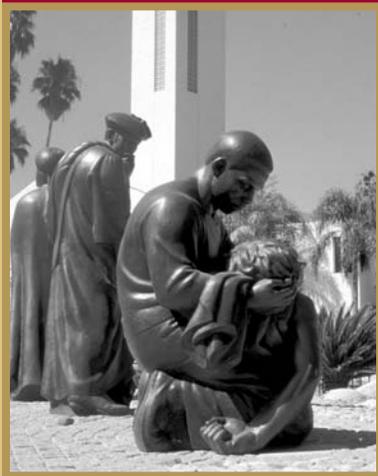


# LOMA LINDA UNIVERSITY



transforming lives>

*2005~2006 Catalog*

*A Seventh-day Adventist  
Institution Integrating Health,  
Science, and Christian Faith*

Catalog of  
**Loma Linda**  
**University**

**2005-2006**

This is a one-year CATALOG,  
effective beginning Summer Quarter 2005.

**Loma Linda University**

Loma Linda, CA 92350

<http://www.llu.edu/>

a health-sciences university

# WELCOME TO LOMA LINDA UNIVERSITY

**O**ur health-sciences community is delighted that you have chosen to continue your academic and professional preparation on this campus. We are committed to the education and training of graduates whose competence and caring bring health, healing, wholeness, and hope through a saving knowledge of the transforming love of God to those whom they are privileged to serve.

We are proud of Loma Linda University's global reputation for academic excellence in the Christian context. Here you will engage in the stimulating process of discovering and applying knowledge, testing new models of engagement, and exploring fresh ways to share the diverse resources of this University. You will identify challenges facing society, and will help determine ways in which this University's dialogue with the world it serves can most effectively address and remedy those challenges that most engage your heart, mind, and hands.

We trust that this school year will be an extraordinarily positive experience for you and that you will seize the numerous opportunities presented to continue acquiring the knowledge and skills that will allow you to realize your academic and career goals. We also trust that your individual talents will flourish as you enlist them in the service of God—enlarging His Kingdom as you continue the healing and teaching ministry of Jesus Christ.

May God bless you this year as you pursue personal and professional excellence and as you find in Christ the center of your joy.

Sincerely,



B. Lyn Behrens, M.B., B.S.

President

Loma Linda University

Loma Linda University Adventist Health Sciences Center



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# I

## INTRODUCTION

Chancellor's Welcome

Programs, Degrees, and Certificates Offered

Accreditation Overview

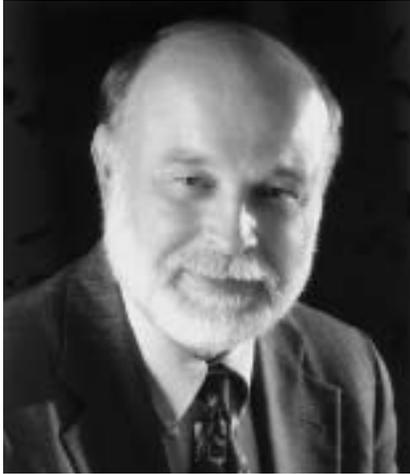
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# Chancellor's Welcome



**W**elcome to Loma Linda University. We are honored to have you join our community of health professionals, scientists, and scholars. Our primary responsibility is to aid in your education. The faculty, staff, and administration desire to assist you in achieving your professional goals.

We celebrate the centrality of Christ in the mission of Loma Linda University. He is our Model, our Mentor, and our Motivation for service. And as our Messiah, we are joyous in the assurance of His salvation. Building upon the principles of faith, hope, and love, we embrace the values of compassion, integrity, freedom, justice, excel-

lence, self-control, and humility.

We encourage personal and professional growth through the integrated development of your intellectual, physical, social, and spiritual dimensions. Competent professional development involves not only the acquisition of knowledge and skills but also the maturation of appropriate personal and professional attitudes and behavior, which are grounded in our core values.

We are united in our pursuit of excellence, and in your preparation to enhance the quality of life for individuals in local, regional, national, and world communities, ever spreading the good news of a loving God. We encourage you to maintain and strengthen your commitment to serve others by remaining sensitive to the hurts and needs of individuals you encounter in your training and also by participating in service learning through such community outreach programs as the social action clinics in our region and through the students for international mission service.

We are enriched by the ethnic and cultural diversity of our students, faculty, staff, and administration. You, our students, come from many nations throughout the world. We promote an environment that reflects and builds respect for the diversity of humanity as ordained by God.

May you daily experience the excitement of learning, the richness of friendship with peers and mentors, and the joy of God's personal love and care for you as you prepare to bring healing, health, wholeness, and hope to a needy world.

Sincerely,

A handwritten signature in cursive script that reads "Richard H. Hart".

Richard H. Hart, M.D., Dr.P.H.

Chancellor

Loma Linda University

# Programs, Degrees, and Certificates Offered

## CURRICULA

The degree and certificate curricula at Loma Linda University are under continuous review and are, therefore, subject to change and improvement without prior notice, as the need occurs. The University also offers nondegree and short courses throughout the United States and globally to meet the continuing-education and extension-program needs of alumni, health professionals, and lay persons in the church and in the community. Most degree courses are approved for continuing-education credit.

The Faculty of Graduate Studies oversees Ph.D. and research master's degrees as well as combined-degrees programs.

## KEY TO CODES

AH	School of Allied Health Professions
PH	School of Public Health
SD	School of Dentistry
SM	School of Medicine
SN	School of Nursing
SP	School of Pharmacy
ST	School of Science and Technology
FR	Faculty of Religion
IS	Interdisciplinary Studies (LLU diploma, across schools/faculties)

Anatomy	SM	M.S., Ph.D.
Biochemistry	SM	M.S., Ph.D.
Biology	ST	M.S., Ph.D.
Biomedical and Clinical Ethics	FR	M.A., PB certificate
Biomedical Data Management	PH	B.S.P.H.
Biomedical Sciences	IS	PB certificate
Biostatistics	PH	PB certificate (basic, advanced), M.P.H., M.S.P.H.
Case Management	ST	PB certificate
Child Life Specialist	ST	M.S., PB certificate
Chinese Studies	ST	UG certificate (for Health Care Professionals)
Clinical Mediation	ST	PB certificate
Clinical Ministry	FR	M.A., PB certificate
Clinical Laboratory Science	AH	B.S. (formerly Medical Technology)
Coding Specialist	AH	certificate
Criminal Justice	ST	M.S.
Counseling	ST	M.S.
Counseling, Family	ST	PB certificate (See: Family Counseling)
Counseling, Group	ST	PB certificate (See: Group Counseling)
Counseling, School	ST	PB certificate (See: School Counseling)
Cytotechnology	AH	certificate, B.S.
Dental Programs, Advanced	SD	See: individual programs
Dental Anesthesiology, Advanced	SD	PD certificate
Dental Hygiene	SD	B.S.
Dentistry, General	SD	D.D.S.

Dentist Program, International	SD	D.D.S.
Diagnostic Medical Sonography	AH	Certificate
Dietetic Technology	AH	A.S., PB certificate
Drug and Alcohol Counseling	ST	PB certificate
Earth Science	ST	Ph.D.
Emergency Medical Care	AH	B.S.
Endodontics, Advanced	SD	M.S. option, PD certificate
Environmental and Occupational Health	PH	M.P.H.
Epidemiological Research Methods	PH	PB certificate
Epidemiology	PH	PB certificate (basic, advanced), M.P.H., Dr.P.H.
Executive Online M.P.H	PH	(See: Online Executive)
Family Counseling	ST	PB certificate
Family Studies ST (Family Life Education)	ST	PB certificate
Family Studies ST (Family Life Education)	ST	PB certificate
Family Studies	ST	M.A., Ph.D.
Forensic Science	ST	PB certificate
Geology	ST	B.S., M.S., Ph.D. (See: Earth Science)
Gerontology	ST	M.S.
Global Health	PH	M.P.H., Dr.P.H.
Group Counseling	ST	PB certificate
Health Administration	PH	M.B.A., M.P.H.
Health Care Administration	PH	B.S.P.H.
Health Care Practice	SM	PMD certificate
Health Education	PH	M.P.H., Dr.P.H.
Health Geographics	PH	B.S.P.H.
Health Information Administration	AH	B.S., PB certificate
Health Information Systems	PH	M.H.I.S., PM certificate
Health Professions Education	ST	PB certificate
Health Professions Education	IS	M.S.
Health Promotion and Education	PH	(See: Health Education)
Health Services Research	PH	(See: Health Administration)
Health Science	IS	B.S.
Humanitarian Assistance	PH	PB certificate
Implant Dentistry, Advanced	SD	M.S. option, PD certificate
International Dentist Program	SD	(See: Dentist Program, International)
Lifestyle Intervention	PH	PB certificate
Marital and Family Therapy	ST	M.A., M.S., D.M.F.T., Ph.D.
Marital and Family Therapy	ST	M.S.
Maternal and Child Health	PH	M.P.H.++/+++
Medical Dosimetry	AH	Certificate
Medical Radiography	AH	A.S.
Medical Scientist	SM	M.D./Ph.D.
Medical Sonography	AH	(See: Diagnostic Medical Sonography)
Medicine	SM	M.D.
Microbiology and Molecular Genetics	SM	M.S., Ph.D.
Natural Sciences	ST	M.S.
Nursing	SN	M.S., PB and PM advanced certificates, Ph.D.
Nursing Administration	SN	M.S.
Nutrition	PH	M.P.H., Dr.P.H.
Nutrition Care Management	PH	M.S.
Clinical Nutrition	PH	M.S.
Nutritional Sciences	PH	M.S.
Nutrition and Dietetics	AH	B.S., PB certificate
Occupational Therapy	AH	M.O.T.
Occupational Therapy Assistant	AH	A.A.
Online Executive M.P.H	PH	M.P.H.
Oral and Maxillofacial Surgery, Advanced	SD	M.S. option, PD certificate
Orthodontics and Dentofacial Orthopedics, Advanced	SD	M.S. option, PD certificate
Pediatric Dentistry, Advanced	SD	M.S. option, PD certificate
Periodontics, Advanced	SD	M.S. option, PD certificate
Pharmacology	SM	M.S., Ph.D.

Pharmacy	SP	Pharm.D.
Phlebotomy	AH	Certificate
Physical Therapist Assistant	AH	A.S.
Physical Therapy	AH	M.P.T., D.P.T., D.P.T.Sc.
Physician Assistant Sciences	AH	M.P.A.
Physiology	SM	M.S., Ph.D.
Preventive Care	PH	Dr.P.H.
Program Evaluation	ST	PB certificate
Prosthodontics, Advanced	SD	M.S. option, PD certificate
Clinical psychology	ST	Psy.D., Ph.D.
Experimental psychology	ST	M.A., Ph.D.
Public Administration	ST	D.P.A.
Public Health	PH	(See: Online Executive M.P.H.)
Public Health Practice	PH	M.P.H.++/+++/++++
Radiation Sciences	AH	B.S.
Radiation Therapy Technology	AH	B.S., certificate
Radiologist Assistant	AH	B.S., PB certificate
Rehabilitation Science	AH	Ph.D.
Religion and the Sciences	FR	M.A.
Reproductive Health	PH	PB certificate
Respiratory Care	AH	B.S., PP B.S., certificate
Social Work	ST	M.S.W., Ph.D.
Social Policy and Social Research	ST	Ph.D.
School Counseling	ST	PM certificate
Spanish Studies	ST	UG
Special Imaging Technology (CT/MRI)	AH	Certificate (for Health Care Professionals)
Speech-Language Pathology	AH	Certificate
Speech-Language Pathology Assistant	AH	A.S.
Speech-Language Pathology and Audiology	AH	B.S.
Speech Language Pathology	AH	M.S.
Tobacco-Control Methods	PH	PB certificate+
Wellness Management	PH	B.S.P.H.
Community Wellness	PH	M.P.H.
	UG	Undergraduate
	PB	Postbaccalaureate
	PD	Post-D.D.S. or Post-D.D.M.
	PM	Post-master's
	PMD	Post-M.D.
	PP	Postprofessional
	*	off-campus, Canada
	+	off-campus, Cambodia
	++	off-campus, Chile
	+++	off-campus, Peru
	++++	off-campus, Russia



# Accreditation Overview

The University is accredited as a degree-granting institution by the Western Association of Schools and Colleges (WASC). The programs of the schools are accredited by the appropriate accrediting agencies, and graduates are eligible to take the qualifying examinations of the respective state and national licensing or registration bodies and to join professional organizations. Details of accreditations are given in the individual programs and in Section VII of this CATALOG.

Founded as College of Evangelists 1905-06, the University was chartered as College of Medical Evangelists by the state of California December 13, 1909 and was accredited by Northwest Association of Secondary and Higher Schools April 7, 1937. Accredited by WASC (Western Association of Schools and Colleges) [prior to January 1962, Western College Association] February 24, 1960, it became Loma Linda University July 1, 1961.

## ACCREDITING AGENCIES

Loma Linda University is fully accredited by the Western Association of Schools and Colleges (WASC), which may be contacted at:

Accrediting Commission for Senior Colleges and  
Universities of the Western Association of  
Schools and Colleges (WASC)  
985 Atlantic Avenue, Suite 100  
Alameda, CA 94501  
Phone: 510 / 748-9001  
FAX: 510 / 748-9797  
Web site: [www.wascweb.org](http://www.wascweb.org)  
Email: [wascsr@wascsenior.org](mailto:wascsr@wascsenior.org)

WASC is an institutional accrediting agency recognized by the U.S. Secretary of Education and the Commission on Recognition of Postsecondary Accreditation.

**In addition to WASC, the following organizations accredit specific University schools or programs:**

Accreditation Council for Occupational Therapy Education (ACOTE),  
American Occupational Therapy Association, Inc., (AOTA)

Accreditation Council for Pharmacy Education (ACPE)

Accreditation Review Commission on Education for the Physician Assistant (ARC-PA),  
Medical Education Department 1R6

American Health Information Management Association

American Physical Therapy Association

American Psychological Association

American Speech-Language-Hearing Association

Association of American Medical Colleges

California Association of Alcoholism and Drug Abuse Counselors (CAADAC)

California Board of Registered Nursing

California Department of Health, Laboratory Field Services

California Department of Health Services, Radiologic Health Branch

California State Department of Health Services

Commission on Accreditation for Dietetics Education (CADE) of the American Dietetic Association

Commission on Accreditation for Marriage and Family Therapy Education of the  
American Association for Marriage and Family Therapy

Commission on Accreditation in Physical Therapy Education, American Physical Therapy Association, (APTA)

Commission on Accreditation of Allied Health Education Programs (CAAHEP)

Commission on Collegiate Nursing Education, (CCNE)

Commission on Dental Accreditation of the American Dental Association

Committee on Accreditation for Respiratory Care

Council on Education for Public Health

Council on Medical Education of the American Medical Association

Council on Social Work Education, Division of Standards and Accreditation

Cytotechnology Programs Review Committee

Joint Committee on Accreditation for Respiratory Care Education

Joint Review Committee on Education in Diagnostic Medical Sonography (JRCE-DMS)

Joint Review Committee on Education in Radiologic Technology (JRCERT)

Joint Review Committee on Educational Programs in Nuclear Medicine Technology

Liaison Committee on Medical Education, Association of American Medical Colleges

National Accrediting Agency for Clinical Laboratory Sciences (NAACLS)

National Commission for Health Education Credentialing, Inc.

Speech-Language Pathology Educational Standards Board, American Speech-Language-Hearing Association

State of California, Environmental Health Specialist Registration Program

# Affirmative Action

**T**he University routinely monitors its educational and employment practices regarding women, minorities, and the disabled to ensure compliance with the law and University policy. The University's affirmative-action policy is to provide equal access to admissions, educational programs and activities, financial aid, student services, and employment.

In compliance with Title IX of the Educational Amendments of 1972 and Section 504 of the Rehabilitation Act of 1973, a grievance procedure has been established to process student complaints alleging violation of these regulations or of the University's policy of nondiscrimination based on gender or disability. Inquiries concerning Title IX may be directed to the affirmative-action officer. Employment-related discrimination complaints, including those filed by student employees, are processed in conformity with the provisions outlined in existing staff personnel policies. Complaints related to discrimination in academic areas are reviewed in conformity with the procedures established by the academic administration.



# Nondiscrimination Policy

Loma Linda University was established by the Seventh-day Adventist Church as an integral part of its teaching ministry. The University affirms that Christian principles are incompatible with various forms of discrimination that have divided societies, and that all persons are of equal worth in the sight of God and should be so regarded by all His people. Therefore, the University is committed to equal education and employment opportunities for men and women of all races and does not discriminate on the basis of handicap, gender, race, color, or national origin in its educational or admissions policies, financial affairs, employment programs, student life and services, or any University-administered program.

To this end, the University is in compliance with Titles VI and VII of the Civil Rights Act of 1964 as amended and is in substantial compliance with Title IX of the Education Amendments of 1972 (34 CFR 106 et seq.), Sections 503 and 504 of the Rehabilitation Discrimination in Employment Act of 1967, and Section 402 of the Vietnam Era Veterans Adjustment Act of 1974; and does not discriminate against any employees or applicants for employment on the basis of age or because they are disabled veterans or veterans of the Vietnam era. In addition, the University administers student programs without discrimination on the basis of age—except in those programs where age is a bona fide academic qualification for admission—in accordance with the provisions of the Age Discrimination Act of 1975.

The University reserves constitutional and statutory rights as a religious institution and employer to give preference to Seventh-day Adventists in admissions and employment, including but not limited to 42 U.S.C. Secs. 2000e-1, 2000e-2; Sec. 6-15 of Federal Executive Order 11246; 41 CFR Sec. 60-1.5(5); 20 U.S.C. Sec. 1681 (a)(3); 34 CFR Secs. 106.12 (a)(b), 106.21, 106.31, 106.39, 106.40, 106.51, and 106.57; California Government Code Sec. 12926(d)(1); Title II, Division 4, Chapter 2, Sec. 7286.5 of the California Code of Regulations; the First Amendment to the United States Constitution; and Article I, Sec. 4, of the California Constitution. The University believes that Title IX regulations are subject to constitutional guarantees against unreasonable entanglement with or infringements on the religious teachings and practices of the Seventh-day Adventist church. The University expects students and employees to uphold biblical principles of morality and deportment as interpreted by the Seventh-day Adventist church. The University claims exemptions from the provisions of Title IX set forth in 34 CFR Secs. 106.12 (a)(b), 106.21, 106.31, 106.39, 106.40, 106.51, and 106.57.

# Accommodation for Disability

Loma Linda University is in compliance with the Americans with Disabilities Act, Sec. 504 of the Rehabilitation Act, as well as with local and state requirements. The University is committed to providing education—including support services and reasonable accommodations for disabilities—to qualified applicants for whom such accommodation does not fundamentally alter the chosen program or create an undue burden.

**For information regarding accommodation for disability, the student should consult the office of the dean of the school to which application for admission is being made.**

Following acceptance, the student may be asked if he or she has a disability requiring accommodation. A student who desires accommodation for a disability (e.g., physical, learning, or psychological) identified *after* acceptance should consult the office of the dean regarding a request for accommodation. The accommodation request must be submitted in writing on the designated form. The completed form and the required supporting documentation will be evaluated by appropriate University entities to determine whether or not the applicant can be expected to perform the essential functions of the program. All discussions will remain confidential.



# The Academic Calendar

## 2005

**U Date applies University-wide (except as specifically noted by two-letter code):**

**GS Faculty of Graduate Studies**

**FR Faculty of Religion**

### Schools of

**AH Allied Health Professions**

**PH Public Health**

**SD Dentistry**

**SM Medicine**

**SN Nursing**

**SP Pharmacy**

**ST Science and Technology**

### SUMMER SESSIONS 2005

23 AH Cytotechnology certificate registration; instruction begins  
MAY 23-JUN 13 Registration (standard term and first 5-week session) without a late fee

### JUNE

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

1-13	SD	Registration for didactic remediation session
1-28	SD	Registration for Summer Quarter without a late fee
6-AUG 26	AH	PA program second-year summer clerkships
10-JUN 14	SD	California dental licensure examination
13	AH	MPT/DPT, PMPT, PTA, MOT student/family welcome
13	U	Last day to obtain financial clearance for standard term (before late registration)
13-30	SD	Makeup session
13-SEP 16	AH	Nutrition and Dietetics summer practicum
14	AH	PTA instruction begins
15	AH	MPT/DPT, PMPT, PTA, MOT Juniors instruction begins
16	SM	Junior, Senior registration begins
20	U	Instruction begins
20-JUL 26	U	First 5-week session: 27 days
20-SEP 2	U	11-week session: 55 days (including examinations)
20-SEP 23	AH	PA program first-year summer sessions
24	GS	Last day to submit Petition for Graduation (Form C) and program check sheet
27	GS	Last day to submit Petition for Candidacy (Form A) for Winter completion
27	U	Last day to enter a course or change from audit to credit/credit to audit (standard term)
27	SM	Junior orientation; OCM course begins
28	SD	Last day to obtain financial clearance

### JULY

S	M	T	W	T	F	S
				1	2	
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

4	U	Independence Day recess
5	U	Last day to withdraw with no record (standard term)
5	SD	Instruction begins
5-SEP 15	SD	Summer session
6-13	SD	Late registration begins (\$50 late-registration fee assessed)
11	SD	National Board Examination, Part I
11	SM	Junior clerkships begin
11-AUG 5	AH	Clinical Laboratory Science Junior registration
13	SD	Last day to enter a course or change from audit to credit/credit to audit
15-AUG 12	AH	Clinical Laboratory Science Senior registration
20	SD	Last day to withdraw with no record of course registration on transcript
24-JUL 27	SD	"Careers in Dentistry" seminar
25	AH	MPT/DPT and MOT Senior instruction begins
25	SM	Senior clerkships begin
27-SEP 2	U	Second 5-week session: 28 days
	U	Add/withdraw dates for 5-week sessions as follows:
		Prior to second class meeting—
		Last day to enter a course or change from audit to credit/credit to audit
		Last day to withdraw with no record of course registration on transcript
		Last day to withdraw with a "W" grade
		Last day to submit S/U petition

# The Calendar

## 2005

### AUGUST

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

2 AH MOT instruction begins  
 4 SD D4 Summer mock board examination (projected)  
 4-5 SM Freshman registration and orientation  
 8 SM Freshman late registration begins (\$50 late registration fee assessed)  
 15 U Last day to withdraw with a "W" grade or submit W/U petition (standard term)

### POST-SUMMER SESSIONS 2005

15 AH Cytotechnology certificate registration; instruction begins  
 15-SEP 16 AH Clinical Laboratory Science Junior post-summer session  
 15 AH Clinical Laboratory Science Junior instruction begins  
 15-16 AH Clinical Laboratory Science Junior orientation  
 22 AH Clinical Laboratory Science Senior orientation  
 22-SEP 16 AH Nutrition and Dietetics prerequisite block classes  
 23 AH Clinical Laboratory Science Senior term I practicum begins  
 26 GS Last day to submit final copy of thesis, publishable paper, or dissertation, including signed approvals, and Statement of Completion (Form D) for Summer completion  
 29-SEP 16 AH Clinical Laboratory Science Senior registration  
 29-SEP 19 U Registration (AH, SD, GS, SN, PH, FR)  
 31 SM Sophomore late registration begins (\$50 late registration fee assessed)

### SEPTEMBER

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

2 U Summer Quarter ends  
 5 U Labor Day recess  
 5 SD Summer Quarter ends  
 6 U Instruction begins (varies; check schedule of classes)  
 6 SM Sophomore orientation; instruction begins  
 6-16 U 9-day post-summer session  
 7 U Grades due from faculty  
 8 AH PTA Summer Quarter ends  
 11-OCT 11 U Hispanic Heritage Month  
 12 SP P3 instruction begins  
 12-14 SP Orientation  
 12-15 SD Final examinations  
 14-15 SP Retreat  
 14-23 SD D1 orientation and clinical pre-session  
 16-25 SD Summer recess  
 19 PH Faculty colloquium  
 19 U Last day to obtain financial clearance before late registration begins  
 19 AH PTA instruction begins  
 19 SM Freshman and Sophomore late registration begins  
 19 SP P1 and P2 instruction begins  
 19-21 SD Dental Hygiene orientation  
 20 SD Grades due from faculty  
 20 PH Orientation  
 21 ST New-student orientation  
 21 AH New-student orientation  
 22 U University Fall faculty colloquium  
 22 FR Faculty colloquium  
 23-25 SM Retreat

### AUTUMN QUARTER 2005

26-DEC 15 SD Fall Quarter  
 26-DEC 16 U Total days [including examinations]: 57  
 26 U (except Junior and Senior SM) Instruction begins  
 26 SM Junior and Senior late registration begins  
 26-DEC 16 AH PA program second-year autumn clerkships  
 30 GS Last day to submit Petition for Graduation (Form C) and program's check sheet for Fall and Winter completion

# The Calendar

## 2005

### OCTOBER

S	M	T	W	T	F	S		
						1	2	U Welcome-back party
2	3	4	5	6	7	8	3	U Diversity new-student orientation
9	10	11	12	13	14	15	3	U Last day to enter a course or change from audit to credit/credit to audit
16	17	18	19	20	21	22	3-DEC 23	SM Junior and Senior Autumn Quarter
23	24	25	26	27	28	29	6	U Campus/Chamber of Commerce Connection
30	31						6	AH Physician Assistant jacketing ceremony
							10	U Last day to withdraw with no record of course registration on transcript
							10-14	U Fall Week of Devotion
							12	U ALAS chapel
							12	U Center for Christian Bioethics grand rounds
							14-16	SD Retreat
							16	U HALL banquet
							19	U University convocation
							31	AH Cytotechnology registration; instruction begins

### NOVEMBER

S	M	T	W	T	F	S		
			1	2	3	4	5	
6	7	8	9	10	11	12	2	GS Last day to submit Petition for Candidacy (Form A) for Spring completion
13	14	15	16	17	18	19	2-3	SD D3 Autumn mock board examination (projected)
20	21	22	23	24	25	26	4	AH Job fair
27	28	29	30				4	SP Career fair
							5	U Bioethics Center Annual Contributor's Convocation
							6	SP Phi Lambda Sigma ceremony
							7-10	SD D4 mock board examination (projected)
							9	U Center for Christian Bioethics grand rounds
							10	SP Phi Lambda Sigma
							11-13	U Annual BALL/BHPSA student retreat
							16	AH Clinical Laboratory Science Senior term II practicum begins
							18-20	U ALAS student retreat
							28	U Last day to withdraw with a "W" grade or submit S/U petition
							23-27	U Thanksgiving recess
							28	U Instruction resumes

### DECEMBER

S	M	T	W	T	F	S		
					1	2	3	1-21
4	5	6	7	8	9	10	2	U Registration for Winter Quarter without a late fee
11	12	13	14	15	16	17	2-4	U Christmas tree lighting
18	19	20	21	22	23	24	5	PH Retreat
25	26	27	28	29	30	31	5	SD National Board Examination, Part I
							5-6	SD National Board Examination, Part II
							7	U Center for Christian Bioethics grand rounds
							7	U World AIDS Day
							9	GS Last day to submit final copy of thesis, publishable paper, or dissertation, including signed approvals, and Statement of Completion (Form D) for Fall completion
							12-15	SD Final examinations
							12-16	U Final examinations
								SM Final examinations
							15	SD Autumn Quarter ends
							16	U Autumn Quarter ends
							16-JAN 2	SD Christmas recess
							17-JAN 2	U Christmas recess: 17 days
							17-JAN 2	SM Freshman and Sophomore Christmas recess
							19	AH Radiation Technology instruction begins (AS Medical Radiography second year, Radiation Therapy, Nuclear Medicine, Diagnostic Medical Sonography, Special Imaging)
							20	SD Grades due from faculty
							21	U Grades due from faculty
							21	U Last day to obtain financial clearance before late registration begins
							23-JAN 8	SM Junior and Senior Christmas recess
							23-JAN 10	SD Late registration begins (\$50 late-registration fee assessed)

# The Calendar

## 2006

### JANUARY

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

### FEBRUARY

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28				

### WINTER QUARTER 2006

3	U SD	Winter Quarter instruction begins (all schools, unless otherwise noted)
3	SM	Instruction begins (Freshman, Sophomore)
3	AH	Radiation Technology instruction begins (BS and first-year AS Medical Radiography)
3-MAR 17	U	Total days [including examinations]: 52; SD Winter Quarter ends March 16
3-MAR 24	AH	PA program second-year Winter Quarter clerkships
6	GS	Last day to submit Petition for Graduation (Form C) and program's check sheet for Spring completion
6	SD	D4 deadline to submit WREB application
9	SM	Junior and Senior instruction begins
9-14	U	Mission Emphasis Week
9-31	SM	Junior and Senior Winter Quarter
10	U	Last day to enter a course or change from audit to credit/credit to audit
11	U	Martin Luther King, Jr., Day Symposium for Diversity in Health Care
11	U	Center for Christian Bioethics grand rounds
15-18	SD	Nevada licensure board examinations
16	U	Martin Luther King, Jr., recess
17	U	Last day to withdraw with no record of course registration on transcript
17-20	U	Student Week of Spiritual Emphasis
TBD	AH/GS/SN	Job fair
18	SD	Winter mock board examination (projected)
28	U	Celebration of Faith and Learning
29	SP	White coat ceremony
30-FEB 1	SD	WREB qualifying examination (projected)
8	SP	White coat ceremony
1-28	U	Black History Month
1	U	BHPSA chapel
5-9	SD	Midterm week
8	GS	Last day to submit Petition for Candidacy (Form A) for Summer completion
8	U	Center for Christian Bioethics grand rounds
9-13	SD	Alumni-Student convention
10	GS	Last day to submit final copy of thesis, publishable paper, or dissertation, including signed approvals, and Statement of Completion (Form D) for Winter completion
10	SD	Student dedication service
11	SN	Dedication ceremony
13	AH	Cytotechnology registration; instruction begins
17	SM	Family day and dedication
20	U	President's Day recess
22	SD	D4 deadline to submit CAL Board examination application
25	U	BALL banquet
26-27	U	Diversity and Science International Conference
27	U	Last day to withdraw with a "W" grade or submit S/U petition
27	U	Provonsha lecture
27-28	U	Annual bioethics conference

# The Calendar

## 2006

### MARCH

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

1-20	U	Registration for Spring Quarter without a late fee
4-7	SM	Annual Postgraduate Convention (APC)
7	AH	Clinical Laboratory Science Senior term III practicum begins
8	U	Center for Christian Bioethics grand rounds
8-10	PH	Alumni "Healthy People" convention
10		Last day to submit final copy of thesis, publishable paper, or dissertation, including signed approvals, and Statement of Completion (Form D) for Winter completion
13-17	U	Final examinations
17	U	Winter Quarter ends
17-21	SD	Western Regional Board Examinations (projected)
18-26		Spring recess: 9 days
20	U	Last day to obtain financial clearance before late registration begins
22		Grades due from faculty
23	AH	PTA Winter Quarter ends
24	SM	Freshman Winter Quarter ends
25	AH	Faculty/Staff retreat
25-APR 2	AH	PA program second-year spring recess
31-APR 2	SM	Junior and Senior spring recess
27	SP	Winter Quarter ends
27	SM	Freshman, Junior, and Senior late registration begins
		<b>SPRING QUARTER 2006</b>
27-JUN 9	U	Spring Quarter
27	U	Instruction begins
28	U	Dental Hygiene national board examination
31	GS	Last day to submit Petition for Graduation (Form C) and program's check sheet for Summer completion
31-APR 2	SN	Alumni Association Homecoming and Institute; centennial year celebration begins

### APRIL

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

3	U	Last day to enter a course or change from audit to credit/credit to audit
3	SM	Freshman, Junior, and Senior instruction begins
3-7	U	Spring Week of Devotion
3-21	SD	Late registration begins (\$50 late-registration fee assessed)
3-JUN 2	AH	PA program second-year spring clerkships
10	U	Last day to withdraw with no record of course registration on transcript
10	SP	Instruction begins
10-13	SD	Cal Board qualifying examination (projected)
12	U	Center for Christian Bioethics grand rounds
20-23	AH	Alumni weekend
21	SD	D2 spring mock board examination (projected)
24-28	SD	Midterm week
30-MAY 5	SN	National Nurses Week

# The Calendar

## 2006

### MAY

S	M	T	W	T	F	S		
	1	2	3	4	5	6	3	GS Last day to submit Petition for Candidacy (Form A) for Fall completion
7	8	9	10	11	12	13	10	U Center for Christian Bioethics grand rounds
14	15	16	17	18	19	20	11	SP Honors and awards ceremony
21	22	23	24	25	26	27	15-19	SM Freshman final examinations
28	29	30	31				15-26	SM Sophomore final examinations
							20	U Diversity consecration service
							21	SP Rho Chi ceremony
							22	U Last day to withdraw with a "W" grade or submit S/U petition
							22-JUN 12	U Registration for summer session (standard and first 5-week session) without a late fee
							22-JUN 16	SM Freshman required ward experience
							22	FIRST 2006 SUMMER SESSION
							22	AH Cytotechnology registration; summer session instruction begins
							25	AH MOT research colloquium
							25	SD Grades due from faculty for D4 students
							26	SD D4 deadline for eligibility to take California state board licensure examination
							26	SD Dental Hygiene pinning
							26	SM Consecration and Hooding Ceremony
							27	SM, SD Baccalaureate Service
							28	SM, SD Conferring of Degrees
							29	U Memorial Day recess

### JUNE

S	M	T	W	T	F	S		
				1	2	3		
4	5	6	7	8	9	10		
11	12	13	14	15	16	17	2	GS Last day to submit final copy of thesis, publishable paper, or dissertation, including signed approvals, and Statement of Completion (Form D) for Spring completion
18	19	20	21	22	23	24		
25	26	27	28	29	30			
							5-8	SD Final examinations
							5-JUN 9	U Final examinations
							5-AUG 25	AH PA program second-year summer clerkships
							7	FR Center for Christian Bioethics grand rounds
							8	SD Spring Quarter ends
							9	U Spring Quarter ends
							9	GS, SN, PH, AH Focus on Graduates Vesper Service
							9	SD D1 comprehensive examination (required for D1 students)
							9-13	SD California board licensure examination (projected)
							10	GS, SN, PH, AH Baccalaureate Service
							10	AH Dietetics pinning
							11	AH Occupational Therapy and Occupational Therapy Assistant pinning
							11	GS, SN, PH, AH Conferring of Degrees
							12	SD D2 qualifying examination (required for D2 students)
							12-30	SD Makeup session
							12-SEP 22	Nutrition and Dietetics summer practicum
							13	SD Grades due from faculty (D1, D2, D3, and Dental Hygiene students)
							14	U Grades due from faculty
							19-JUL 25	First 5-week summer session
							19-SEP 1	11-week summer session: 54 days
							19-SEP 22	AH PA program first-year summer session
							22-25	SD Registration for summer session without late fee

# The Calendar

## 2006

### JULY

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

2-9  
3-SEP 14  
4  
17

SD summer recess  
SD summer session  
U Independence Day recess  
SD National Board Examination, Part I (projected)

### AUGUST

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

3  
14  
26-SEP 1

SD D4 summer mock board (projected)  
AH Cytotechnology registration for Autumn Quarter; instruction begins  
U Second 5-week summer session

### SEPTEMBER

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

4  
5-15  
  
25-DEC 15  
DEC 14

#### POST SUMMER SESSIONS 2006

U Labor Day recess  
U Total days of instruction: 9

#### AUTUMN QUARTER 2006

U Total days [including examinations]: 57  
SD Autumn Quarter ends



The Good Samaritan, located on the campus mall,  
is a representation of the parable told by Jesus and recorded in Luke 10:30-37.  
This four-figure sculpture was dedicated and unveiled at Loma Linda University May 3, 1981.  
It speaks eloquently of Jesus' compassionate practice of the healing arts  
and of His mission  
*—To make man whole—*  
the motto of this health-sciences University.

# II

## ABOUT THE UNIVERSITY

University Mission

University Mace, Coat of Arms, and Seal

University Foundations

University Philosophy

Fundamental Values

A Unique University

Learning Environment, Libraries, Research Centers

Admission Policies and Information

Division of General Studies

Student Life

Academic Policies and Information

Financial Policies and Information



# OUR MISSION

## **LOMA LINDA UNIVERSITY,**

a Seventh-day Adventist Christian health-sciences institution, seeks to further the healing and teaching ministry of Jesus Christ “to make man whole” by:

- EDUCATING** ethical and proficient Christian health professionals and scholars through instruction, example, and the pursuit of truth;
- EXPANDING** knowledge through research in the biological, behavioral, physical, and environmental sciences and applying this knowledge to health and disease;
- PROVIDING** comprehensive, competent, and compassionate health care for the whole person through faculty, students, and alumni.

### **IN HARMONY WITH OUR HERITAGE AND GLOBAL MISSION:**

- ☞ We encourage personal and professional growth through integrated development of the intellectual, physical, social, and spiritual dimensions of each member of the University community and those we serve.
- ☞ We promote an environment that reflects and builds respect for the diversity of humanity as ordained by God.
- ☞ We seek to serve a worldwide community by promoting healthful living, caring for the sick, and sharing the good news of a loving God.

### **TO ACHIEVE OUR MISSION WE ARE COMMITTED TO:**

#### **OUR STUDENTS**

Our primary responsibility is the education of students, who come from diverse ethnic and cultural backgrounds, enabling them to acquire the foundation of knowledge, skills, values, attitudes, and behaviors appropriate for their chosen academic or health-care ministry. We nurture their intellectual curiosity. We facilitate their development into active, independent learners. We provide continuing educational opportunities for our alumni and professional peers. We encourage a personal Christian faith that permeates the lives of those we educate.

#### **OUR FACULTY, STAFF, AND ADMINISTRATION**

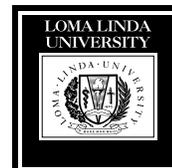
We respect our faculty, staff, and administration who through education, research, and service create a stimulating learning environment for our students. They contribute to the development of new understandings in their chosen fields. They demonstrate both Christian values and competence in their scholarship and professions.

#### **OUR PATIENTS AND OTHERS WE SERVE**

We provide humanitarian service through people, programs, and facilities. We promote healthful living and respond to the therapeutic and rehabilitative needs of people. We seek to enhance the quality of life for individuals in local, regional, national, and world communities.

#### **OUR GOD AND OUR CHURCH**

We believe all persons are called to friendship with a loving God both now and throughout eternity. We support the global mission of the Seventh-day Adventist Church by responding to the need for skilled Christian health professionals and scholars. We seek to honor God and to uphold the values of the Seventh-day Adventist Church and its commitment to awakening inquiry. We are drawn by love to share the good news of God expressed through the life and gospel of Jesus Christ and to hasten His return.





## University Mace, Coat of Arms, and Seal

Traditionally the ceremonial mace represents the authority vested in the highest officer of a governing body. In an educational institution, the authority symbolized by the mace derives from respect for the authority of knowledge and for the rights and value of the individual. Thus the leader of an academic community assumes the obligation and challenge to ensure for its members a climate conducive to growth in knowledge and grace.

The construction of the ceremonial mace of Loma Linda University evokes further ideas. Its two metals, *bronze and aluminum*, suggest the value of lessons both ancient and contemporary. Rather than lying prone, an instrument to be wielded, this mace stands *upright* in celebration of the free human spirit. Its *open construction* implies free exposure to questions, ideas, and conflict. The eight vertical *supporting elements* (at three points bound together as for strength and stability in unity) uphold a graceful *oval* that points outward to the universe, the province of inquiry.

Within the oval, the *University seal* appears to float unfettered. The basic design of the coat of arms and the seal of Loma Linda University—established in 1905 as the College of Medical Evangelists—is a contemporary modification of the shield, a heraldic device.

Within the seal, *the broken sword* suggests the compassion and mercy of those who serve others with love, selflessness, and restraint from attitudes of self-aggrandizement and acts of destructiveness.

*The lighted torch* symbolizes the learner's zeal to advance truth. It also suggests the illuminating power of knowledge and the University's central purpose of forwarding and perpetuating good through the enlightened, searching, caring mind and conscience of the individual.

*The ancient staff of Aesculapius*, long associated with medicine, represents in the modern and broad sense the combined services of all the healing arts and sciences.

Across the base of the shield, *the open book* symbolizes the Word of God—the foundation of all truth, the source of the Christ-centered commission, the inspiration for all endeavor of humanity for humanity.

Framing the shield are, at the left, the *wreath of oak leaves and acorns*, presented in ancient times to honor the civic contribution of one who had saved his brother-citizen's life; and, at the right, the *wreath of laurel*, presented to honor personal achievement.

*The emblems of the seal* imply that one who has the privilege of learning also has the obligation of valor and honor. On the scroll below the shield is *the motto*—adopted in 1955 on the occasion of the 50th anniversary of this institution—*To Make Man Whole*.

# University Foundations

## HISTORY

Loma Linda University is part of the Seventh-day Adventist system of higher education. In 1905 the University (formerly College of Medical Evangelists) was founded—through a series of divine providences—at Loma Linda, California, by the Seventh-day Adventist Church. The School of Nursing began in 1905. In 1909, the College of Medical Evangelists received its charter as a medical school with the express purpose of preparing physicians who could meet the needs of the whole person. Both Schools emphasized the need for healthful living as a part of medical care, a revolutionary concept in 1905.

The University was designated by the church as a center for educating health professionals. The original schools—Nursing and Medicine—have been joined by Allied Health Professions, Dentistry, Pharmacy, Public Health, Science and Technology, the Graduate School, and the Faculty of Religion. The curricula of the University are approved by their respective professional organizations. From its small beginnings, the University has achieved widespread recognition, having sent more of its graduates into international service than has any other university. It remains committed to the vision of its founders and is sustained by its close association with the church.

From 1918 to 1962, the University operated within health facilities in two cities: Loma Linda and Los Angeles. In September 1962 all health-professional education was consolidated at Loma Linda. In 1967 Loma Linda University Medical Center opened in its new three-tower facility, a landmark cloverleaf structure. The Medical Center continues on the cutting edge of health care, providing excellent service for patients and expanding educational opportunities for students.

In 1990 the Board of Trustees designated Loma Linda University a health-sciences university—part of a complex comprised of Loma Linda University Medical Center, faculty practice plans, and affiliated institutions. The University is a leader in the field of health-sciences education, research, and service.

The most current campus census figures (January 1, 2005) indicate that the core of the combined faculties consists of 1,126 full-time teachers. Part-time and voluntary teachers (1,385—largely clinicians in the professional curricula) bring the total to 2,511. As of Autumn Quarter 2004, students from 92 countries are represented in the enrollment of 4,034.



This imposing three-story structure—the Loma Linda Resort and its surrounding acreage—was purchased in 1905. Incorporated in August of that year as the Loma Linda Sanitarium, in October it opened its doors to patients and nursing students.

Today the original property is part of an expanding health sciences campus, which includes

- **three medical facilities**, licensed for 785 beds—
  - Loma Linda University Medical Center (LLUMC), 1966;
  - Loma Linda University Children’s Hospital (LLUCH), 1993;
  - and Loma Linda University East Campus Hospital (LLUECH), 2003—licensed under LLUMC as Loma Linda University Community Medical Center (LLUCMC), 1993, formerly known as Loma Linda Community Hospital;
- **an acute psychiatric care facility**, licensed in 1991 for 89 beds—
  - the Loma Linda University Behavioral Medicine Center (LLUBMC);
- five Loma Linda University Adventist Health Sciences Center (LLUAHSC) **institutes**, four **LLU research centers**, and various **school-related research centers** (see Learning Resources);
- **and Loma Linda University** (on-campus, distance-education, and online degree programs)—
  - through the Schools of Allied Health Professions, Dentistry, Medicine, Nursing, Pharmacy, and Public Health; the Faculty of Graduate Studies; and the Faculty of Religion.

1905 School of Nursing opens  
 1909 School of Medicine, renamed the College of Medical Evangelists (CME)  
 1922 Department of Dietetics  
 1937 School of Medical Technology\*  
 1941 School of Physical Therapy\*  
 1945 Radiologic Technology Program\*  
 1948 School of Tropical & Preventive Medicine (reorganized as School of Public Health, 1964)  
 1954 Graduate School (restructured as Faculty of Graduate Studies in 2005)  
 1953 School of Dentistry  
 1958 Dental Hygiene Program  
 1959 Occupational Therapy Program\*  
 1963 Medical Records Administration Program\*

1966 Schools/Programs (see \*) are consolidated as School of Allied Health Professions  
 1967 Loma Linda University campus merges with La Sierra College  
 1968 Loma Linda University Medical Center dedicated  
 1990 Loma Linda and La Sierra campuses become two separate universities  
 1990 Faculty of Religion (originally School of Religion)  
 1991 Loma Linda University designated as a health-sciences university  
 1997 Loma Linda University and Medical Center corporately linked together through Loma Linda University Adventist Health Sciences Center (LLUAHSC)  
 2002 School of Pharmacy  
 2003 School of Science and Technology

## University Philosophy

**A**s implied by its motto, “TO MAKE MAN WHOLE,” the University affirms these tenets as central to its view of education:

God is the creator and sustainer of the universe.

Mankind’s fullest development entails a growing understanding of the individual in relation both to God and society.

The quest for truth and professional expertise, in an environment permeated by religious values, benefits the individual and society and advances the ministry of the Seventh-day Adventist Church.



## Loma Linda University Fundamental Values

- **COMPASSION**—The sympathetic willingness to be engaged with the needs and suffering of others. Among the most memorable depictions of compassion in Scripture is the story of the Good Samaritan, which LLU has taken as a central symbol for our work.
- **INTEGRITY**—The quality of living a unified life in which one’s convictions are well-considered and match one’s actions. Integrity encompasses honesty, authenticity, and trustworthiness.
- **EXCELLENCE**—The commitment to exceed minimum standards and expectations.
- **FREEDOM**—The competency and privilege to make informed and accountable choices and to respect the freedom of others. God has called us not to slavery, but to freedom.
- **JUSTICE**—The commitment to equality and to treat others fairly, renouncing all forms of unfair discrimination. The God of the Bible is One who calls people continually, to justice. According to the prophets, religious faith could be genuine only when it led the believers to “seek justice, rescue the oppressed, defend the orphans, [and] plead for the widow.”
- **PURITY/SELF-CONTROL**—The commitment to be morally upright and moderate in all things with complete control over one’s emotions, desires, and actions.
- **HUMILITY**—The willingness to serve others in a sacrificial manner; the self-respect that renounces haughtiness or arrogance.

# A Unique University

Loma Linda University has always combined a devotion to academic excellence with a concern for spiritual values and a high sense of mission. The motto of the University, “to make man whole,” illustrates the sense of destiny felt in the University community to act its part in God’s ongoing plan for healing and restoring human beings to live with Him in wholeness, both now and in eternity.

While Loma Linda University has changed in many ways since its beginning in 1905, the Biblical principles which provide its foundation have remained unchanged.



## SEVENTH-DAY ADVENTIST HERITAGE

Loma Linda University is owned and operated by the Seventh-day Adventist Church and has a deep commitment to respecting the rich diversity of its student body. It views respect and sensitivity for all people, regardless of their culture and ethnicity, as a part of true Christianity. We recognize that students come from many different faiths. This University has a tradition of religious liberty, and it highly respects students’ religious values that differ from ours. We look upon the various perspectives of each spiritually committed student as enriching to our campus and educational environment.

## OUR UNIQUE FEATURES

**T**wo distinctive features of the Seventh-day Adventist Church, which are part of the Loma Linda experience, become evident to first-time students. The first is the concept of Sabbath rest which reminds us of God as Creator. Adventists realize this in part by celebrating Saturday as the Sabbath from sundown Friday to sundown Saturday. During these hours you will find that University offices, laboratories, libraries, study halls, and recreation facilities are closed to give time for physical and spiritual renewal and worship.

A second distinctive feature worth noting is the emphasis on health and wholeness. As a student you will be able to exercise in our recreation and wellness center, a health and fitness complex which received a national award for excellence in utility and design. The cafeterias on campus feature well-prepared vegetarian meals. You should also note that the University holds that a drug, alcohol, and tobacco-free lifestyle is essential for achieving the goal of “wholeness.” This means that all students agree to refrain from the use of tobacco, alcohol, and other “recreational” drugs while enrolled at the University.

## SPIRITUAL LIFE

**W**orship experiences represent a critical dimension of the educational experience at Loma Linda University and are available to the student many times throughout the week. Besides regular Friday evening and Saturday services, you will find that many class, school, club, and University activities include a component of worship and praise to God.



**CHAPEL SERVICES**

In keeping with the commitment of our mission, Loma Linda University students have special requirements, such as chapel service attendance each Wednesday morning in the University Church. The chapel programs provide a variety of opportunities to integrate faith and learning. Undergraduates who stay in the residence halls are also expected to attend worships in the residence halls each week.

**RELIGION CLASSES**

Classes in religion are part of the core curriculum in each of the University's schools and programs. These classes deal with the study of the Bible, ethics, clinical ministry (which concentrates on ways to understand and meet the spiritual needs of patients in a manner that is noninvasive and individually appropriate), and a variety of other issues related to the student's field of study and personal spiritual journey.

All students who choose Loma Linda as their university make a commitment to conduct their lives in a manner which reflects their sense of responsibility for the honor and integrity of the University and themselves as members of its community.



# Learning Environment

The total resources of the University offer a wealth of opportunity to the student with initiative and willingness to develop individual capacity to the fullest extent. The academic resources, affiliated clinical facilities, and community agencies constitute a rich educational environment both in classroom instruction and in guided experience. Major facilities utilized for clinical affiliations and internships include the University Medical Center; the Jerry L. Pettis Memorial Veterans Medical Center; and numerous other hospitals and agencies located in the Redlands, San Bernardino, Riverside, and Los Angeles areas, as well as throughout the United States and abroad. In addition, students find varied opportunities for service and learning in the immediate University community, in clinical and research electives, and in diverse volunteer programs.

## UNIVERSITY STUDENT SERVICE-LEARNING OPPORTUNITIES

### Students for International Mission Service (SIMS)

Students for International Mission Service (SIMS) is a University-wide student organization that plans projects targeting underserved populations; monthly medical/dental trips to Baja, California; and one-to-three-month medical-mission experiences around the world. The administration of this program is housed in the School of Public Health. For more information call 909/558-8047.

### SAC Health System

A 42,000-square-foot clinic located just three miles from campus at the former Norton Air Force Base serves as the hub for activities of the SAC Health System (SACHS). The SAC Health System provides low-cost, primary health care to persons who have limited or no access to medical care in the traditional system. Satellite clinics serve populations at several locations. The clinics are staffed by a wide variety of health care professionals and provide an ideal setting for interdisciplinary training in today's changing health care climate. Students' involvement includes managing the clinic; developing nutrition and health-education programs; creating questionnaires for data collection; writing proposals for funding; and actual hands-on experience at the clinic, i.e., obtaining patient histories, assessing psychosocial problems, analyzing laboratory specimens, and providing nutrition and health-education counseling. For additional information, call 909/382-7000.

### Mission Institute

The schools provide assistance to the annual world mission institutes—organized by the Seventh-day Adventist Church and conducted at Loma Linda University and at Andrews University in Michigan.

**LEARNING RESOURCES: UNIVERSITY LIBRARIES****Major library resources**

Four major library resources on campus support the University's academic programs. These are:

- the Del E. Webb Memorial Library,
- the Jesse Medical Library and Information Center (JMLIC),
- the Rehabilitation Library (East Campus), and
- the Veterans Administration Library Services.

In addition to these facilities, specialized libraries are located in various medical and school departments and other entities on campus.

**The central library**

The historical roots of the Del E. Webb Memorial Library—the central library of Loma Linda University—go back to 1907, when a small library collection was started in a room of the old Loma Linda Sanitarium. In 1953 the growing collection was moved to its own building on the Loma Linda campus. In 1981 a new library was built, funded by a Del E. Webb Foundation grant, giving the library a total floor space of 87,670 square feet. This structure now houses the main library; while the old structure is now shared between the Department of Archives and Special Collections and the bound retrospective journals. As of June 2003, the library had a total collection of 353,019 books and bound journals; 165,856 print and electronic books; 8,211 current print and electronic journal titles; and 6,060 media items. For more information consult <http://www.llu.edu/llu/library/about/libstats.htm>.

**Library mission**

The mission of the Library is to stimulate and support the information needs of the University's instructional, research, and service programs. To this end, the Library provides a full range of information-support services—including, but not limited to, reference, circulation, reserve, and access to the Internet. The Library also provides hundreds of online databases, including full text; end-user training programs; interlibrary loans; photocopy and pull services; a computer laboratory; class-integrated, library-instruction programs; and services that support distance education and University outreach programs.

**Access to resources**

The Del E. Webb Memorial Library's Online Public Access Catalog (OPAC) provides integrated access to all campus library collections. In addition to the collections of the Del E. Webb Memorial Library and of the JMLIC, there are Nursing Skills Lab, Bioethics, East Campus, Nutrition, Occupational Therapy, and Geoscience Research Center collections. The OPAC also provides access to the combined collections of some thirty-nine libraries through LinkPlus, a book-request service and union catalog of more than 8 million records.

The Library's Web site serves as a gateway to all electronic resources in our system, as well as those resources available on the Internet. The Library's databases provide access to more than 5,000 full-text and citation databases.

The Library participates in national and regional networks such as the National Network of the Libraries of Medicine, founded by the National Library of Medicine. This structure is divided into eight regional sections, one of which is the Pacific Southwest Region. The Del E. Webb Memorial Library belongs to this region and is the designated medical-resource library for San Bernardino and Riverside counties. Local library cooperatives include the Inland Empire Academic Library Cooperative (IEALC) and San Bernardino, Inyo, Riverside Counties United Library Services (SIRCULS). Membership in these cooperatives gives Loma Linda University students, faculty, and staff access to the collections of these libraries, archives, and special collections.

**Archives and special collections**

The Department of Archives and Special Collections is the central repository of information on the history of Loma Linda University, the health sciences, and major collections on Adventism. It includes print materials; rare books; theses; dissertations; microforms; sound recordings; several thousand photographs; and 14,000 linear feet of archival materials, including papers of various denominational and University officials, as well as the congressional papers of the Honorable Jerry and Shirley Pettis. Searchable digitized indexes for various document files are also available via the Library's Web site.

For additional information about school- or program-specific libraries/computer and research centers/learning resources, see the desired schools and programs in Sections III and IV of this CATALOG.

**ELLEN G. WHITE ESTATE  
LOMA LINDA BRANCH OFFICE**

Also located in the Library is a branch office of the Ellen G. White Estate. It contains 60,000 type-written pages of Ellen G. White's letters and manuscripts; 4,600 of her published articles; and several different files of materials pertaining to various aspects of her life and ministry. A computerized concordance to her published writings is available to researchers. A link to a bibliography of the variant editions of her works is available on the Library's home page.

**LEARNING RESOURCES: UNIVERSITY INSTITUTES AND SCHOOL RESEARCH CENTERS**

**O**n the campus many learning resources for the student offer various opportunities for academic study and research. Each school research center is listed under the school with which it is most closely affiliated.

**LLUAHSC INSTITUTES****Loma Linda University****Adventist Health Sciences Center**

- Loma Linda International Heart Institute
- Cancer Institute
- Transplant Institute
- Rehabilitation Orthopaedics and Neurosurgery Institute
- Behavioral Health Institute

**LOMA LINDA UNIVERSITY CENTERS**

- Center for Spiritual Life and Wholeness (under LLUAHSC)
- Center for Molecular Biology and Gene Therapy
- Center for Perinatal Biology
- Center for Health Research
- Center for Christian Bioethics

**School of Allied Health Professions**

- Center for Prehospital Care, Education, and Research

**School of Medicine**

- Center for Molecular Biology and Gene Therapy
- Center for Perinatal Biology

**School of Public Health**

- Center for Health and Development
- Center for Health Promotion:
- Center for Health Research

**Faculty of Religion**

- Center for Christian Bioethics
- Center for Spiritual Life and Wholeness (LLUAHSC)

# Admission Policies and Information

## PERSONAL QUALITIES

Loma Linda University was established to provide professional health education in a distinctively Christian environment that prepares well-qualified, dedicated Christian health-science professionals who are committed to fulfilling the mission of this University to serve humanity. Students at Loma Linda University are expected to uphold the Christian ethical and moral standards of this Seventh-day Adventist Church-related institution while on and off campus.

The University's emphasis on health and the health professions, as well as the practices of the supporting church, preclude admission of applicants who use tobacco, alcoholic beverages, or narcotics. The rights of the individual are recognized and respected; however, any conduct that is contrary to the principles governing a healthful and moral lifestyle is not acceptable for a Loma Linda University student. The prospective student has the freedom to accept or reject these principles and practices. However, once application is made to this University, it is assumed that the applicant has chosen to abide by them.

In selecting students for entrance to programs in the schools, the admissions committees look for evidence of personal integrity, academic achievement, healthy lifestyle, self-discipline, and self-direction. An applicant accepted to a school must possess capabilities to complete the full curriculum in the allotted time at the levels of competence required.

While preference is given to Seventh-day Adventist Church members, anyone interested in studying at Loma Linda University and willing to live by the institution's standards is encouraged to apply.

Some programs require an interview with faculty. Acceptance of an applicant into any curriculum is contingent on the recommendation of the department conducting the program.

## APPLICATION AND ADMISSIONS

### Where to write

It is important to know the specifics of the application process and to begin this process well in advance of the date of anticipated or desired entrance. Correspondence regarding application and admission should be addressed to:

Office of Admissions  
(School of choice)  
Loma Linda University  
Loma Linda, CA 92350

Application to a degree of certificate program can also be submitted online at <http://www.llu.edu/apply>.

### Where to call

For information about Loma Linda University, telephone inquiries may be made at 800/422-4LLU; dialing from Canada, please call 800/578-7114.

### Procedure

The applicant should complete the following application requirements:

- Complete and submit the application forms (preferably online at [www.llu.edu/apply](http://www.llu.edu/apply)) accompanied by the nonrefundable application fee. The following programs use external application services: medicine (MD), dentistry (DDS), and physician assistant (MPA).
- Submit recommendations from three people.
- Request that official transcripts of all college and professional course work be sent directly to the school to which admission is desired. High school transcripts are required for application to undergraduate programs.
- Take the appropriate admissions tests, as noted in the school and program sections of this CATALOG, and request that the results be sent to the school to which admission is desired.
- Provide health records or certificates, as required.
- Schedule an interview, if required by the school or program to which admission is desired.

### Application-review process

Online and paper applications are treated with equal care and attention. All completed applications are first reviewed by the department chair and faculty. A recommendation on each application is then submitted to the school's admissions committee, which makes the final decision regarding acceptance.

### Acceptance

Upon receipt of the notice of acceptance, the applicant should send a letter by return mail to confirm acceptance, along with the required nonrefundable deposit. This deposit is deducted from the tuition and fees due at the initial registration.

### Applicant's records

The application and all supporting records and documents become the property of the University.

## TRANSCRIPTS

### Incoming

Transcripts that convey the grade and credits earned in each subject taken at a college or university previously attended are required of all accepted stu-

dents. An applicant to a bachelor's degree program must also submit official transcripts of all high school work. The final transcript must include the date of graduation. The University accepts only official transcripts sent directly to Loma Linda University from the college, university, or high school issuing it. Transcripts submitted by the student are not considered to be official. At the time of registration, official transcripts should be in the admissions office of the school to which the applicant has been accepted.

Official educational transcripts (or mark sheets), degrees earned from international institutions, or professional credentials must be sent to an evaluation center approved by Loma Linda University. The center reports the evaluation results directly to the Admissions Office of the school to which the student has applied for acceptance.

Transcripts and evaluation results received by the University become the property of the University and will not be released to the student or forwarded to any other institution.

### Outgoing

The University provides transcripts to other institutions or to the student or graduate only upon written request of the student or graduate.

The University reserves the right to withhold all information concerning the record of any student who is in arrears in the payment of accounts or other charges, including student loans. No transcripts will be issued until all of the student's financial obligations to the University, as defined in this CATALOG, have been met.

## STUDY DEFERRAL

Applicants are accepted for a specified entering date. **A** If the applicant does not enter the program at the time stated for admission, the application will become inactive unless the school receives a written request to hold the application. Accepted applicants who wish to reactivate their acceptance at a later date must apply to the school for reactivation. Previous acceptance does not guarantee acceptance at a later time. Individuals must meet admission and graduation requirements that are in effect for the school year during which they first register.

## RE-ENTRANCE

**A** student who discontinues studies at the University for more than two quarters and wishes to return may be required to meet the entrance requirements effective at the time of re-entrance, unless a leave of absence has been granted. Fees are required for re-entrance applications, and supplementary documents may also be required. Specific information regarding the re-entrance process can be obtained from the Office of Admissions.

## PRE-ENTRANCE EXAMINATIONS

**O**fficial pre-entrance examination results, as required by each program, should be sent to the Office of Admissions of the school to which the student is applying for acceptance.

Applicants to the School of Medicine are required to take the Medical College Admission Test (MCAT) and have scores sent to the school's Office of Admissions through an application submitted to the American Medical College Admissions Service (AMCAS).

Applicants to the School of Dentistry are required to take the Dental Aptitude Test (DAT) and have scores sent directly to the school's Office of Admissions.

## TRANSFER CREDIT

Applicants must file with the school's Office of Admissions and Records complete records of all studies taken on the high school (undergraduate students only) and college levels. Transfer credit is defined as credit completed at another U.S.A. institution accredited with a regional or national association, or credit earned at an institution accredited by the Seventh-day Adventist educational system, or credit earned at an international institution recognized by its government. The University reserves the right to require an applicant to satisfactorily complete written and/or practical examinations in any course for which transfer credit is requested. Remedial, high school-level courses, and courses identified by the transfer institution's catalog as not applicable toward a baccalaureate degree are not accepted for transfer into an undergraduate program. Graduate transfer courses must be equivalent to courses appropriate to degree requirements.

### Junior colleges

A maximum total of 70 semester units or 105 quarter units of credit will be accepted from regionally accredited junior colleges. Subject and unit requirements for admission to the respective programs are outlined in Section IV.

### International

Credits submitted from a college outside the United States are evaluated on an individual basis by an evaluation center approved by Loma Linda University, which reports the evaluation results directly to the Office of Admissions of the school to which the student is applying for acceptance. It is the applicant's responsibility to contact an approved evaluation service and supply the required documents for evaluation.

### Professional schools

Credits earned in a professional school are accepted only from a school recognized by its regional or national accrediting association and only for a course that is essentially the equivalent of what is offered at this University or is substantially relevant to the curriculum.

### Military schools

Credit for studies taken at a military service school is granted to veterans according to recommendations in the *Guide of the American Council on Education*.

### Correspondence / Distance course work

Course work taken at an accredited school is ordinarily accepted. Home Study International, Silver Spring, Maryland, is the officially affiliated correspondence school for Loma Linda University.

## HEALTH / IMMUNIZATIONS

### Pre-entrance health requirements / Immunizations

It is expected that necessary routine dental and medical care and elective surgery will have been attended to before the student registers.

New students are required to have certain immunizations and tests before registration. Forms for a student's personal physician to use in documenting the completion of immunization requirements are provided in the acceptance packet sent to the student. In order to avoid having a hold placed on the registration packet, the student is encouraged to return the documentation forms in the provided envelope to Student Health Service no later than six weeks prior to the beginning of classes. The student must give evidence in the form of physician records or University health-service records for the items listed below before registration for the first academic quarter.

**NOTE: Charges for immunizations and tests completed at Student Health Service will be billed to the student's account.**

- Two MMRs-measles (rubeola), mumps, rubella (German measles)  
Immunizations must be current after 1980.
- PPD (TB) skin result or x-ray report.  
This test must be repeated at least yearly while a student, and more frequently if required for placement at a clinical agency site.\*  
If a returning student is assigned to a clinical facility that requires a tuberculosis skin test, then the student is required to have the test within the six months before the assignment begins.
- Tetanus/Diphtheria booster  
Must be current within ten years.
- Varicella (chicken pox) blood test and/or immunization  
If no known history of chicken pox, student will need to provide proof of a positive titer or of a completed series of two vaccinations.
- Hepatitis-B vaccination series  
Students who have had hepatitis-B in the past should employ extra protection when involved in direct patient care and may request a modified curriculum, if necessary. This series of three vaccinations may be completed at this University even if it was begun elsewhere.

For further information, consult the Student Handbook-University Policies: Communicable disease transmission prevention policy; and the Student Health Service office, extension 88770.

\*School of Dentistry applicants only.

## COMBINED-DEGREES PROGRAMS

Information regarding combined-degrees programs—their curricula, pre-entry requirements, distribution of instruction, graduation requirements, finances, etc.—may be obtained from the schools and program directors responsible for the programs. See Section III of this CATALOG for combined-degrees program options.

## ADMISSIONS CLASSIFICATIONS

Applicants are admitted under one of the following classifications and must be approved for acceptance by the department(s) in which they propose to do their major concentration. Acceptance into a specific program is required before any credit earned can be applied to a degree or certificate.

### Regular

Regular status is given to a student who has met all entrance requirements and is registered for a standard course of study leading toward a degree or certificate in one of the schools of the University.

### Provisional

Provisional status may be given to a student who has been accepted for admission but has not yet received regular status, either because of qualitative or quantitative deficiencies in the academic record; or because qualification for regular status has not yet been adequately documented.

### Nondegree

Nondegree status may be granted to a student who has not been admitted to a degree or certificate program but who is registered for selected courses in one of the schools of the University. Nondegree students are limited to a total of 12 units cumulative of courses that are applicable to a degree program at this University.

### Continuing education (CE)

Continuing education status is given to a student who is registered for a continuing-education course.

## ADVISEMENT

Upon admission into a degree program, each student is assigned an academic adviser--a faculty member in the student's major department who serves as the student's first line of communication in addressing professional and personal successes and potential challenges. Faculty advisers are prepared to discuss career opportunities, academic policies, academic problems, curriculum, and personal circumstances.

It is the student's responsibility to consult with his/her adviser in planning the program of study. Thereafter, advisees should schedule counseling sessions with their advisers to monitor progress and assure completion of degree requirements. When questions arise relating to curriculum or policy requirements, students should always refer first to the CATALOG and their own program curriculum outline. Next, they may seek counsel from their academic adviser. Questions arising after discussion with the adviser should be referred to the department chair or the academic dean.

Orientation and advisement sessions are scheduled for all new students. These sessions provide general guidance regarding student services, health care, library resources, safety and security, registration procedures, and academic policy.

## INTERNATIONAL STUDENTS

International applicants (non-U.S. citizens and non-U.S. permanent residents) must meet all admissions requirements for the chosen program, provide suitable

recommendations, meet minimum pre-entrance examination requirements, furnish English evaluations of all official foreign transcripts and credentials, and give evidence of their ability to meet estimated living expenses and all financial obligations to the University during their program.

### English proficiency

Regardless of nationality or citizenship, an applicant whose native language is not English and whose secondary education has been outside the United States is required to pass the Michigan Test of English Language Proficiency (MTELP) or the Test of English as a Foreign Language (TOEFL), or their equivalents. It is recommended that prior to admission, all professional programs require the Test of Spoken English (TSE) of all applicants whose native language is not English.

The minimum total score requirements are as follows for TOEFL, unless adjustments are made at the discretion of the individual school:

- undergraduate, 173 (paper based = 500) required of applicants to programs that do not include a clinical component and/or do not lead to licensure in the United States, with a goal of 200 (paper based = 533) upon graduation from a baccalaureate degree program;
- undergraduate, 213 (paper based = 550) required of applicants to programs with a clinical component and/or programs leading to licensure in the United States;
- graduate, 213 (paper based = 550).

For the Michigan test, requirements are as follows: undergraduate, a minimum score of 90th percentile; graduate (humanities and social sciences), 90th percentile and above; graduate (science), 85th percentile and above. Test of Written English (TWE), a minimum score of 5; Test of Spoken English (TSE), a minimum score of 50.

### Pre-entrance examination results

Official pre-entrance examination results, as required by each program (e.g., TOEFL), should be sent directly to the Office of Admissions of the school to which the student is applying for admission.

### Foreign transcripts and credentials

Official foreign degrees, professional credentials, and educational transcripts (or grade sheets or grade reports) must be sent to an evaluation center approved by the National Association of Credential Evaluation Services, Inc. The center reports the evaluation results directly to the Office of Admissions of the school to which the student is applying for acceptance.

### Finances and employment

Loma Linda University requires accepted international applicants to pay an advance international student deposit. This deposit is refundable, less any courier/ mailing fees, under the following circumstances: 1) during the student's last quarter of enrollment at Loma Linda University, 2) when a visa is denied by a U.S. embassy or consulate, or 3) when a student terminates his/her program.

United States immigration regulations require a prospective student to document his/her financial resources for tuition, fees, and living expenses. For international students, on-campus employment is

allowed but limited by visa regulations (e.g., for F-1 and J-1 students, employment is limited to a maximum of twenty hours per week while school is in session). Scholarships, assistantships, and living stipends are rarely available at Loma Linda University because it is a small, private university (i.e., not supported by the U.S. or California state government but rather is church sponsored). Employment plans require approval by a designated school official (DSO) in International Student and Scholar Services.

## VISAS

### F-1 student visas

Loma Linda University is authorized by the United States Department of Homeland Security to issue F-visa applications (i.e., I-20 forms). The F-1 student visa is the visa of choice for most international students coming to Loma Linda University. This visa allows some nondegree study (e.g., certificates, preceptorships, and English-as-a-second-language studies). Degree-earning students are subject to study-load requirements and are allowed limited on-campus employment. The I-20 is issued after a student has been accepted into a program, has paid the advance deposit, and has documented his/her financial plan for the chosen program. International Student and Scholar Services can be contacted at 909/558-4955 for further information regarding F-1 student visas and the regulations governing these visas.

### J exchange-visitor's visas

Loma Linda University has an Exchange Visitor Program that is approved by the U.S. Department of State. This J-visa exchange program is authorized to sponsor/host degree-earning students, nondegree (continuing education) students, short-term scholars, visiting professors, and research scholars. The J-visa form, DS-2019, is issued after an exchange visitor has been accepted into a program, scholar position, or professor position; and has documented his/her financial plan (including health insurance for J-1 and J-2 dependents) for the chosen program.

Loma Linda University also hosts exchange visitors who are sponsored by other organizations (e.g., Fulbright scholars). As a hosting institution, Loma Linda University has limited authority over an exchange visitor since the authority resides in the sponsoring organization.

Under current exchange-visitor regulations, J-2 dependents are allowed to enroll part or full time at Loma Linda University. Also, their credits earned can be either degree or nondegree applicable.

J-1 exchange visitors are allowed to work; but employment guidelines differ, depending on the exchange category. Contact International Student and Scholar Services at 909/558-4955 for further information and regulations governing the Exchange Visitor Program.

### Other visas

Internationals may enter the U.S. on a wide variety of visas. However, a visa may have to be changed before a student can commence academic studies at this University. For further information regarding regulations and study options for specific visa types, contact International Student and Scholar Services at 909/558-4955.

### Transfer students

International students currently attending other schools in the United States who have either an I-20 or a DS-2019 and who wish to attend Loma Linda University must do a school-to-school transfer. The timing of a transfer is critical in order to maintain visa status; therefore, it is important to consult with an international adviser as soon as the acceptance letter is received.

### Study load

Both the F- and J-student-visa regulations require the successful completion of a full study load during each quarter of each academic year (as defined by each program). A minimum of 12 units per quarter is usually considered full time for an undergraduate program; 8 units per quarter is considered full time for a graduate program. In any quarter in which there will be a reduced study load, prior approval is needed from an international student adviser in International Student and Scholar Services.

# Division of General Studies

## GENERAL EDUCATION REQUIREMENTS

The Division of General Studies offers general education courses that contribute to the fulfillment of requirements that apply to the Bachelor of Science degree programs in the Schools of Allied Health Professions, Dentistry, Nursing, and Public Health. In addition, these Schools offer a variety of general education courses that are open to students across all Schools. The Division of General Studies also provides oversight for courses that may be selected to enrich a student's academic experience, but which do not fulfill Loma Linda University general education requirements.

## LOMA LINDA UNIVERSITY PHILOSOPHY OF GENERAL EDUCATION

As a Seventh-day Adventist health-sciences institution, Loma Linda University seeks to exemplify a life of service and sensitivity beyond the requirements of academic excellence within a professional discipline. With its rich spiritual heritage, the University places special emphasis on educating its students for a life of service in a global community.

General education at Loma Linda University consists of courses, lectures, programs, and activities coordinated with the intent to integrate faith and learning. In addition to the basics of cultural heritage and diversity, scientific inquiry and analysis, communication, and wellness, the curriculum emphasizes the University's spiritual heritage as well as moral and ethical decision-making that is grounded in Christian principles.

Thus, a general education is considered to be the cornerstone upon which students begin cultivating their abilities to:

1. Understand the fundamental Christian principles and Adventist heritage that undergird Loma Linda University.
2. Make informed moral and ethical decisions.
3. Incorporate critical thinking skills into personal and professional experience.
4. Value individuals with diverse capabilities and ideological, ethnic, gender, and generational perspectives.
5. Communicate effectively.
6. Undertake scientific inquiry and analysis.
7. Appreciate the contributions of the arts and humanities to society.
8. Examine the historical basis of the health sciences professions.
9. Develop self-awareness through balance of mental, physical, social, and spiritual aspects of daily living.
10. Model servant-leadership in health care as exemplified by Jesus of Nazareth.

The Loma Linda University philosophy of general education creates a unique learning environment committed to the concept of human wholeness. Faculty are selected who embrace the spirit as well as the specifics of general education and who purpose to extend its goals into all aspects of university life—from the residence hall programs to the core of professional studies—thus adding an invisible curriculum to the required course offerings. It is this spirit in tandem with the specifics of a liberal arts education that inspires students to achieve academic excellence, value diversity, pursue lifelong learning, and live to bless others.

### LOMA LINDA UNIVERSITY CRITERIA FOR GENERAL EDUCATION COURSES

1. The course assists the health-sciences student in cultivating abilities in one or more of the ten aspects described in the Loma Linda University Philosophy of general education for baccalaureate degrees.
2. The primary focus of the course contributes to the relevant knowledge and understanding of a subject area within one of the following domains described in the Loma Linda University general education requirements for baccalaureate degrees.
3. The course is based on appropriate prerequisites, particularly when offered at the upper-division level.
4. The course must be open to all baccalaureate degree students of Loma Linda University for general education credit.
5. Courses transferred to Loma Linda University for general education credit from another accredited institution must fall within one of the domains described in the Loma Linda University's general education requirements for the baccalaureate degree.
6. No credit will be granted for courses taken elsewhere that are similar to courses offered at Loma Linda University.

### LOMA LINDA UNIVERSITY GENERAL EDUCATION REQUIREMENTS (68 QUARTER CREDITS)

In harmony with its commitment to wholeness, Loma Linda University requires all students graduating with a baccalaureate degree to complete a minimum of 68 quarter credits of general education, which are integrated into the entire undergraduate program. Requirements are organized into five domains, as outlined in the following:

#### DOMAIN 1: SPIRITUAL AND CULTURAL HERITAGE (28-32 quarter credits)

Study of spiritual heritage must include a minimum of 4 credits in religious studies per year of full-time course work (or the equivalent) while attending a Seventh-day Adventist college or university and must include a religion course dealing with the spiritual heritage of the philosophy and mission of Loma Linda University. Four of the units in religious studies may include a course dealing specifically with the religious, moral, and ethical questions of health care. Other courses may be selected from

such content areas as Christian ethics; clinical ministry; comparative religions; and doctrinal, historical, and systematic theology. Required credits in spiritual heritage must be earned from a Seventh-day Adventist institution.

As of June 2004, the study of cultural heritage must include a minimum of 12 credits. The credits in cultural heritage must be selected from at least three of the following content areas: civilization history, fine arts, literature, modern language, performing/visual arts (not to exceed 4 quarter credits), or philosophy.

#### DOMAIN 2: SCIENTIFIC INQUIRY AND ANALYSIS (24-32 quarter credits)

Scientific inquiry and analysis encompass both the natural and social sciences. The study of natural sciences must include a minimum of 12 credits. The credits in natural sciences must be selected from two of the following content areas: biology, chemistry, geology, mathematics, physics, and statistics.

The study of social sciences must include a minimum of 12 credits. One course (or components integrated into several courses) dealing specifically with issues of human diversity is required). The remainder of credits in the social sciences must be selected from the following content areas: anthropology, economics, geography, political sciences, psychology, and sociology.

#### DOMAIN 3: COMMUNICATION (9-13 quarter credits)

Course work in communication must include a complete sequence in English composition that meets the baccalaureate degree requirements of a four-year college or university. (For samples of English composition requirements, see end of this section.) Other areas of study in communication may include courses in computer information systems, critical thinking, and public speaking.

#### DOMAIN 4: HEALTH AND WELLNESS (2-6 quarter credits)

To encourage the pursuit of lifelong leisure activities and wellness, the study of health and wellness must include at least two different physical activities totaling a minimum of 1 quarter credit, and one course in personal health or nutrition. Additional credits may include other areas of health, nutrition, and physical fitness.

#### DOMAIN 5: ELECTIVES

Electives from the previous four domains may be selected to complete the general education minimum requirements of 68 quarter credits.

### LOMA LINDA UNIVERSITY GENERAL EDUCATION COURSES OFFERED BY THE SCHOOLS

General education courses offered by the schools are listed below in Domains 2-5.

#### DOMAIN 1: CULTURAL AND SPIRITUAL HERITAGE (28-32 quarter credits) CULTURAL HERITAGE

##### ARTA 205 The Language of Art (2-4) ST

Basic concepts, materials, and history of the visual arts that will enable the nonart major to develop an art vocabulary and gain insight into the creative process.

**CHIN 105 Chinese Civilization: Introduction to Chinese Studies (4)**

A survey course of Chinese language, literature, history, geography, culture, politics, economics, philosophies, and religions.

Prerequisite: No knowledge of the Chinese language is required. No prerequisite for enrolling in this introductory course.

**CHIN 106 China Today—Its Language and Culture**

Introduces the important aspects of Chinese civilization. Discusses Chinese language, literature, history, geography, culture, modern-day politics, economics, philosophies, and religions up to 1949. Surveys the Mandarin Chinese language, focusing on basic pronunciation, grammar, traditional and simplified written characters, sentence construction, and common communication in modern-day situations. Prepares student for further Chinese studies and research.

Prerequisite: No knowledge of the Chinese language is required.

**CHIN 111 Language: Mandarin I (4)**

Focuses on the study of modern-vernacular Mandarin Chinese in both spoken and written form. Full attendance is expected.

Prerequisite: No knowledge of the Chinese language is required.

**CHIN 112 Language: Mandarin II (4)**

Continues the study of modern-vernacular Mandarin Chinese in spoken and written forms. Culminating activity—in Mandarin Chinese—includes a simple speech presented in class and a short, written narrative.

Prerequisite: CHIN 111.

**CHIN 205 Immersion Language-and-Culture Program (4)**

Integrates language and culture with a domestic or an international service project within a Chinese community. Cultural immersion, with eighty clock hours of service learning, gives students an educational “China experience” firsthand.

Prerequisite: Language/culture course such as CHIN 105, 106, or 111.

**CHIN 206 Health Care Service Learning in a Chinese Context (4)**

Focuses on an international service-learning project within a Chinese community. Classroom lectures applied to a health-exposition project. Language and culture immersion, with practical learning, while serving people’s needs.

Prerequisite: Language/culture course such as CHIN 105, 106, or 111.

**CHIN 305 Mandarin for Health Care Professionals (2)**

Student listens to, speaks, writes, and reads Mandarin Chinese in a health care-related setting. Reading includes medical records written in Mandarin Chinese.

**DNHY 408 Professional Ethics (2)**

Develops understanding of hygienist’s obligations to the public and to his/her professional association. Defines the ethical and mature conduct expected of professional health care providers. Compares and contrasts professional ethics and personal morality as they relate to dental hygiene practice.

**DNHY 409 Jurisprudence (2)**

Laws and regulations that govern the practice of dental hygiene, with special emphasis on California regulations. Standards of government regulations. Obligations of the hygienist to the public and to his/her profession.

**ENGL 111, 112, 113 English Composition (3, 3, 3)**

Reading skills and techniques; practice of written communications, with emphasis on expository, critical, argumentative, and research writing. (Available only at international program sites.)

Prerequisite: Grade of C or better in ESL courses, or satisfactory performance on a placement test.

**ENGL 206 Introduction to Literature (4)**

Introduces reading and analysis of major literary genres: poetry, drama, short story, and essay.

**ENGL 246 Literary Forms and Ideas (4)**

Varied content from quarter to quarter, with specific areas listed in the class schedule (such as drama, the short story, contemporary literature, women in literature, C. S. Lewis). May be repeated with new content for additional credit.

**ENGL 478 Theory and Applications of Linguistics (4)**

Introduces general linguistics. Covers the core linguistic areas of syntax, phonetics, phonology, morphology, and semantics; also peripheral linguistic areas such as sociolinguistics, pragmatics, and psycholinguistics.

**MUHL 205 Introduction to Music (4)**

Basic music literature, with some attention to other arts.

**SPAN 118 Spanish Literature I (2)**

Survey of the literature of the Spanish world, with emphasis on specific authors, countries, or periods. Review of historical conditions. Discussion of worldview issues and cultural diversity.

**SPAN 119 Spain—Culture and Civilization (2)**

Introduction to and review of the culture and language of Spain. Also a summary and analysis of Spain’s achievements in the New World.

**SPAN 122 Tradition and Paradox in Latin American Women (2)**

Utilizes literature to acquaint health care providers with the growing Latina population; to examine their culture, needs, and experiences in social, academic, and family life; and to reveal their anger, fear, and frustration, as well as their vibrant sense of self worth. Analyzes the role of Latinas in their complex interplay of gender, ethnicity, and social status, and how they strike a balance between their old and new worlds.

**SPAN 123 Practicum in Spanish for the Professions—Mexico/Spain (3-4)**

Practicum in conversational Spanish within the patient-practitioner context. Supervised communication with Spanish-speaking patients in the various settings of the behavioral sciences professions. A 7-15-day field trip to Mexico that will include patient-practitioner encounters in the context of the professions. Also, 3-week field trips to Argentina and Spain.

**SPAN 424 Advanced Spanish (medical and general) (3)**

Enables students and professionals (including medical students and health care professionals) to communicate in the Spanish language with Spanish-speaking patients in settings such as hospitals, clinics, and offices. Covers beginning- to advanced-level grammar, as needed, for basic understanding of the language. Focuses on conversational skills rather than on the conventional study of grammar.

**SPIRITUAL HERITAGE**

LLU Faculty of Religion general education Spiritual Heritage courses are online at [www.llu.edu/ssweb/](http://www.llu.edu/ssweb/) > Course Schedules > General Education Brochure and Course Descriptions > DOMAIN I > Spiritual Heritage courses (pages 3-5).

**DOMAIN 2: SCIENTIFIC INQUIRY AND ANALYSIS (24-32 quarter credits)****NATURAL SCIENCES****AHCJ 235, 235L Essentials of Human Anatomy and Physiology, Lecture and Laboratory (4, 1)**

Study of the structure and function of the human body, including organ systems. Lectures and demonstration laboratory. (Prerequisite to many certificate and associate degree programs, e.g., coding specialist/certificate, occupational therapy assistant/A.A.).

**AHCJ 241, 242 Microbiology (2, 2)**

Designed for students in the health sciences. History, classification, morphology, growth, control, transmission, and pathology of selected bacteria, viruses, fungi, rickettsia, and parasites. Host defenses against microbial pathogens, including specific and nonspecific immunity. Lecture, 30 hours; laboratory, 30 hours. Course covers two quarters. Grade given upon completion of the 242-242 sequence.

Prerequisite: A college-level chemistry course.

**AHCJ 250, 251 Anatomy and Physiology (4, 4)**

An 8-unit course (4 units Winter Quarter plus 4 units Spring Quarter) which covers structure and function of human biology. For students entering two- and four-year health professional programs such as physical therapy, occupational therapy, cardiopulmonary sciences, speech-language pathology and audiology, radiation technology, nursing, and other programs with an anatomy and physiology prerequisite.

**AHCJ 351 Statistics for the Health Professions (3)**

Fundamental procedures in collecting, summarizing, analyzing, presenting, and interpreting data. Measures of central tendency and variation, probability, binomial and normal distribution, hypothesis testing and confidence intervals, t-tests, chi-square, correlation, and regression. Introduction to SPSS statistical package for computer data analysis.

**AHCJ 402 Pathology I (4)**

Fundamental mechanisms of disease, including cell injury; inflammation, repair, regeneration, and fibrosis; vascular, cardiac, respiratory, gastrointestinal, hepatobiliary, urinary, reproductive, endocrine, and integumentary pathologies.

**AHCJ 403 Pathology II (3-4)**

3 units: Fundamental mechanisms of disease, including the central and peripheral nervous systems, bone and joint, skeletal muscle, developmental, genetic, infectious, and parasitic pathologies; and neoplasia.

4 units: Additional unit requires two autopsy viewings and written report.

Prerequisite: AHCJ 402.

**AHCJ 418 Physiology I (4)**

Physiology of the human body, including cellular, neuromuscular, cardiovascular, respiratory, gastrointestinal, renal, and endocrine physiology.

**AHCJ 419 Physiology II (3)**

Detailed study of neuromuscular physiology.

**AHCJ 461 Research Methods (2-3)**

Introduction to the scientific method in research. Focuses on the major steps of the research process as these steps relate to research-report evaluation, proposal writing, literature review, development of conceptual framework, identification of variables, statement of hypotheses, research design, and analysis and presentation of data.

Prerequisite: AHCJ 351.

**BCHM 306 Introduction to Organic and Biochemistry (6)**

Meets the organic and biochemistry requirements of nursing and allied health students. Covers the nomenclature, structure, and salient chemical properties of the nine classes of organic compounds; as well as the structures and biological functions of proteins, carbohydrates, lipids, nucleic acids, and intermediary metabolism. Emphasizes relevant health-related topics.

**DNHY 390 Introductory Statistics (3)**

Fundamentals of statistical analysis and critique of research data in scientific literature and in student research projects. Inferential and descriptive statistics, frequency distribution, histograms, bar graphs, and statistical tests. Laboratory computer practice in preparing and analyzing research data.

**DNHY 421 Research I (2)**

Introduction to research methodology. Evaluation of literature, with emphasis on statistics adequate for interpretation of the literature. Preparation for table-clinic presentations.

**ENVH 414 Introduction to Environmental Health (3)**

Introductory overview of the major areas of environmental health, such as ecology, environmental law, population concerns; environmental diseases and toxins; food, water, and air quality; radiation; noise; and solid and hazardous waste.

**EPDM 414 Introduction to Epidemiology (3)**

Distribution and determinants of health events in human populations. Assessments of environmental conditions, lifestyles, and other circumstances influencing disease. Measures of disease occurrence and frequency and use of these measures in health care. Major types of epidemiological investigation. Interpretation of statistical associations.

Prerequisite: STAT 414.

**SPPA 304 Hearing Science (4)**

Introduction to basic theories and laboratory exercises in acoustics, psychoacoustics, and physiological acoustics.

**SPPA 376 Anatomy of Speech and Hearing Mechanism (4)**

Anatomy and physiology of auditory-vocal communicative process.

**STAT 414 Introduction to Biostatistics I (3)**

Fundamental procedures in collecting, summarizing, presenting, analyzing, and interpreting data. Measures of central tendency and variation. Investigation of binomial and normal probability distributions. Topics include: probability; confidence intervals; and hypothesis testing using t-tests, chi-square, correlation, and regression. Brief introduction to ANOVA and multivariate analysis. Emphasis on practical application. Laboratory use of the personal computer in statistical problem solving.

Prerequisite: Competency in algebra.

**STAT 415 Computer Applications in Biostatistics (1)**

Laboratory use of the personal computer in statistical problem solving. Prerequisite or concurrent: STAT 414 or equivalent.

**STAT 464 Survey and Advanced Research Methods (4)**

Principles and procedures of surveys as applied to health sciences. Survey and research designs, questionnaire construction, interviewing techniques, sampling techniques, sample-size determination, nonresponse problems. Data collection, coding, processing, and evaluation.

Presentation of results. Practical experience gained by completing a survey project. Cross-listed as STAT 564.

Prerequisite: STAT 414 or equivalent.

**SOCIAL SCIENCES**

**AHCJ 305 HIV/AIDS and the Health Provider (1)**

Current issues on HIV/AIDS, with special emphasis on the epidemiology and etiology of the disease. Psychosocial, economic, ethical, and legal concerns. Education for prevention and impact on the health care worker. Resources available. Risk factors and precautions for blood-borne pathogens, HIV, hepatitis, and tuberculosis.

**AHCJ 324 Psychosocial Models and Interventions (2)**

Orientation to the major models in psychology and how they relate to medical care. Development of a psychological model for interpretation of needs of the person in crisis. Understanding the roles of psychiatrists, psychologists, social workers, and family therapists. Suicide intervention. Critical-incident debriefing. Support factors in providing temporary, adequate psychological care for all involved in medical crisis.

**AHCJ 328 Portfolio Practicum I (1)**

Introduction to the goals for a graduate of Loma Linda University. Students demonstrate progression towards effective communication, teamwork, support of diversity, ethical behavior, appreciation of human worth, balanced work-rest-leisure within a spiritual atmosphere, and commitment to long-term personal and professional growth.

**AHCJ 407 Financial Management (2)**

Financial aspects of health care involving prospective reimbursement system, analysis of various health-care reimbursement schemes, and hospital financial disbursements. Budget variance analysis, analysis of cost components, operating statements, and productivity related to department budget. Special projects may be assigned as needed.

**AHCJ 408 Health Care Management (4)**

Management theory: planning, organizing, directing, and controlling (including budgetary controls). Department productivity and theories of work simplification.

Preparation of resumes, interviewing skills, professional attitudes, group theory, and group dynamics. Students spend the last two to three weeks doing special projects designed and supervised by their departments.

(Department of Nutrition and Dietetics students register for a 2-unit practicum in conjunction with this course.)

**AHCJ 415 Educational Psychology for Health Professionals (3)**

Psychological factors relating to learning processes in professional and higher education. Emphasis on the role of communication skills in learning settings, gender influences on learning, objective setting and course design, stimulating higher-level thinking, motivation, and retention.

Prerequisite: AHCJ 409.

**AHCJ 421 Psychology of Physical Disability (2)**

Psychological reactions to illness or disability. Methods of dealing with these reactions considered with reference to the clinical situation. Seminar approach to professional responsibilities for health care.

**AHCJ 498 Portfolio Practicum II (1)**

Continued progress towards the goals for a Loma Linda University graduate.

1 unit: Development of portfolio that illustrates the potential graduate's ability to meet the goals set by SAHP for graduates of baccalaureate and master's degree programs.

2 units: Requires a research abstract. Course covers three quarters (AU, WN, SP). IP grade will carry through each quarter until completion of third quarter, at which time grade is issued.

**ANTH 304 Biocultural Anthropology (4)**

*(meets diversity requirement)*

Explores the interaction between biology and culture in producing the variations in physical traits currently found worldwide. Examines processes of change resulting from heredity, ecological adaptation, dietary differences, mate selection, disease, and other factors. Examines the problems of paleo-pathology (disease in ancient populations), human-kind in the fossil record, and the place of biological and ecological factors in the fall of ancient civilizations. Detailed consideration of scientific and social bases for popular conceptions of "race."

**ANTH 306 Language and Culture (4)***(meets diversity requirement)*

Surveys anthropological linguistics and sociolinguistics. Considers the place of language and communication in social interaction. Introduces descriptive and structural linguistics and discourse analysis. Examines linguistic pluralism in the United States. Contrasts language of health care givers with the language styles of people they serve. Language productions such as folklore, humor and other forms of “word play,” curses and blessings, and glossalalia.

**ANTH 315 Cultural Anthropology (4)***(meets diversity requirement)*

Advanced course in ethnology and social organization. Explores the nature of culture, giving special attention to such features as technology, economic activities, community organization, kinship and marriage, social control, magic and religion, the arts, and other forms of cultural behavior. Presents a wide array of examples from societies around the world.

**ANTH 316 Archaeology (4)**

Studies principles of archaeological research and the discoveries of centers of civilization in the Middle East, the Mediterranean, the New World, the Far East, Africa, and other parts of the world—particularly recent discoveries. Also covers the main features of biblical archaeology. Some attention given to research into prehistoric cultures.

**ANTH 436 Cultural Contexts of Religion (4)**

Anthropological approach to the study of religious beliefs and practices, focusing on the diversity of religious expressions that can give insight into what makes humans human and how the frailties of humanity can be overcome. Promotes empathy with people from cultural and religious traditions other than one’s own, as well as tolerance and even respect for their differences.

**ANTH 448 Medical Anthropology (4)***(meets diversity requirement)*

Studies sickness and health as universal factors in the human condition. Examines world view as an explanatory system for human behavior, giving ethnographic examples of curing systems and coping mechanisms. Deals with cross-cultural communication of health principles and practices.

**DNHY 414 Personal Finance (2)**

Personal finance topics, including credit, taxes, insurance, real estate, budgeting, housing, and inflation.

**HADM 444 Financial Accounting for Health Care Organizations (3)**

Fundamentals of preparing and understanding financial statements. Emphasis on relationships between the balance sheet, income statement, and cash flow statement. Generally accepted accounting terminology.

**HPRO 431 Psychology and Sociology of Sport (3)**

The role, effect, and importance of sport in society. Psychological principles that motivate individuals to initiate and continue sport activities.

**PSYC 224 Developmental Psychology: Childhood/Adolescence (3-4)**

Physical, mental, emotional, social, and religious/moral development that occurs within the family context during the interim from conception through adolescence. Observations and/or laboratory experience.

**PSYC 226 Life-Span Development (4)**

Life-span course emphasizing the physical, mental, emotional, social, and religious/moral development from conception through adulthood, aging, and death.

**PSYC 305 Psychological Foundations of Education (4)**

Studies psychological development as it relates to the learning process and to evaluation techniques for learners in the elementary and secondary schools.

Prerequisite: General psychology.

**PSYC 404 Psychological Tests and Measurements (3)**

Develops competencies and understandings for selecting, administering, and interpreting the major types of standardized tests and inventories used in psychology and education. Presents theoretical principles and issues together with hands-on applications. Practicum required.

**PSYC 405 Psychology of Human Relations (2-3) PER GH**

Human relations for career and personal success. Topics include the effective use of human resources, communication, leadership skills, decision making, stress management, assertiveness training, managing conflicts, career development, and achieving balance.

**PSYC 414 Interviewing and Counseling (4)**

Procedures, methods, and problems of collecting personal data in a professional interview situation. Theories and techniques of academic, vocational, and therapeutic counseling in various settings designed to improve intra- and interpersonal behavioral patterns for more effective living. Consideration of clinical, educational, and crisis-intervention counseling application.

**PSYC 460 The Exceptional Individual (3)**

Study of the determinants, characteristics, problems, and adjustments of individuals who deviate markedly from the norm in their mental, physical, emotional, or social aptitudes, traits, and tendencies. Emphasis on education and career planning. Open only to postbaccalaureate students and to upper-division undergraduate students.

**PSYC 479 Human Neuropsychology (4)**

Introduction to brain-behavior relationships, including cerebral asymmetry, disconnection syndromes, disorders of memory and language, biological substrates of affective behavior, motor and perceptual dysfunction, and drug actions.

**SOCI 104 Introduction to Sociology (4)**

Introduces the scientific study of human society and behavior in social settings. Course topics include: sociological theory and research, culture and social structure, socialization, groups and organizations, social problems, social institutions, and social change. Assists the student in achieving a greater understanding of self and society, and preparing for successful personal and professional life.

**SOCI 414 Sociology of the Family (4)**

Study of the structure, function, and changing patterns of families in society; the relationships between family problems and changes in society, and their impact on children.

**SOCI 477 Intervention Strategies for At-Risk Youth (4)**

Psychological and spiritual intervention strategies for working with at-risk youth, taught within the environment of nature retreats known as Operation Jessica. Theory-based topics covered include dangerous coping methods, spiritual deficiencies, and dysfunctional family systems of at-risk youth. Additional focus on understanding gang culture, addictive processes, family and community violence, and spiritual recovery strategies.

**SPPA 377 Bilingualism and Biculturalism I (2)**

Explores theories and issues of bilingualism and biculturalism, introducing literature that gives insights into the experiences and achievements of minority college students and young adults. Opportunity for students to examine their personal identity and competence when faced with another culture or language. Explores various bilingual or dual-language educational practices and their potentials based on psycholinguistic models.

**DOMAIN 3: COMMUNICATION**

(9-13 quarter credits)

**AHCJ 308 Professional Communications (1-2)**

Forms of written and verbal communication routinely required in the performance of the health care-manager's duties. Projects include memos, letters, confidential FAX cover design, short reports, meeting notices, minutes, and creation of an agenda.

**AHCJ 311 Medical Terminology (1-2)**

Language of medicine, including word construction, definitions, and the use of terms related to medical science. Course organized by body systems.

1 unit: includes four body systems with weekly quizzes and a final comprehensive examination.

2 units: includes six body systems with evaluation in the form of homework, weekly quizzes, and midterm and final examinations.

**AHCJ 331 Personnel Management (3)**

Theory and practice of the management of people at work. Organizational behavior concepts and the problems of employee procurement, training, and motivation. Job evaluation, wage administration, employee benefits, and negotiating with labor unions. Preparation both for managing people and directing a department in a complex organization.

**AHCJ 405 Dynamics of Learning and Teaching (1-3)**

2 units: Examination of the theories of learning applied to teaching process. Includes evaluation of current research and methods of instruction.

3 units: Includes requirements for 2 units plus a referenced research paper.

**AHCJ 409 Adult Learning Styles (3)**

Theories and styles of learning, personality factors relating to learning, implications of effective intellectual, emotional, and social functioning included within the context of structuring education for the adult learner. Analysis of the teaching process from setting of objectives, selection of content, and design of classroom and clinical teaching strategies, with emphasis on alternatives to lecturing.

**AHCJ 426 Introduction to Computer Applications I (2)**

Hands-on instruction in Word, Excel, and PowerPoint. Lectures, laboratory, assignments, quizzes, projects, and a written and practical examination. Required number of units determined by challenge test given by instructor. 3 units.

**AHCJ 432 Database Management II (2-3)**

Theories and steps of database development using Microsoft Access. Topics include but are not limited to relationships, form building, advanced queries, reporting, and macros. Required project creating a basic medical-information database from scratch.

Prerequisite: AHCJ 431 or consent of instructor.

**AHCJ 433 Special Projects in Computer Applications (1-3)**

Computer systems and applications designed to the specific professional needs and interests of the student. Emphasizes use of databases with health care data and on-systems design, as needed.

Prerequisite: AHCJ 431, 432.

**AHCJ 464 Group Process and Dynamics (3)**

Introduction to principles and techniques of group theories, processes, and dynamics, as applied to the health professional setting. Concepts include group functions, roles, structures, and characteristics; group membership, norms, dynamics, and relations. Theoretical perspectives on group development, dynamics, and conflicts. Practical issues, including educational applications, negotiation, observation, and diagnosis. Leadership issues, facilitation, expedition, and termination. Simulation exercises, active learning, and flexible choices of study and application.

**AHCJ 465 Seminars in Leadership (2)**

Seminar in contemporary leadership topics designed to prepare graduates for entry into the new work requirements. Through observation and participation, students explore the responsibility of the employee of today for successful integration into customer and community service and social responsibility.

**DNHY 499 Research Writing (2)**

Elective course for students wishing to write their research study for submission to professional journals for possible publication.

**HPRO 443 Writing for Publication (2)**

Writing by health professionals for popular, lay, or professional publications. Selection of journal or magazine, writing of query letter, preparation of abstract and manuscript in final form for submission. Includes preparation of camera-ready art. Not a remedial writing course.

**SPPA 217 Beginning Sign Language (3)**

Focus on learning American Sign Language (ASL) for conversational purposes. Students learn finger-spelling, acquire a sign vocabulary of approximately 500 words, and explain and demonstrate the basic grammatical rules of ASL. Opportunity to use ASL with native signers. Students discuss ASL in contrast to the various sign systems currently being used in educational settings in this country.

**STAT 439 Fundamentals of Microcomputer Usage (1)**

Fundamental principles of microcomputer use, and introduction to DOS and Windows commands and features. Lectures and in-class demonstrations emphasizing how to create, organize, manage, and protect files on diskette and hard disks. Laboratory homework required. Not applicable toward a graduate degree in the School of Public Health.

**DOMAIN 4: HEALTH AND WELLNESS (2-6 quarter credits)****DNHY 415 Applied Nutrition (2)**

Basic concepts of nutrition. Recognition of a balanced diet. Evaluation of the specialized nutritional needs of the young, the medically compromised, and the aging patient. Dietary assessment and counseling. Health-behavior change.

**DTCS 301 Human Nutrition (3)**

Fundamentals of normal nutrition. Carbohydrates, proteins, fats, vitamins, minerals; their roles in human metabolism. Introduction to nutrition in the life cycle. Per week: lecture 3 hours.

**DTCS 311 Human and Clinical Nutrition for Nursing (4)**

Fundamentals of normal nutrition. Carbohydrates, proteins, fats, vitamins, minerals; their roles in human metabolism. Investigating the role of nutrition at various stages in the life cycle of the individual in health and disease. Nutrition intervention in the prevention and treatment of disease in the clinical setting.

**DTCS 312 Clinical Nutrition for Nursing (2)**

Nutrition intervention in the prevention and treatment of disease in the clinical setting.

**HPRO 414 Personal Health and Fitness (4)**

Application of health principles to the student's physical, mental, spiritual, and social health.

**HPRO 415 Consumer Health (3)**

Study of fitness and health in terms of consumer welfare, marketing, and fraud. Discussion of ethics as they relate to professional behavior.

**HPRO 416 Health Through the Life Span (4)**

Examination of changes in health status that may occur between birth and old age. Emphasis on tailoring wellness strategies and programs to the needs of various age groups.

**NUTR 474 Nutrition and Fitness (3)**

Basic principles of nutrition and healthful eating for fitness and exercise. Role of nutrition and exercise in optimizing health from a scientific standpoint. Myths prevalent among consumers in the area of nutrition and fitness.

**PEAC 110 Independent Activities (.5-1)****DOMAIN 5: ELECTIVES**

Electives from Domains 1-4 may be selected to complete the general education minimum requirements of 68 quarter credits.

**ENGLISH COMPOSITION REQUIREMENTS IN SEVENTH-DAY ADVENTIST COLLEGES**

The following sequences of English composition courses taught in Seventh-day Adventist schools are representative of sequences that would meet LLU general education requirements.

Andrews University

ENGL 111-112: English Composition and  
ENGL 306: Writing Seminar  
(9 quarter units)

Atlantic Union College

ENGL 101-102: College Writing I and II  
(6 semester units)

Columbia Union College

ENGL 101-102: Composition  
(6 semester units)

La Sierra University

ENGL 111-113: Freshman English  
(9 quarter units)

Oakwood College

ENGL 111-113: Freshman Composition  
(6 semester units)

Pacific Union College

ENGL 101-102: College English  
(8 quarter units)

Southern Adventist University

ENGL 101-102: College Composition  
(6 semester units)

Southwestern Adventist University

ENGL 121: Freshman Composition and  
ENGL 220: Technical Writing and Research  
(6 semester units)

Union College

ENGL 111-112: College Writing I and II  
(6 semester units)

Walla Walla College

ENGL 121-122: College Writing and  
ENGL 223: Research Writing  
(9 quarter units)

**ENGLISH COMPOSITION REQUIREMENTS IN NON-SEVENTH-DAY ADVENTIST COLLEGES**

The following sequences of English composition courses taught in non-Seventh-day Adventist schools are representative of sequences that would meet LLU general education requirements.

Cal State San Bernardino

ENG 101: Freshman Composition and  
One of the following upper-division expository  
writing courses:  
EDUC 306, ENG 306, HUM 306, MGMT 306,  
MGMT 306, NSCI 306, and SSCI 306  
(8 quarter units)

Crafton Hills College

ENGL 101: Freshman Composition and  
ENGL 102: Intermediate Composition and Critical  
Thinking  
(8 quarter units)

Fullerton College

ENGL 101: College Writing (CAN ENGL 2) and  
ENGL 102: Introduction to Literature  
(CAN ENGL 4)

Riverside Community College

ENG 1A: English Composition (CAN ENGL 2) or  
 ENG 50A: Basic English Composition; and  
 ENG 1B: Critical Thinking and Writing (CAN  
 ENGL 4)  
 (8 quarter units)

San Bernardino Valley College

ENGL 101: Freshman Composition and  
 ENGL 102: Intermediate Composition and Critical  
 Thinking  
 (8 quarter units)

UC Riverside

ENGL 1A: Beginning Composition  
 ENGL 1B: Intermediate Composition, and  
 ENGL 1C: Applied Intermediate Composition  
 (12 quarter units)

**LOMA LINDA UNIVERSITY GENERAL EDUCATION COURSES—ONLINE AND BOOKLET**

A complete listing of courses offered each academic term at this University to meet general education domain requirements is included on the Loma Linda University Web site at <[www.llu.edu/ssweb/](http://www.llu.edu/ssweb/)> under the course schedules.

By linking from course schedules to General Education Brochure and Course Descriptions the student has access also to the entire list of general education courses and course descriptions. It is also available at the above Web site as a printable booklet—*Loma Linda University General Education Philosophy, Requirements, and Courses*.

**SCHOOL AND PROGRAM-SPECIFIC GE REQUIREMENTS**

For additional information about specific general education requirements, see the desired schools and programs—Sections III and IV of this CATALOG.



## Student Life

The information on student life contained in this CATALOG is brief. The most current *Student Handbook* more comprehensively addresses University and school expectations, regulations, and policies, and is available to each registered student. Students need to familiarize themselves with the contents of the Student Handbook. Additional information regarding policies specific to a particular school or program within the University is available from the respective school.

### FROM UNIVERSITY TO STUDENT

Loma Linda University was established to provide education in a distinctively Christian environment. Students are expected to respect the standards and ideals of the Seventh-day Adventist Church. Prospective students have the freedom to choose or reject University or school standards, but the decision must be made before enrollment. Application to and enrollment in Loma Linda University constitute the student's commitment to honor and abide by the academic and social practices and regulations stated in announcements, bulletins, handbooks, and other published materials; and to maintain a manner that is mature and compatible with the University's function as an institution of higher learning.

It is inevitable that the student will come under question if academic performance is below standard; student duties are neglected; social conduct is unbecoming; or attitudes demonstrate deficiencies such as poor judgment, moral inadequacy, or other forms of immaturity.

Procedures for evaluation of academic and nonacademic performance—as well as for the student to exercise his/her right of appeal—are described in the current CATALOG and in each school's section of the *Student Handbook*. Grievances regarding both academic and nonacademic matters must be processed according to these published grievance procedures. After a student files an appeal or grievance, the faculty assesses the student's fitness for a career in the chosen profession and recommends to the dean appropriate action regarding the student's continuance or discontinuance.

Prospective students who have questions concerning the University's expectations should seek specific information prior to enrollment.

### WHOLE-PERSON HEALTH

The University regards the student from a cosmopolitan and comprehensive point of view. It is cosmopolitan in that historically the University's global mission has promoted bonds and opportunities in education and service without regard to gender, or to national, racial, or geographical origin. It is comprehensive in that the University's concern for the welfare

of the student traditionally has been an integrated concern for assisting the student toward whole-person health—balanced development of spiritual, social, physical, and mental health. Cultivating the health of any one part enhances the health of all parts. Neglecting or abusing the health of one harms the health of all. Before one can experience whole-person health, there must be a practical appreciation of the interdependent interaction of each part of the whole.

Students from all schools of Loma Linda University may congregate and participate in the multifaceted programs offered that involve the wholistic concept of social, intellectual, physical, emotional, and spiritual wellness. These programs support Loma Linda University's motto, "To make man whole."

### **Spiritual health**

In addition to personal quiet times, opportunities for the student to further develop rich, personal spiritual resources are provided in scheduled religious exercises and activities and in informal association with others who cherish spiritual values. Religion classes as well as weekly chapel services are part of the required curriculum.

### **Social health**

Situated within easy access of the ocean, mountains, and desert, the University provides numerous opportunities for students to complement their formal learning through participation in a wide variety of recreational, cultural, and other activities. A variety of University-, school-, and group-sponsored events encourage students to relax and become better acquainted with one another. Through these activities and events, students can enrich their group interaction and leadership experiences, increase their enjoyment of and interest in fields outside their profession, develop their talents, enhance wholesome and memorable association with others, and cultivate supportive and lifelong social relationships.

### **Physical health**

The University promotes physical fitness by encouraging recreational interests and by providing courses in field exercises, bodybuilding, and health instruction. An effort is exerted to interest each student in some recreational and health-building activity that may be carried over to enhance future life.

### **Mental health**

The University promotes mental health by encouraging students to study and practice principles of sound psychological health and to access state-of-the-art counseling and mental health services, as needed.

## RECREATION/WELLNESS: THE DRAYSON CENTER

The Drayson Center, Loma Linda University's recreation and wellness center, provides state-of-the-art fitness facilities.

The center includes a 21,000-square-foot multi-purpose gymnasium, which may accommodate three full-sized basketball courts, five volleyball courts, or nine badminton courts. Circling the gymnasium's inside perimeter is an elevated, rubberized, three-lane running track. The facility also includes five racquetball courts with viewing areas, and fully equipped men's and women's locker rooms. Aerobics studios and cardiovascular and fitness areas are equipped for strength training, sports conditioning, body building, and power lifting. A 22-foot-high, 150-foot water slide ends in the nearby recreational pool. This shallow pool is wheelchair accessible. An outdoor jacuzzi is also available, as well as indoor saunas in the men's and women's locker rooms. Included in the complex are a lighted, six-court tennis facility; a 400,000-square-foot multiuse recreational area with four softball fields; a half-mile-long track; and picnic and game areas.

The Drayson Center offers lifetime leisure classes (noncredit), such as low- and high-impact aerobics, ballet, karate, and judo. The Wellness Office offers personal training, massage therapy, and individual nutrition counseling and group nutrition classes with a registered dietitian.

## THE STUDENT HEALTH PLAN

Because the health, vitality, and welfare of its students and their dependents are of major concern to the University, Loma Linda University sponsors and funds the Student Health Plan, a health care plan that provides health service and medical coverage to all eligible students. Student Health Service provides free service to students who are enrolled in the Student Health Plan. Full-time students are enrolled automatically. Part-time students must buy in. The plan includes the following benefits: Student Health Service, 24-hour coverage, and generous coverage through preferred providers. The Student Health Plan provides a broad range of medical coverage but does not provide dental or vision coverage.

### Student Health Service

Professional services are rendered by the Student Health Service, which provides basic care to students. The Student Health Service is located in the Center for Health Promotion in Evans Hall, corner of Stewart and Anderson streets. The hours are Monday through Thursday, 8 a.m.-5 p.m.; Friday, 8 a.m.-2 p.m. Services are free to students.

### Supplementary medical-coverage policy

The Student Health Plan is an "excess" policy and only supplements other medical plans that provide benefits to the student. The student first obtains direct-provider payment, or reimbursement for out-of-pocket payments, from all other medical plans that provide benefits for the student; only then does the student submit bills to the Student Health Plan for any remaining balance not covered by the other plans. The student must, therefore, follow all rules of his/her primary insurance in obtaining medical treatment. The

student should contact the primary carrier to determine what procedure to follow.

### Eligibility

The Student Health Plan automatically covers all full-time students at Loma Linda University in any clinical or academic program. Students are covered when enrolled for 7 units or more per quarter (or clock-hour equivalent, as defined by each school) for which Loma Linda University is receiving tuition and applicable fees (excluding load validation, "in progress" [IP] units, "employee tuition benefit" units, and "audit" units). Students enrolled for field practicum are eligible for coverage if registered for at least 240 hours per quarter.

### Coverage during clinicals/rotations

Students who are accidentally injured while performing their clinical rotation duties do not have to pay their co-payment. If a covered student is doing a school-sponsored clinical or rotation out of the area and becomes ill or injured, any health service and medical care received that is covered by the Student Health Plan will still be covered as if the student were in the Loma Linda area.

### Effective coverage date

An eligible student's coverage becomes effective on the day of orientation or the first day of class. Any purchased benefits will become effective on the day the Department of Office of Risk Management receives the health plan application and payment within the open enrollment period, which is only the first two weeks of each calendar quarter.

### Buy-in rules and deadlines

Eligible students are themselves automatically covered by the plan; however, noneligible students—those on summer break and part-time students (e.g., in a clinical program but enrolled for fewer than 7 paid units)—may, if they wish, purchase coverage at the Department of Office of Risk Management.

Those wishing to buy in may enroll in the Student Health Plan only during the first two weeks of each new calendar quarter, that is, during the first two weeks of January, April, July, and October.

For further information about eligibility, the student may refer to the Student Health Plan booklet or call Department of Office of Risk Management.

### Buy-in rates per quarter

For current quarterly buy-in rules, please contact the Department of Office of Risk Management.

### Student responsibility for payment

Neither the Office of Student Finance nor the Department of Office of Risk Management bills the student's account or sends out reminders. Funds received for buy-in coverage must be in the form of a check or money order (payable to the Department of Office of Risk Management).

### Coverage exclusion for "pre-existing" condition

If a student or patient has not maintained a continuous "creditable coverage" under another health plan during the twelve months prior to the coverage-effective date, the pre-existing-condition exclusion that follows will apply.

This plan will not cover any medical condition, illness, or injury for which medical advice, diagnosis,

care, or treatment was recommended or received by the student or patient during the six months prior to the effective date of health plan coverage. This exclusion will apply for twelve months from the student's coverage-effective date, unless such an individual remains treatment free during the six-month term beginning with the effective date of coverage. If the individual remains treatment free during the six-month term, the pre-existing-condition exclusion will apply only during that six-month period. This exclusion will not apply to pregnancy-related medical expenses or to medical treatment for a newborn or adopted child. For additional information, the student may contact the Department of Office of Risk Management.

#### **Preferred-provider plan, prescriptions, annual term, benefit limits**

The Student Health Plan is a PPO preferred-provider plan. A list of preferred physicians and preferred medical facilities is available from the Department of Office of Risk Management.

The Student Health Plan covers prescriptions when the Advance PCS prescription-benefit services card is used. At Loma Linda University (LLU) network pharmacies, the student co-pay for a 30-day supply per prescription is \$15 for generic or \$30 for brand name. At non-LLU Advance PCS pharmacies, the student co-pay for a 30-day supply per prescription is \$25 for generic and \$40 for brand name. The Student Health Plan prescription benefit is limited to \$2,500 per plan year.

Benefits are limited by the terms and conditions set forth in the Student Health Plan booklet. The booklet is available from the Loma Linda University Department of Office of Risk Management. For additional health plan information, phone the Department of Office of Risk Management at 909/558-4386.

### **MALPRACTICE COVERAGE**

Students are covered by malpractice insurance while acting within the course and scope of any approved clinical assignment.

### **DISABILITY INSURANCE**

All students in the School of Medicine and the School of Dentistry are automatically enrolled in a disability insurance program while enrolled in this University. This program provides limited disability insurance for students while in the program and also allows for conversion to an individual disability insurance policy at the time of graduation. Details of this program are available from the School of Medicine or the School of Dentistry.

### **COUNSELING AND HEALTH SERVICES**

#### **Loma Linda University (LLU) Health Care Student/Family Counseling**

The LLU Counseling Center offers a variety of private, confidential services to students and their families—including individual, premarital, marital, family, and group counseling. Counselors offer assertion training and use practical, problem-solving strategies to help students deal more effectively with stresses and

personal challenges, including test anxiety and time management. The culturally diverse and sensitive team includes staff who are comfortable using spiritual interventions; as well as physicians specializing in psychiatry, who are available for medication consultation as an additional treatment strategy.

A 24-hour emergency crisis-intervention support service is also in place. The center is located at 11374 Mountain View Avenue in Loma Linda.

Full-time students may receive up to nine free visits. Call 909/558-4505 (or campus extension, 66028) to schedule an appointment or for more information.

#### **Student Assistance Program**

The Loma Linda Student Assistance Program (LLSAP) provides professional and caring assessment and treatment for a variety of personal, family, work, and school-related issues. The LLSAP clinicians will develop a treatment plan that may include free short-term counseling. All LLSAP services are free of charge.

If more extensive treatment is appropriate, the client is referred to a community therapist who specializes in the student's area of concern and who is covered by the student's health plan. All information is confidential. Community therapists and LLSAP clinicians will not release information without the written consent of the student, with the exception of matters that fall under mandatory reporting laws.

The LLSAP, the only nationally accredited student assistance program in California, has provided state-of-the-art services to students since it was established in 1990.

Appointments may be scheduled during office hours—on-campus extension, 66050; off-campus telephone, 909/558-6050: Monday through Wednesday, 8 a.m.–5 p.m.; Thursday, 8 a.m.–7 p.m.; Friday 8 a.m.–1 p.m. Additional appointment times may be available upon request.

The program is located in the Hartford Building, 11360 Mountain View Avenue, suite A, Loma Linda.

#### **Loma Linda University (LLU) Student Health Services**

Loma Linda University Student Health Services is committed to providing quality care to students and assisting with students' special needs. Services provided by the qualified team of physicians, nurses, and support staff include primary care, women's health, immunizations, health education, counseling or referral to counseling services, and referral to specialty services.

Student Health Services is located in Evans Hall, room 111. The hours of operation are Monday through Thursday, 8 a.m.–12 p.m., 1p.m.–5 p.m.; Friday, 8 a.m.–1 p.m. To schedule an appointment or for more information, call 909/558-8770.

### **GOVERNING PRACTICES**

At Loma Linda University, nonacademic policies have been established that help foster a fulfilling University experience. Students are expected to uphold these policies, which govern nonacademic student life on and off campus. Information in this section of the CATALOG, as well as in Section III and in the *Student Handbook* pertains to requirements governing all students. The student is reminded of individual responsibility to be fully informed of the general and specific requirements of his/her school and program.

**Identification number and card**

All accepted students will be assigned a unique University identification number. This seven-digit number will be used on all correspondence and noted on all payments to the University. A University identification card using this identification number and a bar code will be issued to each student after completion of their initial registration and financial clearance.

The identification card allows access to various student services, including the libraries, Student Health, recreation facilities (i.e., the Drayson Center), parking, etc. Also, the bar code on the card allows currently enrolled and financially cleared students to charge against their accounts at the Campus Bookstore and campus cafeterias, and for ticket sales available through the Student Services office. In subsequent quarters, the card's bar code is automatically reactivated at each registration with financial clearance.

In some cases, a second identification card is necessary for students on clinical rotation in the Loma Linda University medical centers. This card is issued by Loma Linda University's Human Resource Management office and is valid only for medical center-related activities and does not replace the student identification card.

For further information regarding these identification cards, please contact Student Services.

**Residence hall**

The University is coeducational and accepts both single and married students. Any single student who prefers to live on campus may do so. Students are expected to live on campus unless they are:

- married,
- twenty-one years of age or older,
- in a graduate program, or
- living with their parents.

Students who wish to live off campus but who do not meet one of the foregoing requirements may petition the associate vice chancellor for student services for an exception. This should be done well in advance of registration to allow the student adequate time to plan. Additional information about campus housing can be obtained from the housing Web site: [www.llu.edu/llu/housing](http://www.llu.edu/llu/housing).

The student must keep the Office of the Dean of the school informed of his or her current address and telephone number and other contact numbers.

**Marriage**

A student who marries or changes marital status during the academic year must provide the school with advance written notification of the change in status in order to keep school records correct and up to date. Students should make every effort to schedule their wedding ceremonies during academic recesses.

**Name change**

Currently enrolled students may change their names on University records when they provide evidence (e.g., certified copy of a marriage certificate) that the name change is official. In addition to filing a Request for Change of Name on University Records form with the Office of University Records, the student must present a current ID card or other form of picture ID with his or her name as it appears on University records, along with official documentation of the name change.

Name changes must be processed no later than six months prior to graduation if the new name is to appear on the diploma

**Professional apparel**

Clinic and laboratory apparel are distinctive articles of dress specified by the department or school and are to be worn only in the manner prescribed and under the conditions specified in the school or department dress code. Student uniforms are to be maintained in clean, presentable condition. Information on the required professional dress is provided in section III of this CATALOG and in the University Student Handbook.

**Personal appearance**

Students in the classroom or clinical environment must exhibit personal grooming consistent with expectations of the health care institution, the profession, the school, and the University. Specific guidelines regarding grooming and attire are provided in section III of this CATALOG and in the University Student Handbook.

**Personal property**

The School assumes no responsibility for the loss of the student's personal property, instruments, or other items by theft, fire, or unknown causes. The student is expected to assume responsibility for the safekeeping of personal belongings.

**Cars and transportation**

Because the student is responsible for transportation arrangements and costs for special projects and off-campus clinics, it is advantageous for the student to have access to a car. All vehicles used to transport fellow students to University- or school-sponsored off-campus assignments or activities must be registered with Security and must have adequate public liability insurance—a minimum of \$100,000 bodily injury and property damage liability.

The University enforces traffic rules and regulations as provided for by the State of California Vehicle Code. It is the sole responsibility of the driver of any vehicle on University property to become familiar with these regulations. Drivers are held responsible for any infraction of the regulations. Copies of the brochure entitled "Loma Linda University Traffic and Parking Regulations" are available at the Department of Security.

Vehicles used by students on campus must be registered with the Department of Security. Returning students must go to the Department of Security annually in September to renew registration.

**Confidentiality**

The Health Insurance Portability and Accountability Act (HIPAA) of 1996 requires that all health care professionals maintain the highest level of confidentiality in matters pertaining to clients. Discussions or written assignments relating to client information, either health related or personal, may not include identifying data. Clients' privacy and rights are to be protected.

Failure to maintain confidentiality could result in legal action.

For additional information, see "What is HIPAA" at <http://wisdom.mc.llumc.edu/hipaa/education/whatishipaa.htm>.

**Substance abuse**

As a practical application of its motto, “To make man whole,” Loma Linda University is committed to providing a learning environment conducive to the fullest possible human development. Because the University holds that a lifestyle free of alcohol, tobacco, and recreational/illegal drugs is essential for achieving this goal, it maintains policies that foster a campus environment free of these substances.

All students are expected to refrain from substance abuse while enrolled at the University. Substance abuse is considered to be any use of tobacco, alcohol, and/or other recreational or illegal drugs; any use of a nonprescription mood-altering substance that impairs the appropriate functioning of the student; or any misuse of a prescription or nonprescription drug. Also, possession of an illegal drug may be cause for dismissal.

The University offers counseling and other redemptive programs to assist in the recovery from substance abuse. Continuation as a student with the University will be dependent upon the abuser appropriately utilizing these programs. Failure to comply with these policies will result in discipline up to and including expulsion and, if appropriate, notification of law-enforcement agencies for prosecution.

For details regarding the University's drug-free environment—as well as information regarding prevention, detection, assessment, treatment, relapse prevention, confidentiality, and discipline—see the Loma Linda University *Student Handbook*, Section V, University Policies: Alcohol, controlled substances, and tobacco policy.

**Sexual harassment**

Sexual harassment is reprehensible and will not be tolerated by the University. It subverts the mission of the University and threatens the well-being, educational experience, and careers of students, faculty, employees, and patients.

Because of the sensitive nature of situations involving sexual harassment and to assure speedy and confidential resolution of these issues, students should contact one of the school's designated, trained sexual harassment ombudspersons.

A more comprehensive statement of the policy regarding “Sexual harassment” and “Sexual standards policy” can be found in the Loma Linda University *Student Handbook*, Section V, University Policies.

**Employment**

It is recommended that students limit work obligations (outside employment for income) that divert time, attention, and strength from the arduous tasks of class preparation, clinical practice, and/or training in their chosen career. A student wishing to work during the school year should consult the Office of the Dean regarding employment restrictions or prohibitions.

**Employment for international students**

International students must obtain written authorization from International Student and Scholar Services before accepting any on-campus employment. Off-campus employment requires prior issue of a work permit by the Bureau of Citizenship and Immigration Services. F- and J-visa students must limit their employment to twenty hours or less per week while registered for courses and while classes are in session

during three of four quarters in an academic year. Regulations allow full-time work (forty hours or less per week) during school breaks and summer vacations (if students' programs allow summer quarters off). For questions, please telephone International Student and Scholar Services at 909/558-4955.

**ACADEMIC AUTHORITY**

The Office of the Dean is the final authority in all academic matters, with the exception of General Education requirements, and is charged with the interpretation and enforcement of academic requirements. Any exceptions or changes in academic requirements, graduation requirements, or grades are not valid unless approved by the dean. Any actions taken by individual faculty members with regard to these matters are advisory only and are not binding on the school or the University unless approved by the dean.

**ACADEMIC INTEGRITY**

The academically dishonest act intentionally violates the community of trust upon which all learning is based, intentionally compromises the orderly transfer of knowledge from teacher to student, and is inconsistent with good professional and moral behavior. Accordingly, the penalty for academic dishonesty is severe.

Acts of dishonesty include but are not limited to:

- theft;
- falsifying or changing grades or other academic records;
- plagiarism or excessive paraphrasing of someone else's work;
- knowingly giving, obtaining, or falsifying information during examinations or other academic or professional practice assignments;
- using unauthorized aids during examinations;
- loud and disruptive behavior during lectures, demonstrations, or examinations;
- excessive unexcused absences from classes or from clinical assignments

“Examinations” are defined as regularly scheduled tests, quizzes (scheduled or unscheduled), final examinations, comprehensive assessments, take-home tests, open-book tests, and any other assignment given by an instructor or preceptor whether for a grade, points toward a grade, or for zero points (e.g., a learning exercise).

Instructors and students are charged with the responsibility of reporting instances of academic dishonesty for investigation. An instructor may take immediate action during an examination or other point-generating activity in order to maintain the integrity of the academic process. Substantiated violations are to be brought before the designated disciplinary body for action. Disciplinary action may include receiving a failing grade on the examination or assignment, receiving a failing grade in the course, suspension, or permanent dismissal from the program.

**CONDUCT**

Students are expected to conduct themselves in a professional manner during didactic and clinical training. Professional conduct includes (but is not limited to) punctuality; and respect for other people, their property, and their right to learn. It also includes an appropriate respect for those in authority. Students of Loma Linda University are expected to behave in a manner that will not bring criticism upon themselves, the program, the school, or the University.

Because students may be exposed to patients' relatives and friends in any public place, and because their conversations and their attitudes have an effect on those around them, students are asked to observe the following:

- Any information given to the student by a patient or contained in a medical record must be held in strict confidence. Therefore, the discussion of a patient's diagnosis and treatment and other clinically related topics should be extremely guarded. A patient's family and community people may be listening and may incorrectly interpret the things discussed. Careless talk may lead to a malpractice litigation.
- A joking or casual attitude toward illness and medical treatment should not be displayed since it may seem uncaring and be disturbing to those who are ill and suffering, as well as to the family members.
- Student and staff behavior in professional situations may be the deciding influence for or against Christian beliefs, values, and a health-enhancing lifestyle.

A more in-depth description of the professional conduct expected of students is contained in the Loma Linda University Student Handbook.

**GRIEVANCE PROCEDURE**

Grievances related to sexual harassment, racial harassment, or discrimination against the disabled shall be pursued in accordance with University policies specifically relating to these items. Grievances related to academic matters or other issues covered by specific policies shall be made pursuant to the policies of the school in which the student is enrolled. A student who questions whether the process provided by the school has followed the policy of the school in regard to his/her grievance may request the office of the chancellor to conduct a review of the process used by

the school in responding to his/her academic grievance.

Students who believe that an error has been made or that he/she has been dealt with it in an inappropriate manner by an office or non-academic department of the University such as records, student finance, student affairs, health services, Drayson Center, etc., may seek correction by the following steps:

1. The student may put his/her complaint in writing and provide it to the head of the department or office involved. The student may request an appointment and discuss this matter with the department head. The department head will make a decision and provide a written answer to the student within 14 days of receiving the student's written complaint or meeting with the student, whichever is later. If the answer is not satisfactory to the student, he/she may:

2. Put the complaint in writing and send it to the dean of student affairs for review. The matter will be considered at the next meeting of the dean's council and the student will be informed in writing of the council's response within seven days of the council's consideration of the complaint.

**COPYRIGHT VIOLATIONS**

The copyright law of the United States (Title 17, USC) governs the making of photocopies or other reproductions of copyrighted material. Under certain conditions specified in the law, libraries and archives are authorized to furnish a photocopy or other reproduction. One of these specific conditions is that the photocopy or reproduction is not to be "used for any purpose other than private study, scholarship, or research." If a user makes a request for or later uses a photocopy or reproduction for purposes in excess of "fair use," that user may be liable for copyright infringement. This institution reserves the right to refuse to accept a copying order if, in its judgment, fulfillment of the order would involve violation of copyright law.

**COMMUNICATION DEVICES**

All communication devices must be set to "off" or "vibrate" during class, laboratory, clinic, or chapel. No cell phones, PDAs, calculators, laptops, or other electronic or communication items may be used in the classroom, testing facility, or laboratory unless specifically a part of that activity and approved by the faculty member in charge.

# Academic Policies and Information

Students of the University are responsible for informing themselves of and satisfactorily meeting all regulations pertinent to registration, matriculation, and graduation. In this section (Section II) are the University regulations. See Section III for regulations that pertain to each school.

## REGISTRATION

### Registration

Registration dates are published on the Web at [www.llu.edu/registration](http://www.llu.edu/registration). Posted deadlines for registration and change of registration are in effect and binding. The school will not intercede to obtain a variance.

After consultation with their academic adviser, students register online. Registration procedure includes entering classes online, clearing financial arrangements with the Office of Student Finance, and having a student identification picture taken for the ID card first-quarter registration only). Students are advised to print the Request for Clearance Submitted Web page to retain written documentation that they have requested financial clearance.

A late-registration period of at least a week prior to the beginning of the quarter and extending to five days after the quarter begins is provided, during which a late-registration fee of \$50 will be charged. (Always check the Web for specific dates of registration, since they vary during some quarters due to holiday schedules.) Students may not attend class without being registered, and in no case may registration take place later than the seventh calendar day of a term unless the course is offered as an intensive that requires registration before the end of the first day of class. No credit is granted for academic work performed during any quarter without registration.

### Change in registration

A change in registration requires filing a Registration Change Request (Add/Drop) form with the Office of University Records. Students receive written verification each time a change of program is officially approved. Students are advised to retain this written verification as documentation of their registration. Changes in registration after the second week affect the student's grade record.

### Course changes

A student may add courses that follow the general University calendar during the first seven calendar days of the quarter. Courses that follow the general University calendar may be dropped during the first fourteen days of the quarter without academic or financial penalty. Course changes after the fourteenth day of the quarter affect the permanent grade record. A Change of Program form must be filed. Students may withdraw from a course prior to the fourteen calendar days before the final examination week, after which time withdrawals are no longer permitted.

### Study load

Usually an academic study load is defined in terms of credit units. A full undergraduate load is considered to be 12 or more units per quarter; a full graduate load is considered to be 8 units per quarter. Professional programs, however, require considerable clinical experience, for which only partial academic credit is given at times. Consequently, a full study load often is not reflected by the number of academic credit units carried.

To be considered a full-time student, an undergraduate student must be registered for at least 12 units of course work per quarter; and a graduate student must be registered for at least 8 units. A registration of 400 clock hours per quarter is also considered to be full time for any student. This is based on forty hours per week for a ten-week quarter.

The normal course load, including all course work for which a student may be registered at this or another institution, is 16 quarter units for an undergraduate student and 12 quarter units for a graduate student. Full-time study loads are those specified by the departments for each program. Students of exceptional ability may register for additional course work upon recommendation of the department and consent of the dean.

### Non-LLU courses as part of total load for financial aid

Regular courses for which a student is registered at another financial-aid eligible institution constitute part of the student's study load. Courses must be transferable and required for completion of the student's Loma Linda University degree program. Correspondence and independent study courses are excluded, per federal-aid regulations. Only when the student enrolls in such courses using the Consortium Agreement form (from the Office of Financial Aid) will the course(s) count on the student's total load as eligible for financial-aid and loan-deferment purposes.

A person who is not enrolled in regular classes but who is occupied in research, dissertation, or thesis, is classified as a student. By filing an Academic Load Validation form every quarter at registration, the academic load may be validated for loan-deferment.

## BACKGROUND CHECKS

Some clinical affiliation sites require background checks for all incoming students; these checks must be completed no later than two weeks prior to clinical placement. The student will be responsible for obtaining the background checks, including the cost.

The following elements must be covered by the check, at a minimum: past 7 years, 3 counties, Office of Inspector General (OIG), Social Security number, other names (maiden, married, etc.), addresses, and sex offender database.

## STUDENT LEVEL

Students enrolled in a professional program in which they are classified as freshman, sophomore, junior, or senior will be classified according to the level of the course work they are taking (e.g., a student with a previous baccalaureate degree pursuing another baccalaureate degree would be classified as a sophomore while taking sophomore-level courses, etc.).

Students enrolled in block programs are classified according to the level of the block in which they are enrolled (e.g., master's-1st, 2nd, or 3rd year; or freshman, sophomore, junior, senior, as is appropriate for the degree program; or PY1 [professional year 1]).

## COURSE NUMBERS

Courses numbered

- 001-099, nondegree-applicable credit;
- 101-299, lower division;
- 301-499, upper division;
- 501-599, graduate;
- 601-699, graduate: seminar, research, thesis, or dissertation;
- 701-899, professional and clinical;
- 901-999, continuing education without academic credit.

500-level course work may not apply toward a baccalaureate degree unless it is approved by the instructor, and both deans (dean of the school offering the course and dean of the school in which the student is enrolled) give permission; and provided the credit does not apply toward both an undergraduate and a graduate degree. Approval is not needed if the course is part of a coordinated program.

No courses numbered in the 700s, 800s, or 900s may apply toward a baccalaureate degree.

## UNIT OF CREDIT

Credit is recorded in quarter units. One unit represents 10-11 class hours in lecture or 30-40 hours in laboratory practice.

## ATTENDANCE

Regular attendance at all appointments (class, clinic, laboratory, chapel) is required beginning with the first day of each term. A pattern of absence, excused and unexcused, will be referred to the school's designated academic authority for consideration and action.

Excused absences are defined as follows:

- Illness, verified by a physician's statement or official statement from Student Health Service submitted to the school's designated academic authority;
- Participation in an institution-sponsored activity (verified by a written statement from a faculty sponsor);

- Recognizable emergency approved by the school's designated academic authority.

Tardiness is disruptive, distracting, and inconsistent with professional behavior. Students who arrive after the beginning of class may be counted absent.

*Information regarding the school's designated academic authority can be obtained from the Office of the Dean.*

## CLEP

The College Level Examination Program (CLEP), a national program of credit by examination, offers persons of all ages and backgrounds new opportunities to obtain recognition for college-level achievement, no matter how acquired.

As of July 2001, general examinations are no longer offered; however, the policy remains in effect for students who took general examinations prior to that date. No credit is granted for the CLEP general examinations in English composition, mathematics, or science courses requiring a laboratory.

As of July 1, 2004, in order to receive Loma Linda University credit, students must complete all examinations for CLEP credit within six months after having received their initial degree-compliance report. A student will be allowed to challenge a given course by examination only once. CLEP scores will be accepted at C or better until percentiles are available from CLEP. Credit is granted for scores at or above the 50th percentile for the subject examinations, and at the 65th percentile for general examinations in the humanities, natural sciences, and social sciences/history.

## CREDIT BY EXAMINATION

For certain courses offered by the University, a student in an undergraduate degree program may earn credit by passing an equivalency examination administered by the appropriate school and department. Such an examination is at least equal in scope and difficulty to a final examination in the course and may include materials supplied by CLEP or other agencies.

A graduate program should be used to acquire new knowledge. Since the purpose of credit by examination is to validate prior knowledge, graduate credit may not be earned by examination. If a required course in the degree program is a repeat of prior learning, the student may request a waiver, thus making it possible to take elective courses that would increase knowledge.

A student currently enrolled in a degree program at this University who desires credit by equivalency examination petitions the dean of the school offering the course, and, upon approval, pays a testing fee. See Schedule of Charges in the Financial Information section for examination fee.

Equivalency examinations may not duplicate credit already earned through course work, including courses taken for audit.

A grade of CR (Credit) is given only after the student has completed one quarter, or the equivalent, at this University; and has earned 12 units of credit with a grade-point average of at least 2.0 in undergraduate courses.

Units earned by equivalency may not be used as part of the enrolled load.

Equivalency examinations must be taken before the final quarter of residency.

The maximum amount of credit that may be earned by equivalency examination is determined by each school but may not exceed a maximum of 20 percent of the units required for the degree or certificate.

**COURSE WAIVER**

Certain course requirements in a program may be waived on the basis of previously completed course work, experience, or licensure. An examination for waiver credit, if required, may be taken only once and must be taken before the last quarter of the program of study. Waiver of a specific course requirement does not reduce the number of units required for a program or residency requirements. A waiver examination does not carry academic credit and cannot be used to make up for a course in which an unsatisfactory grade was received. For examination fee, see Schedule of Charges in the Financial Information section.

Permission to waive a course requirement in the School of Pharmacy requires prior approval of the department chair and consent of the dean.

**INDEPENDENT STUDY**

Independent study may be undertaken subject to the consent of the department chair and/or the Office of the Dean. The student is responsible for completion of the Directed/Independent Study Title Request form in addition to the regular registration. University policy limits directed study to 12 quarter units of undergraduate credit and 8 units of graduate credit in a degree program. Individual programs may further limit these units. The Office of the Dean should be consulted regarding limits on credit earned through independent study. Independent study is to be completed in adequate time before graduation to allow recording in the Office of University Records.

**CORRESPONDENCE COURSE**

As a general rule, the student may not register for a correspondence course that duplicates a course offered at this University. (The School of Nursing makes exceptions when a religion or cognate course conflicts with a clinical course; or when scheduling prevents a student from completing a religion or cognate course during the summer in order to reduce the course load during the regular school year.) If the student is a candidate for graduation, the course must be completed no later than one month before graduation. Information and application for Griggs University Home Study International (the Seventh-day Adventist correspondence school) in Washington, DC, may be obtained from the Web at [www.griggs.edu](http://www.griggs.edu).

In the School of Pharmacy, permission to take a correspondence course for credit requires prior approval of the department chair and consent of the dean.

**EXTENSION STUDY**

To be acceptable for credit, an extension course must be evaluated as to its equivalence to an accepted course. To assure that the course will transfer to Loma Linda University, the student should contact the Office of University Records prior to taking the course. Registration for extension study requires prior approval of the department chair and consent of the dean.

**SCHOLASTIC STANDING**

**Grades and grade points**

The following grades and grade points are used in this University. Each course taught in the schools has been approved for either a letter grade and/or an S/U grade.

A	4.0	<b>Outstanding</b> performance.
A-	3.7	
B+	3.3	
B	3.0	<b>Very good</b> performance for undergraduate credit; <b>Satisfactory</b> performance for graduate credit.
B-	2.7	
C+	2.3	
C	2.0	<b>Satisfactory</b> performance for undergraduate credit. Minimum performance for which credit is granted toward a degree in the School of Nursing or the Graduate School.
C-	1.7	<b>Minimum</b> performance for which credit is granted toward a degree in the School of Dentistry, School of Pharmacy, or School of Public Health.
D+	1.3	
D	1.0	<b>Minimum</b> performance for which undergraduate credit is granted, except as indicated above.
F	0.0	<b>Failure</b> —given for not meeting minimum performance.
S	none	<b>Satisfactory</b> performance—counted toward graduation. Equivalent to a C grade or better in undergraduate courses, or a B grade or better in graduate courses. An S grade is not computed in the grade-point average. A student may request a grade of S in only a limited amount of course work as determined by the school. This is done by the student's filing with the Office of University Records the appropriate form prior to fourteen calendar days before the final examination week. Once filed, the grade is not subject to change.
U	none	<b>Unsatisfactory</b> performance—given only when performance for an S-specified course falls below a C grade

		level in an undergraduate course or a B grade level in a graduate course. Similar filing procedures as given for S grade above are required. The U grade is not computed in the grade-point average.
S/N	none	<b>Satisfactory</b> performance in a clock-hour course. Not included in total units. Same grading criteria as the S grade given for a credit-hour course.
U/N	none	<b>Unsatisfactory</b> performance in a clock-hour course. <b>Not</b> included in total units. Same grading criteria as the U grade given for a credit-hour course.
CR	none	<b>Credit</b> for <i>Credit by Examination</i> . Counted toward graduation/units earned but not units attempted. Such credit cannot be counted for financial aid purposes.
NC	none	<b>No credit</b> for <i>Credit by Examination</i> . Does not count for any purpose.

#### Notations

W	<b>Withdrawal</b> —given for withdrawal from a course prior to fourteen calendar days before the final examination week. Withdrawals during the first fourteen calendar days of a quarter or the first seven calendar days of a five-week summer session are not recorded if the student files with the Office of University Records the appropriate form prior to the cut-off date. Withdrawals outside this time frame, upon recommendation of the dean, may be removed at the discretion of the vice-chancellor for academic affairs. In the case of nontraditionally scheduled courses, W will be given for withdrawal from a course prior to completion of 80 percent of the course, excluding the final examination period. Withdrawals during the first 20 percent of a course, excluding the final examination period, are not recorded if the student files with the Office of University Records the appropriate form prior to the date when this 20 percent of the course is completed. A student may withdraw only once from a named cognate course that (s)he is failing at the time of withdrawal.
UW	<b>Unofficial Withdrawal</b> —indicates that the student discontinued class attendance after the close of registration but failed to withdraw officially.
I	<b>Incomplete</b> —given when the majority of the course work has been completed and circumstances beyond a student's control result in the student being unable to complete the quarter. An I notation may be changed to a grade only by the instructor before the end of the following term (excluding the summer sessions for those not in attendance during that term). Incomplete units are not calculated in the grade-point average.

By use of the petition form—available online at <[www.llu.edu/ssweb/registration](http://www.llu.edu/ssweb/registration)>—the student requests an I notation from the instructor, stating the reason for the request and obtaining the signatures of the instructor, the department chair, and the associate dean. The form is left with the instructor. The instructor reports the I notation on the grade-report form, as well as the grade the student will receive if the deficiency is not removed within the time limit. The petition form is then filed with the Office of University Records along with the grade-report form.

The notation I is not granted as a remedy for overload, failure on final examination, absence from final examination for other than an emergency situation, or a low grade to be raised with extra work.

IP	<b>In Progress</b> —indicates that the course has a duration of more than a single term and will be completed by the student no later than the final term of the course, not to exceed five quarters for independent study and research courses (original quarter of registration plus four additional quarters). The student's final grade will be reported on the instructor's grade report at the end of the term in which the course is completed. If the course work is not completed within the five-quarter time limit, a grade of U will be given.
AU	<b>Audit</b> —indicates registration for attendance only, with 80 percent class attendance considered a requirement. A request to change a credit course to audit or an audit course to credit may be made no later than the fourteenth calendar day after the beginning of a quarter, or the seventh calendar day after the beginning of the five-week summer session. (This does not apply to short summer courses lasting only a week or two.)
AUW	<b>Audit Withdrawal</b> —given for withdrawing from a course, or to indicate that the 80 percent class attendance requirement was not observed.

#### ACADEMIC STANDING

The following classifications are based on scholastic performance, as defined by each school within the University: regular standing or academic probation.

#### VETERANS BENEFITS

Under Title 38 of the U. S. Code, Loma Linda University is approved for the training of veterans and other eligible persons. Information regarding eligibility for these programs may be obtained by calling 888/GIBILL1 or 888/442-4551. Application for benefits must be made directly to the Veterans Administration (VA) and may be done via the Web.

The Office of University Records serves as the certifying official for Loma Linda University. Students should contact the certifying official prior to their first enrollment certification.

Students receiving veteran's benefits who fail for three consecutive quarters to maintain the cumulative grade-point average (G.P.A.) required for graduation will have their benefits interrupted, and the VA office will be notified.

School of Medicine students must maintain satisfactory grades for all required courses for the year in which they are currently enrolled. If a grade in a required course reflects unsatisfactory progress, the School of Medicine student will not be certified until his/her probationary status (usually one year) has been removed.

For more information, open links to the VA Web site ("Students" or "Prospective Students") on the University home Web page at <<http://www.llu.edu>>.

### PRIVACY RIGHTS OF STUDENTS IN ACADEMIC RECORDS

Under the Family Education Rights and Privacy Act (FERPA), students have full rights of privacy with regard to their academic records, including their grade reports. Grades are available to the student online at [www.llu.edu/ssweb](http://www.llu.edu/ssweb). The Office of University Records sends one copy of the student grade report to the school.

The campus is authorized under FERPA to release "directory information" concerning students. Such information may include a student's picture, name, telephone listing, month and day of birth, and major field of study. This information is subject to release at any time unless the campus has received prior written request from the student that such information not be released.

### GRADE CHANGE

Faculty members are responsible for evaluating and assigning grades. A grade may not be changed except when an error has been made in arriving at or recording a grade. Such changes are permissible up to the end of the succeeding term.

The faculty member must obtain the dean's signature on the Change of Grade form after the initial grade has been entered.

### REPEATING A COURSE

A student wishing to improve his/her grade once grades have been posted for a course must repeat the course. When repeating a course, the student must attend class and laboratory sessions as ordinarily required and take all regularly scheduled examinations. The amount of tuition paid for repeated courses is determined by the school. Both grades will appear on the student's permanent record, but only the repeat grade is computed in the G.P.A. and included in the total units earned.

A student may repeat a course only once, and no more than two courses may be repeated in a student's degree program, except in the Graduate School.

### PERSONAL LEAVE OF ABSENCE

Leave of absence, which may be as short as one day but no longer than one year, is defined as being

away from school for obligations other than personal health, which may or may not be school sponsored. The appropriate personal-leave-of-absence form must be obtained from the University Web site and approved by the dean or his/her designee prior to the student's departure. Stipulations for re-entry are given to the student in writing. The student should consult the Office of the Dean regarding the possibility of maintaining health coverage and continuous registration during the leave period.

### WITHDRAWAL

To withdraw from a course(s), the student must complete a Change of Program form. If a student finds it necessary to withdraw from a degree or certificate program, the dean (or his/her designee) must be notified in writing. The student then arranges for formal withdrawal from the program by filing a Program Withdrawal form in the Office of University Records. The Change of Program form or the Program Withdrawal form should be completed and submitted on the last day of class attendance.

Courses dropped during the first two weeks of the term are not included in the student's permanent record.

If a student is discontinuing the entire program, the date the Program Withdrawal form is properly submitted to the Office of University Records will be the date of withdrawal used to calculate tuition refunds. Tuition is refunded according to the practice outlined in the Financial Information section of this CATALOG. Failure to file the Program Withdrawal form may result in avoidable charges to the student's account.

The tuition-refund policy for off-campus students is listed under the applicable school in section III of this CATALOG.

### ADMINISTRATIVE WITHDRAWAL

Students who fail to make arrangements for a leave of absence and continuing registration may be administratively withdrawn from school. Information regarding the period of inactivity allowed prior to administrative withdrawal can be obtained from the Office of the Dean.

### FACILITATING THE TRANSFER OF CURRENTLY REGISTERED LOMA LINDA UNIVERSITY STUDENTS

The following steps apply to processing an application for a registered student:

1. The student submits application (online or paper) to a new program that is not part of a joint/combined-degree arrangement.
2. The Office of University Records prominently flags the transcript as being from a currently registered student.
3. The flagged University transcript is forwarded to new program for evaluation.
4. The new program contacts a designated person in the home school/program to obtain relevant information about the student without revealing that an application is under consideration.

5. If the new program decides to accept the student, the acceptance letter instructs the student to take one of the following actions-
  - a. Send a letter/deposit accepting the offer of admission and process a Total Withdrawal form or a Leave of Absence form for the program (s)he is leaving, or
  - b. Decline the offer of admission.
6. The home program has an opportunity to speak with the student when (s)he attempts to get an adviser's signature on the Total Withdrawal form.
7. The Office of University Records updates the student's program in Banner upon the Total Withdrawal and acceptance into the new program.

### ACADEMIC RESIDENCE

A student must meet the residence requirements indicated for a particular degree or certificate.

### CATALOG IN EFFECT FOR DEGREE REQUIREMENTS

Subject to department approval, students may complete degree requirements outlined in any CATALOG in effect during the time they are enrolled as accepted students in a school. However, students who have been on leave of absence for more than one year, or who failed to register without leave of absence (consult Office of the Dean regarding number of quarters) may be required to re-enter the program under the CATALOG in effect at the time of re-entry, with the exception of students who are on leave from a school to pursue a medical or dental degree at this University. Such students may complete their program under their original CATALOG.

### GRADUATION

The responsibility for meeting graduation requirements rests primarily upon the student. Therefore, students should read and understand the requirements as set forth in this CATALOG and consult carefully with their adviser to plan a sequence of courses each term that fulfills these requirements. A student's program of study is governed by the requirements listed in the University CATALOG at the time of admission; however, when circumstances demand, the University reserves the right to make changes with reference to admission, registration, tuition and fees, attendance, curriculum requirements, conduct, academic standing, candidacy, and graduation.

The undergraduate who plans to graduate must submit an "Undergraduate Intent to Graduate" form two quarters prior to graduation. The form is available online at <[www.llu.edu/ssweb/forms/intgrad.pdf](http://www.llu.edu/ssweb/forms/intgrad.pdf)>.

### COMMENCEMENT EXERCISES

The candidate completing requirements in the Spring Quarter is expected to be present at the commencement exercises and receive the diploma in person. Permission for the degree to be conferred in absentia is contingent upon the recommendation of the dean to the chancellor and can be granted only by the chancellor. If a candidate has not satisfactorily fulfilled all requirements, the University reserves the right to prohibit participation in commencement exercises.

### DIPLOMAS

All diplomas issued to graduates list the degree only. No official diploma is awarded that identifies a specific area of specialization.



# Financial Policies and Information

**T**he student is expected to arrange for financial resources to cover all expenses before the beginning of each school year. Accounts with other schools or with this University must have been settled. Registration is not complete until tuition and fees for each term are paid; therefore, the student should be prepared to make these payments during scheduled registration periods for each academic year. Tuition and fees may vary from amounts shown.

## GENERAL PRACTICES

### Advance payments/refunds

For students whose student loans are pending at the time of registration-loans were not applied for at least 30 days prior to registration-a \$50.00 late-payment fee will be charged. Tuition and fees are due and payable in full before or at registration each term. If a student withdraws from a per-unit course or all courses in a block or nonblock registration up to 60 percent into a term, tuition will be refunded on a pro-rata basis. Students who drop a course from a block program of courses receive no refund.

### Monthly statement

The amount of the monthly statement is due and payable in full within thirty days after presentation of the statement. A student unable to meet this requirement must make proper arrangements with the director of financial aid. An account that is more than thirty days past due is subject to a finance charge of .833 percent per month (10 percent per year). Failure to pay scheduled charges or to make proper arrangements will be reported to the Office of University Records and the dean and may cause the student to be considered absent, discontinued, or ineligible to take final examinations.

### Financial clearance

The student is expected to keep a clear financial status at all times. Financial clearance must be obtained—

- each term in order to complete registration;
- before receiving a certificate or diploma;
- before requesting a transcript, statement of completion, or other certification to be issued to any person, organization, or professional board.

To obtain financial clearance from the Office of Financial Aid, the student must pay any balance due on account. To obtain financial clearance from the Office of Student Loan Collections, the student must be current on all scheduled loan-account payments and must have fully completed a loan exit interview, after having ceased to be enrolled for at least half time.

### Checks

Checks should be made payable to Loma Linda University and should indicate the student's ID number to ensure that the correct account is credited. In case a check is returned, there will be a \$20.00 returned-check fee assessed.

## DEPOSITS

### Acceptance deposit

Upon notification of acceptance, the student makes the required deposit (see school or program for specific deposit amount). This amount is deducted from the tuition and fees due at registration

### Room and key

Residence hall room and key deposits for Daniells Complex and for Lindsay Hall are forfeited after August 15 if occupancy does not follow for the Autumn Quarter. At the close of the term of residence, both the room deposit and the key deposit are refunded after the dean's inspection and clearance and the student's return of the key.

## HOUSING

**I**f a student is interested in on-campus/residential housing, application may be made online at [www.llu.edu/llu/housing](http://www.llu.edu/llu/housing).

## INTERNATIONAL STUDENTS

**I**nternational students must be prepared to provide an advance deposit, as required by the University; and must provide documentation that additional funds will be forthcoming to meet school expenses. The deposit will be held by the University during the program of study and will be applied to the last quarter's tuition charge. Alternatively, the deposit may be refunded, less any outstanding balance on the account, if the student is denied a visa or chooses to drop the program.

Scholarships and assistantships for international students are scarce, and employment is limited for F- and J-visa students to no more than twenty hours per week. Unless special permission is given by immigration authorities, international students are restricted to employment on campus.

## HEALTH SERVICE

**A** student registered for 7 or more units per quarter is automatically covered by Student Health Plan provisions. A student enrolled for fewer than 7 units may request and pay for health-plan coverage. For further information, see the Student Health Plan in the Student Life section of this CATALOG.

**STUDENT AID**

The University participates in grant, scholarship, and loan programs. Financial assistance is available to students from University and government loan funds and other special trust funds. A needs-analysis system approved by the federal government is used to evaluate the need for financial aid. A parental contribution factor is considered for dependent students.

It is necessary for students who are seeking financial assistance to file the Free Application for Federal Student Aid (FAFSA) as soon as possible for the current academic year. A financial aid packet for Loma Linda University, which must also be completed, can be obtained through Student Financial Aid.

**Loans**

Loans are available both to undergraduate and graduate students who are eligible to participate in government loan programs. Loans are restricted to citizens of the United States and certain eligible noncitizens. Certain funds are interest free while a student is enrolled at least half-time. Inquiries about loans should be made to the Office of Financial Aid.

The Office of Student Loan Collections reserves the right to invoke the student-loan promissory note collection-cost clause on student-loan accounts, both federal and private, sent to an outside agency for collection. The collection clause states:

**"If action is instituted on this note, the undersigned promises to pay all attorney's fees and other costs and charges necessary for the collection of any amount not paid when due."**

**Deferred-payment plans**

Through various nationwide organizations specializing in educational financing, low-cost, deferred-payment programs are available to students who want to pay education expenses in monthly installments.

**Work-study program**

Work opportunities may be available to students after financial need is determined by the Office of Financial Aid. The majority of funding for on-campus employment is provided by the United States government for United States citizens and certain eligible noncitizens.

**Financial aid applications**

Loma Linda University financial aid applications for the 2005-2006 academic year (Summer Quarter through Spring Quarter) are available in the Office of

Financial Aid in January. They are also available online at <[www.llu/ssweb](http://www.llu/ssweb)>. FAFSA applications are available online at <[www.fafsa.edu.gov](http://www.fafsa.edu.gov)>. Financial aid applications must be renewed annually.

Cal Grant deadline is March 2.

**VETERANS BENEFITS**

Under Title 38 of the U. S. Code, Loma Linda University is approved for the training of veterans and other eligible persons. Information regarding eligibility for these programs may be obtained by calling 888/GIBILL1 or 888/442-4551. Application for benefits must be made directly to the Veterans Administration (VA) and may be done via the Web.

The Office of University Records serves as the certifying official for Loma Linda University. Students should contact the certifying official prior to their first enrollment certification.

Students receiving veteran's benefits who fail for three consecutive quarters to maintain the cumulative grade-point average (G.P.A.) required for graduation will have their benefits interrupted, and the VA office will be notified.

School of Medicine students must maintain satisfactory grades for all required courses for the year in which they are currently enrolled. If a grade in a required course reflects unsatisfactory progress, the School of Medicine student will not be certified until his/her probationary status (usually one year) has been removed.

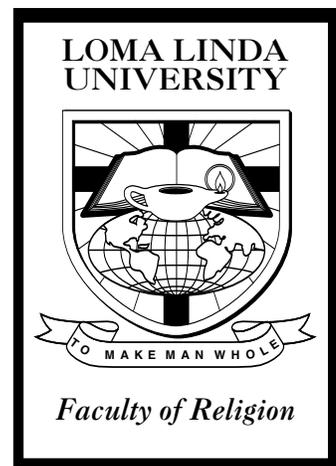
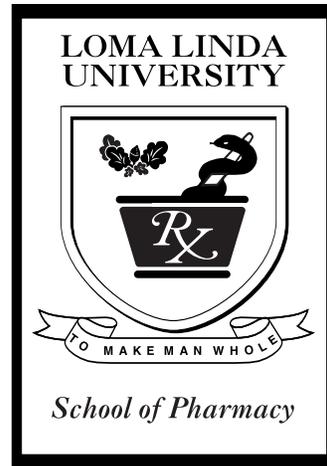
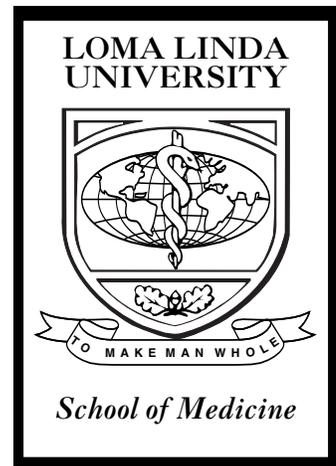
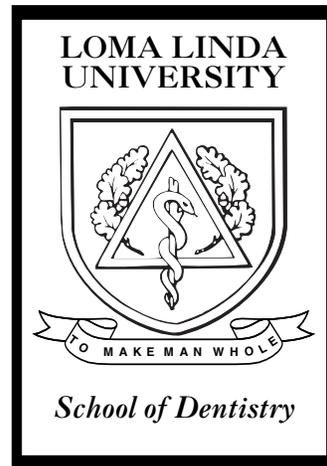
For more information, open links to the VA Web site ("Students" or "Prospective Students") on the University home Web page at <<http://www.llu.edu>>.

**WICHE**

The University participates in the student-exchange program of the Western Interstate Commission for Higher Education (WICHE). Eligibility requirements vary among states. Interested students should apply to their state's certifying officer for further information. The name and address of the certifying officer can be obtained from the Western Interstate Commission for Higher Education, P.O. Drawer P, Boulder, CO 80302.

Inquiry may also be made at the Office of Student Financial Aid. The application deadline is October 15 prior to the year aid is needed.





### Seals of the Schools

Loma Linda University is comprised of nine schools. Each school has its own degree requirements and is headed by a dean, who has final academic authority. Loma Linda University students enroll in the University and in one of the schools described in Section III.

# III

## ABOUT THE SCHOOLS

Seals of the Schools

School of Allied Health Professions

School of Dentistry

School of Medicine

School of Nursing

School of Pharmacy

School of Public Health

School of Science and Technology

Faculty of Graduate Studies

Faculty of Religion



# School of Allied Health Professions

## Departments and Programs

### **Distance Education Program**

Health Science

### **Conjoint Doctoral Program**

Rehabilitation Science

### **Cardiopulmonary Sciences**

Respiratory Care

Emergency Medical Care

### **Clinical Laboratory Science**

Phlebotomy

Cytotechnology

Clinical Laboratory Science (formerly Medical Technology)

### **Health Information Management**

Health Information Administration

Health Information Technology

Coding Specialist

### **Nutrition and Dietetics**

Dietetic Technology

Nutrition and Dietetics

### **Occupational Therapy**

Occupational Therapy Assistant

Occupational Therapy

### **Physical Therapy**

Physical Therapist Assistant

Physical Therapy, Master's

Physical Therapy, Doctoral

### **Physician Assistant Sciences**

Physician Assistant

### **Radiation Technology**

Medical Radiography

Radiation Sciences

Radiation Therapy Technology

Radiologist Assistant

Diagnostic Medical Sonography

Medical Dosimetry

Nuclear Medicine Technology

Special Imaging Technology: CT/MRI

### **Speech-Language Pathology and Audiology**

Speech-Language Pathology

Speech-Language Pathology Assistant

Speech-Language Pathology and Audiology

## Dean's Welcome

Welcome to the School of Allied Health Professions at Loma Linda University. Here you will receive a quality education from a committed faculty and staff. Regardless of the discipline you have chosen to study, we believe we offer an environment that fosters academic excellence, professional competence, and spiritual development.

Our close and effective connection with Loma Linda University Medical Center enables both students and faculty to stay on the cutting edge of health care practice. The school's more than 1,300 clinical affiliations throughout the United States offer a wide variety of experience options designed to develop a well-rounded health care professional.

In the School of Allied Health Professions, we are committed to your education and professional development and believe that it is more than just clinical competence—it is our emphasis on the development of the caring and compassionate professional—that sets us apart.



Craig R. Jackson, J.D., M.S.W.

Dean

## School Foundations

The School of Allied Health Professions was established in 1966 (under the name School of Health Related Professions, 1966-1971) to consolidate the administration of individual curricula initiated earlier in the University: medical technology, 1937; physical therapy, 1941; medical radiography, 1941; occupational therapy, 1959; health information management (formerly medical record administration), 1963. Curricula added since the school was established are nuclear medicine technology, 1970; radiation therapy technology, 1970; cardiopulmonary sciences (formerly respiratory therapy), 1971; nutrition and dietetics, 1972; medical sonography, 1976; special imaging technology, 1976; cytotechnology, 1982; coding specialist, 1987; occupational therapy assistant, 1988; physical therapist assistant, 1989; emergency medical care, 1993; surgical technology, 1995; physician assistant, 2000; polysomnography, 2002; radiologist assistant, 2003; medical dosimetry 2003. The curriculum in speech-language pathology and audiology, initiated in 1965 under the auspices of the College of Arts and Sciences of La Sierra University (formerly Loma Linda University, La Sierra campus), was transferred to the School of Allied Health Professions in 1987. Particulars governing each program are detailed in Section IV of this CATALOG.

## Mission and Goals

### OUR MISSION

The School of Allied Health Professions is dedicated to fulfilling the mission of Loma Linda University through academic and clinical training of allied health professionals. The school prepares competent health professionals in a Christian environment that emphasizes the healing and teaching ministry of Jesus Christ “to make man whole.”

To meet local, national, and international allied health-care needs, we seek to serve:

1. Students choosing to become health care professionals.
2. Individuals in need of medical care or health-promotion programs.
3. Faculty and staff committed to working with students in a Christian educational setting.

### OUR GOALS

The goals of the School of Allied Health Professions are to:

1. Provide an environment in which the student may develop responsibility for integrity, ethical relationships, and empathic attitudes that contribute to the welfare and well-being of patients.
2. Help the student accept responsibility for integrity, ethical relationships, and empathic attitudes that can contribute to the welfare and well-being of patients.
3. Help the student develop a background of information and attitudes conducive to interprofessional understanding and cooperation.
4. Encourage the student to cultivate habits of self-education that will foster lifelong growth.
5. Engender and nurture in the student the desire to serve mankind—and, in particular, to serve as needed in the medical centers sponsored by the Seventh-day Adventist Church, both in this country and elsewhere.

The goals for the ideal graduate of the School of Allied Health Professions are to:

1. Demonstrate clinical competence in his/her chosen profession.
2. Operate from a foundation of personal and professional ethics that incorporates the fundamental values espoused by Loma Linda University.
3. Demonstrate compassion for others in the manner of Christ.
4. Clarify his/her values and attitudes of human worth in relationship to his/her understanding of God.
5. Perform effectively within a team setting.
6. Communicate effectively with peers, supervisors, patients, family, and the community—orally and in writing—with sensitivity to nonverbal communication.
7. Analyze and respond to the changing field of health care.
8. Critically analyze data.

9. Read and interpret research papers.
10. Contribute to the chosen health profession through participation in professional organizations.
11. Utilize a theoretical foundation as a basis for treatment or management.
12. Incorporate wholeness into all aspects of personal and professional life.
13. Use sensitivity to accommodate diversity among individuals.
14. Commit to lifelong personal and professional learning.
15. Demonstrate basic skills in personal financial management and, where appropriate, in practice management.

### EVALUATION OF MISSION AND GOALS— PORTFOLIO-DEVELOPMENT PRACTICUM

Portfolio is a tool by which students develop and personally achieve goals established by the School of Allied Health Professions.

The School of Allied Health Professions conducts an evaluation program that includes courses, validation of writing, and standardized measures related to wholeness. The evaluation courses—Portfolio Practicum I and II and Graduate Portfolio—are intended to be a means of integrating the wholeness concept into the lives of the students and of assessing the outcome of their educational process. The portfolio faculty and staff assist students in understanding and modeling the mission of Loma Linda University and the School of Allied Health Professions.

Each portfolio practicum is in progress for three-to-four quarters, during which time the student is developing a portfolio based on the fifteen goals of the school (see above, Mission and Goals). The final portfolio provides the student with an organized, goal-driven documentation of growth and achieved competence of abilities in a personal and professional realm of skills. An Associate in Science degree program student completes the one-year Portfolio Practicum; all other undergraduate students complete Portfolio Practicum I and II over a two-year period; each graduate student completes a graduate portfolio.

## General Regulations

Students of the University are responsible for informing themselves of and satisfactorily meeting all regulations pertinent to registration, matriculation, and graduation. Section III gives the general setting for the programs of each school. The subject and unit requirements for admission to individual professional programs are outlined in Section IV. It is important to review specific program requirements (Section IV) in the context of the general requirements (Section III) applicable to all programs.

## ADMISSIONS POLICIES AND INFORMATION

The program admissions committees of the University intend that an applicant to any of the schools is qualified for the proposed curriculum and is capable of profiting from the educational experience offered by this University. The admissions committees of the school accomplish this by examining evidence of scholastic competence, moral and ethical standards, and significant qualities of character and personality. Applicants are considered for admission only on the recommendation of the program in which study is desired.

In selecting students, the Admissions Committee of the School of Allied Health Professions looks for evidence of self-discipline, personal integrity, and intellectual vigor. The committee also looks for evidence that students possess the capabilities required to complete the full curriculum in the allotted time and to achieve the levels of competence required. Acceptance of the applicant into any program is contingent on the recommendation of the department conducting the program.

An interview with faculty is required by most programs. Loma Linda University was established to provide education in a distinctively Christian environment, and its students are expected to adopt Christian ethical and moral standards as a basis for their conduct. It must be understood further that, in harmony with the University's emphasis on health and the health professions and the practices of the supporting church, applicants who use tobacco, alcoholic beverages, or narcotics should not expect to be admitted.

Loma Linda University is committed to equal opportunity and does not discriminate against qualified persons on the basis of handicap, gender, race, color, or national or ethnic origin in its educational and admissions policies, financial affairs, employment programs, student life and services, or any University-administered program. It does, however, retain the right to give preference in student admissions to qualified Seventh-day Adventist applicants. While this right is retained, it should be emphasized that admissions are not limited exclusively to Seventh-day Adventist applicants.

## APPLICATION AND ACCEPTANCE

### Where to write

Correspondence about admission to all programs and requests for application information should be addressed to:

Office of Admissions and Records  
School of Allied Health Professions  
Loma Linda University  
Loma Linda, CA 92350

Applications are available on line at  
<<http://www.llu.edu>>. (Click on "apply" under  
Loma Linda University.)

### Apply early

One class is admitted annually to most of the professional programs. Most programs begin with the Autumn Quarter. Exceptions are noted in the respective programs of this CATALOG in Section IV.

Late applications are considered as long as space is available. Notifications generally are sent between

January 1 and May 15, depending on the completeness of information provided and the date of application. Applicants should inquire at the Office of Admissions and Records if notice of action is not received by April 15 for occupational therapy and physical therapy, and by May 15 for other programs.

#### Application review process

All completed applications are first reviewed by the department chair and faculty. A recommendation on each application is then submitted to the School's Admissions Committee, which makes the final decision regarding acceptance.

#### Procedure

The procedure for application and acceptance is given below. All correspondence and documents are to be sent to the Office of Admissions and Records, School of Allied Health Professions, Loma Linda University, Loma Linda, CA 92350.

1. File the complete application form (including recommendations, if received), accompanied by the \$60 application fee.
2. Request that transcripts of all college course work be sent to the School. High school transcripts are required of all applicants in order to verify graduation and completion of high school mathematics.
3. Upon receipt of the notice of acceptance, return the required deposit and the card provided to confirm acceptance.
4. Provide health records or certificates, as required.

#### Applicant's records

The application and all records submitted in support of the application become the property of the University.

## ENTRANCE REQUIREMENTS

#### Subject/diploma requirements

High school and college subject requirements for each program are outlined in the respective programs of this CATALOG Section IV. Students are required to furnish evidence of completion (official transcript) of high school in order to be granted admission to undergraduate programs in schools of the University. A high school diploma or its equivalent, the GED, is required.

#### Grade requirement

Eligibility for consideration by the Admissions Committee is based on a grade-point average of at least 2.0 (on a 4.0 scale) for all course work (science and non-science subjects computed separately) presented in fulfillment of entrance requirements for all programs in the school. A grade-point average considerably higher than the minimum is expected because of the nature of the studies in many professional programs and the competition for the limited number of openings. In general, grade-point averages between 2.5 and 3.0 are considered minimal, depending on the program. A minimum grade of C (2.0) is required for all college transfer courses.

#### Transcripts

Transcripts (the documents by which institutions officially convey the grades and credits earned in specific subjects and the stage of completion of curriculum requirements) are accepted only when sent directly to the University by the issuing institution. Transcripts received by the University become the property of the

University and will not be released to the student or forwarded to any other institution upon request of the student.

#### Academic probation

Students whose cumulative G.P.A. at the end of any quarter is less than the minimum required by the school or program will be placed on academic probation, and the number of units for subsequent registrations will be restricted to a maximum determined by the school of program. A student on academic probation jeopardizes his or her standing in a degree or certificate program.

## Student Life

The information on student life contained in this CATALOG is brief. The most current *Student Handbook* more comprehensively addresses University and school expectations, regulations, and policies and is available to each registered student. Students need to familiarize themselves with the contents of the *Student Handbook*. Additional information regarding policies specific to a particular school or program within the University is available from the respective school.

## PROFESSIONAL STANDARDS

#### Personal grooming

Good taste indicates that haircuts, hairstyling, and personal grooming be neat, and conservative rather than ostentatious. Grooming and style should also be practical, so that the student can perform assigned duties without embarrassment or inconvenience. Specifically:

- Men's hair must be neatly trimmed and not fall below the collar. Ponytails, spikes, and dreadlocks are not acceptable.
- Mustaches and beards, if worn, must be neat and closely trimmed.
- Women's hair, if long, may be required to be tied back. Spikes and dreadlocks are not acceptable.
- The wearing of hats indoors is not acceptable.
- Words, pictures, and/or symbols displayed on clothing should be consistent with a Christian institution and sensitive to a diverse student population.
- Excessive makeup and fragrances are not appropriate.
- Rings, if worn, should be low profile and limited to one finger per hand. Male students are not allowed to wear ear ornaments. If worn by women, ear ornaments are limited to simple studs and should not drop below the bottom of the earlobes. Such ornaments are limited to one per ear. Rings or ornaments in other anatomical sites are not acceptable.
- Fingernails should be maintained in a professional manner, closely trimmed, and should not interfere with patient safety and comfort during treatments. Nail polish, if worn, should be of a subdued color.

## Academic Policies and Information

Students are responsible for informing themselves of the policies and regulations pertinent to registration, matriculation, and graduation; and for satisfactorily meeting these requirements.

### ACADEMIC RESIDENCE

In order to graduate from Loma Linda University with a bachelor's degree, a student must complete at least 32 of the last 48 units, or a minimum of 45 total units of course work, at this University. A minimum grade of C (2.0) or better is required for all B.S. and postbaccalaureate degrees.

### SCHOLASTIC STANDING

#### Repeating a course

A student who receives an unsatisfactory grade in a required course and is required by the faculty to do additional work may request permission of the faculty to pursue one of the following plans. In either plan the student must register and pay the applicable tuition.

1. Review the course work under supervision and take a make-up examination (usually not given before a minimum of two weeks of study). A passing grade resulting from a repeat examination will be limited to a C (2.0). (See the Schedule of Charges in the Financial Information section of this CATALOG for the tuition rate for tutorial course work.)
2. Repeat the course, attend class and/or laboratory, and take the final course examination. Full tuition will be charged whether regular or occasional attendance is required. (See the Schedule of Charges in the Financial Information section of this CATALOG for the tuition rate.)

A student who receives an unsatisfactory grade in a required clinical-experience course and is required by the faculty to do additional work must reregister and pay the applicable fee. (See the Schedule of Charges in the Financial Information section of this CATALOG for the fee for repeat of clinical experience.)

Both the original and repeat grades are entered in the student's permanent academic record, but only the repeat grade is computed in the grade-point average. A course may be repeated only one time.

#### Promotion and probation

Each student's record is reviewed quarterly by the faculty. Promotion is contingent on satisfactory academic and professional performance and on factors related to aptitude, proficiency, and responsiveness to the established aims of the school and of the profession. As an indication of satisfactory academic performance, the student is expected to maintain the following grade-point average:

- |     |   |
|-----|---|
| 2.0 | Associate and baccalaureate degree programs |
| 2.5 | Master's degree program                     |
| 3.0 | Doctoral degree program                     |

A student whose grade-point average in any term falls below the minimum required for the degree, or who receives in any professional or required course a grade less

than a C (2.0), or whose clinical performance is unsatisfactory is automatically placed on academic probation. Continued enrollment is subject to the recommendation of the department. If continued enrollment is not recommended, the case is referred to the Administrative Council of the school for final action.

If continued enrollment is recommended, the student will be required to institute a learning assistance plan within the first two weeks of the following quarter and meet regularly scheduled appointments with the academic adviser. The learning assistance plan should: identify the problem, identify and list the goals, state the time frame, and include student and adviser signatures and date.

A student who is on academic probation and fails to make the minimum required grade-point average the following quarter or fails to have an overall minimum grade-point average after two quarters will have disqualified himself/herself from the program.

#### Standard of student progress (time framework)

After initial enrollment in a program, students must complete program requirements within the following time frames:

A.S. degree	3 years
B.S. degree	5 years
Master's degree	5 years
Doctoral degree	7 years

## Allied Health Studies

The Department of Allied Health Studies provides a variety of administrative and support services to the school's academic departments, including: development, marketing, admissions, computer support and training, portfolio, and financial services. In addition, the Department of Allied Health Studies supports programs offered in conjunction with other schools of the University or distance education sites.

### FACULTY

Shigenobu Arakaki  
 Kent Chow  
 Noha S. Daher  
 G. Charles Dart, Jr.  
 Intithar S. Elias  
 Helen R. Greenwood  
 Esther M. Huecker  
 Craig R. Jackson  
 Theresa M. Joseph  
 Keiko I. Khoo  
 Everett Lohman III  
 Diana S. Medal  
 Dulce L. Pena  
 Gail T. Rice  
 Borge Schantz  
 Ernest R. Schwab  
 Paige Shaughnessy  
 Antonio Valenzuela  
 Ardis E. Wazdataskey  
 Grenith J. Zimmerman

**ADJUNCT FACULTY**

Naoki Ando  
 Yuji Asai  
 Masahiro Hashimoto  
 Fusae Ishibashi  
 Takeo Itoh  
 Yoshinori Koide  
 Miyako Murase  
 Naohito Shingu  
 Tsuyoshi Soji  
 Shige-yuki Suzaki  
 Chiharu Tanaka  
 Akira Tsushima

**ADVISORY COMMITTEE**

Craig R. Jackson  
 Edd J. Ashley  
 Liane H. Hewitt

**EXTENDED-CAMPUS PROGRAMS**

Students may contact the program director for information about distance-learning programs, which are described in Section IV.

Health science, B.S. (Japan)  
 Keiko Khoo, program director

Radiation Technology, B.S. (Fresno, California)  
 Arthur W. Kroetz, program director

Health Information Administration, B.S. (online)  
 Marilyn H. Davidian, program director

**LEARNING RESOURCE/RESEARCH CENTER—CENTER FOR PREHOSPITAL CARE, EDUCATION, AND RESEARCH (CPCER)**

JEFF T. GRANGE, Medical Director, Center for Prehospital Care, Education, and Research (CPCER); Director, LLUMC Emergency Medical Services Department of Emergency Medicine, Loma Linda University Medical Center

EHREN NGO, Director, Bachelor of Science degree program in emergency medical care, Department of Cardiopulmonary Sciences, School of Allied Health Professions

JEFFREY L. BENDER, Manager, Discoveries Project, Loma Linda University Medical Center

RUEL ALIPOON, Program Director, Life Support Education, Department of Cardiopulmonary Sciences, School of Allied Health Professions

The Emergency Medical Care (EMC) Bachelor of Science degree program and Life Support Education (LSE), in conjunction with the LLUMC Emergency Department (ED), constitute the Center for Prehospital Care, Education, and Research (CPCER). The center seeks to advance the mission of Loma Linda University Adventist Health Sciences Center (LLUAHSC)—“To make man whole.” Bringing together the educational and research resources of Loma Linda University and the educational and ethical resources of LLUMC—a tertiary care center, children’s hospital, and Level 1 trauma center—the Center for Prehospital

Care, Education, and Research is uniquely equipped to benefit the prehospital and critical-care EMS community that serves the 3.3 million residents who populate a vast, geographically diverse region spanning one-quarter of the state of California by:

- Giving emergency and critical-care EMS health care providers access to quality education that focuses on personal, spiritual, intellectual, and professional development and up-to-date, quality patient care.
- Providing and expanding on comprehensive and ethical research focused on fostering professionalism and leadership, while continually building the body of knowledge that guides EMS practice and quality patient care.
- Developing leaders with decision-making skills that reflect spiritual, moral, ethical, and compassionate insights.
- Developing and enhancing managers capable of addressing today’s dynamic health care industry with regard to finance and economic viability, resource management, technology, and quality patient care.

**CPCER INFORMATION**

For further information, contact CPCER at: Center for Prehospital Care, Education, and Research, administrative office.

Location: Room A234, LLU Medical Center  
 Loma Linda, CA, 92350

Telephone: 909/558-7611

FAX: 909/558-7934

E-mail: [ems@lluems.com](mailto:ems@lluems.com)

or

[webmaster@univ.llu.edu](mailto:webmaster@univ.llu.edu)

Web site: [www.lluems.org](http://www.lluems.org)

or <http://www.llu.edu/lluems/prehospital/>

**COURSES AND PROGRAMS**

The Center for Prehospital Care, Education, and Research (CPCER) is an alliance formed by the Emergency Medical Care (EMC) Bachelor of Science degree program, Life Support Education (LSE), and the LLUMC Emergency Department (ED). The center offers one of the largest selections of continuing-education courses, classes, and programs available through a single center in the Western United States:

**SCHOOL OF ALLIED HEALTH PROFESSIONS  
 EMERGENCY MEDICAL CARE PROGRAMS**

The School of Allied Health Professions offers class-work and training in emergency medical care through academic and continuing education programs—

1. the Bachelor of Science degree program in emergency medical care (EMC);
2. the Life Support Education (LSE) center for community and continuing education.

## BACHELOR OF SCIENCE DEGREE PROGRAM IN EMERGENCY MEDICAL CARE (EMC)

The two-year EMC B.S. degree program is open to the EMT, paramedic, RN, or respiratory therapist who has completed two years of undergraduate work. (Contact number: 909/558-4932. See additional admission requirements and program information in Section IV, emergency medical care program).

## LLUMC EMERGENCY DEPARTMENT EMERGENCY MEDICAL CARE PROGRAMS

The LLU Medical Center Emergency Department (ED) offers the following courses and programs in basic and advanced education related to emergency care:

### Grand Rounds and Lectures

- Grand Rounds
- Lectures for emergency medicine residents

### EMT and paramedic continuing education, trauma life support, leadership certification, and other offerings

- National registry paramedic refresher program
- Paramedic skills update
- Basic trauma life support
- ICEMA (Inland Counties Emergency Medical Agency) protocol update
- Field-care audits

### Life Support Education (LSE)

Life Support Education offers basic and advanced classes related to cardiac emergency care, as listed below. Life Support Education is located on campus in the University Arts building, at 24887 Taylor Street, Suite 102; telephone 909/558-4977. It is open to LLU students and LLUMC employees and is available to individuals from the surrounding communities.

#### Basic life support (CPR)

Teaches health care providers how to manage a cardiopulmonary-arrest victim with the basics of CPR—including chest compression, mouth-to-mouth, or bag-valve ventilation and automated external defibrillation.

- Basic life support
- Basic life support instructor
- Basic life support renewal

#### Advanced cardiac life support (ACLS)

Teaches health care providers how to manage a cardiopulmonary-arrest victim with cardiac medication, defibrillator, chest compression with ventilations, and endotracheal intubation.

- Advanced cardiac life support
- Advanced cardiac life support instructor
- Advanced cardiac life support renewal

#### Pediatric advanced life support (PALS)

Teaches health care providers how to manage a cardiopulmonary-arrest child or infant with medications, endotracheal intubation, defibrillation and chest compressions with ventilations.

- Pediatric advanced life support
- Pediatric advanced life support instructor course
- Pediatric advanced life support renewal

#### Neonatal resuscitation program

Teaches the health care provider how to manage and resuscitate a newborn infant experiencing life-threatening cardiopulmonary problems.

- Neonatal resuscitation provider
- Neonatal resuscitation provider instructor
- Neonatal resuscitation provider renewal

#### Heartsaver automated external defibrillator (AED)

Teaches the lay person or health provider how to use the AED in conjunction with CPR.

- Automatic external defibrillation

## ACLS COURSE

### Course description

The Advanced Cardiac Life Support (ACLS) course is designed to reevaluate medical professionals as ACLS providers and to increase their skills in the management of cardiac arrest, airway management, and arrhythmia recognition. The lectures, workshops, and tests adhere to the guidelines of the American Heart Association. Participants will gain hands-on experience in code management.

### ACLS course objectives

At completion of the course, participants will be able to demonstrate proficiency according to American Heart Association standards in the areas of:

- Adult CPR
- Mouth-to-mask ventilation
- Esophageal obturator airway placement
- Endotracheal intubation
- Basic arrhythmia recognition and therapeutic treatment
- Team leadership in a megacode situation, including patient assessment, arrhythmia recognition and treatment, supervision of team members, and problem solving.

### ACLS prerequisites

- Be a health care provider whose activities demand proficiency in ACLS skills.
- Study the textbook prior to class attendance.

### ACLS registration

The registration form, along with payment, should be submitted at least two weeks before course beginning date. Registration closes when classes are full.

### ACLS continuing-education units

An ACLS card will be issued upon successful completion of the course. The ACLS Provider course and ACLS Renewal course are approved by the California Board of Registered Nursing (provider number CEP 10403) and constitute eligibility for 16 hours of CE credit for the ACLS Provider course and 8 CE credits for ACLS Renewal course.

### ACLS course materials

A textbook required for this course. Precourse materials and textbook can be picked up at Life Support Education (price varies from year to year). For additional information regarding materials, please call 909/558-4977.

**Additional ACLS fees**

- §25.00 Rescheduling fee
- §25.00 Retesting fee, if test is failed
- §25.00 Processing fee for refunds

**Refund policy**

A seven-day notice is required for cancellation or rescheduling. In case of emergency or if the applicant is called into work, LSE should be notified. A \$25.00 processing fee will be charged for refunds.

## Financial Policies and Information

The Office of the Dean is the final authority in all financial matters and is charged with the interpretation of all financial policies. Any exceptions to published policy in regard to reduction or reimbursement of tuition must be approved by the dean. Any statement by individual faculty members, program directors, or department chairs in regard to these matters is not binding on the school or the University unless approved by the dean.

Registration is not complete until tuition and fees for the required installment are paid; therefore, the student should be prepared to make these payments during scheduled registration for each academic year. There may be adjustments in tuition and fees as economic conditions warrant.

### GENERAL FINANCIAL PRACTICES

The student is expected to arrange for financial resources to cover all expenses before the beginning of each school year. Previous accounts with other schools or this University must have been settled.

### SCHEDULE OF CHARGES (2005-2006)

(Subject to change by Board of Trustees action)

NOTE: Tuition rates are effective Summer Quarter through the following Spring Quarter.

**Tuition information: by department**

- Column 1      academic year/class
- Column 2      total units for academic year
- Column 3      total tuition for academic year
- Column 4      specified degree or certificate, full-time or part-time status, or track

**1            2            3            4**

**SCHOOL OF ALLIED HEALTH PROFESSIONS**

**Rehabilitation Science—Doctor of Philosophy**

24            \$11,160

**CARDIOPULMONARY SCIENCES**

**Emergency Medical Care—Progression Bachelor of Science; Bachelor of Science**

JR      37            \$13,764  
 SR      37            \$13,764

**CPCER—Center for Prehospital Care, Education, and Research**

See Section III, SAHP, Learning Resource/Research Center—Center for Prehospital Care, Education, and Research (CPCER) for contact information *re* CPCER certificate programs and tuition

**Polysomnography—Certificate**

(contact department for tuition information)

**Respiratory Care—Certificate**

1            45            \$16,740  
 2            36            \$13,392

**Respiratory Care—Bachelor of Science**

JR      52            \$19,344  
 SR      60            \$22,320

**Respiratory Care—Postprofessional Bachelor of Science**

New    49            \$18,228  
 Cont.    4            \$ 1,488

**CLINICAL LABORATORY SCIENCE**

**Phlebotomy—Certificate**

AHCJ 105 5            \$279 *per unit*  
                                   (\$1,395 *certificate*)  
 AHCJ 107 2            \$279 *per unit*  
                                   (\$558 *certificate*)

**Cytotechnology—Certificate; Bachelor of Science**

1            48            \$17,856      Certificate  
 2            16            \$ 5,952      Certificate  
 JR      48            \$17,856      B.S.  
 SR      55            \$20,460      B.S.

**Clinical Laboratory Science (formerly Medical Technology)—Bachelor of Science**

JR      61            \$22,692  
 SR      62            \$23,064      Track A, B, C

**HEALTH INFORMATION MANAGEMENT**

**Health Information Systems—Master of Health Information Systems**

1            37            \$17,205      full-time  
 2            17            \$ 7,905      full-time  
 1            18            \$ 8,370      part-time  
 2            25            \$11,625      part-time  
 3            11            \$ 5,115      part-time

**Health Information Systems—Post-Master's Certificate**

Units and tuition vary, depending upon units transferred into Loma Linda University.

**1      2      3      4**  
**Health Information Administration—Certificate;**

**Bachelor of Science**

JR	51	\$18,972
SR	48	\$17,856

Part-time: units and tuition vary.

**Health Information Administration—Health Information Technology (HIT) Progression Bachelor of Science**

JR Units and tuition vary, depending upon units transferred into Loma Linda University.

SR Units and tuition vary, depending upon units transferred into Loma Linda University.

**Coding Specialist—Certificate**

1	10	\$ 1,810
2	13	\$ 2,353
3	6	\$ 1,086

**NUTRITION AND DIETETICS**

**Dietetic Technology—Associate in Science**

SO	52.5	\$14,648
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**Dietetic Technology—Certificate**

Units and tuition vary, depending upon units transferred into Loma Linda University.

**Nutrition and Dietetics—Progression Bachelor of Science; Bachelor of Science; Certificate**

JR 59.5 \$22,134 B.S.

SR 45.5 \$16,926 B.S.

Cert Units and tuition vary, depending upon units transferred into Loma Linda University.

**OCCUPATIONAL THERAPY**

**Occupational Therapy Assistant—Associate in Arts**

1	51	\$14,229
2	6	\$ 1,674

**Occupational Therapy—**

**Entry-Level Master of Occupational Therapy; Postprofessional Master of Occupational Therapy**

**Entry-Level M.O.T.**

JR	68	\$25,296
SR	44	\$16,368
Grad	36	\$13,392

JR 64 \$23,808 Track

SR 42 \$15,624 Track

Grad 36 \$13,392 Track

**Progression M.O.T.**

(applies only to graduated LLU OTA students)

57	\$21,204
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**1      2      3      4**

**Postprofessional M.O.T.**

Cert Units and tuition vary, depending upon units transferred into Loma Linda University.

**PHYSICAL THERAPY**

**Physical Therapist Assistant—Associate in Science**

1	57	\$15,903	regular
2	6	\$ 1,674	regular

**Physical Therapy—**

**Progression Master of Physical Therapy; Postprofessional Master of Physical Therapy**

**Progression M.P.T.**

1	81	\$30, 132
2	65.5	\$24, 366
3	8	\$ 2,970

**Postprofessional M.P.T.**

1	36	\$16,740
2	9	\$ 4,180

**Physical Therapy—**

**Entry-Level Doctor of Physical Therapy; Postprofessional Doctor of Physical Therapy; Postprofessional Doctor of Physical Therapy Science**

**Entry-Level D.P.T.**

1	80	\$31,280
2	65.5	\$25,611
3	32.5	\$12,708

**Postprofessional D.P.T.**

1	36	\$16,740
2	9	\$ 4,185

**Postprofessional D.P.T.Sc.**

1	36	\$16,740
2	9	\$ 4,185

**PHYSICIAN ASSISTANT SCIENCES**

**Physician Assistant—Master of Physician Assistant**

1	56	\$26,040
2	50	\$23,250
3	12	\$ 5,580

**RADIATION TECHNOLOGY**

**Medical Radiography—Associate in Science**

New	41	\$11,439
Cont	14	\$ 3,906

**Radiation Sciences—Bachelor of Science**

Units and tuition vary, depending upon units transferred into Loma Linda University.

New	39	\$14,508
Cont	26	\$ 9,672

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>Radiation Therapy Technology—Bachelor of Science; Certificate</b>				
New	27		\$12,555	
Cont	2		\$ 930	

**Radiologist Assistant—Bachelor of Science; Post-Bachelor of Science Certificate**

Units and tuition vary, depending upon units transferred into Loma Linda University.

New	35		\$13,020
Cont	23		\$8,556

**Diagnostic Medical Sonography—Certificate**

New	17	\$ 7,905	Track 1
Cont 1	19	\$ 8,835	Track 1
Cont 2	3	\$ 1,395	Track 1
New	22	\$10,230	Track 2
Cont	1	\$ 465	Track 2

**Medical Dosimetry—Certificate**

New	33	\$ 15,345	Track A
Cont	4	\$ 1,860	Track A
New	27	\$ 12,555	Track B
Cont	3	\$ 1,395	Track B

**Nuclear Medicine Technology—Certificate**

New	15	\$ 6,975
Cont	3	\$ 1,395

**Special Imaging Technology: CT/MRI Certificate**

New	18	\$ 8,370
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**SPEECH-LANGUAGE PATHOLOGY AND AUDIOLOGY**

**Speech-Language Pathology—Post-Bachelor of Science Certificate**

	51	\$18,972
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**Speech-Language Pathology Assistant—Associate in Science**

(contact department for tuition information)

**Speech-Language Pathology and Audiology—Bachelor of Science**

JR	48-49	\$17,856 to \$18, 228
SR	48	\$17,856 to \$18, 228

**SPECIAL TUITION CHARGES**

- \$250 Per quarter, for advanced clinical experience
- 125 Per course, to remove an Incomplete in a clinical-experience course
- 50 Per course, to repeat a clinical-experience course when the program of study is not extended

**SUPPLIES**

Estimated annual expense of \$600-1,500 for supplies (textbooks, professional apparel, materials), depending on program and year of study

**SPECIAL CHARGES**

- \$ 60 Application
- 30 Reapplication
- 100 Acceptance deposit, nonrefundable (applied on tuition)
- 200 Acceptance deposit for M.P.T./D.P.T. degrees, nonrefundable (applied on tuition)
- 500 Acceptance deposit for M.P.A. degree, nonrefundable (applied on tuition)
- 200 Acceptance deposit for emergency medical care—B.S. degree, non-refundable (applied on tuition)
- 50 Late registration charge (if student registers later than *one full week before* the first day of the term; see University Calendar for specific dates)
- 25 Returned-check charge
- 50 Late-payment charge if loan funds are not received by registration and loan application was made less than thirty days before registration; if check is returned by bank (in addition to \$25 charge); or if student gives a postdated check at registration
- 25 Credit by examination (per unit of credit)
- 50 Examination other than regularly scheduled; waiver examination (per course)
- 25 Food laboratory fee
- 25 Microscope rental, per quarter (clinical laboratory science and cytotechnology students)
- 15 Book-usage-and-replacement fee per quarter (cytotechnology students)
- 2 Transcript of credit (\$5, rush; \$10, FAX)
- cost Professional pin
- cost CPR certification

**EXAMINATION AND MEMBERSHIP FEES**

**National and state fees**

- \$ 80 California Interim Permit for Physician Assistants (initial application and fingerprint fees)
- 89 Clinical Laboratory Scientist License—California
- 398 Registration and Enrollment Fee
- 145 Clinical Laboratory Scientist License—National Certifying Agency
- 145 Cytotechnology, ASCP Board of Registry
- 144 Cytotechnology License-California
- 80 Dietetic Technology, Registration Examination
- 125 Nutrition and Dietetics, Registration Examination

195	Health Information Management AHIMA Registry Examination (member)
245	Health Information Management AHIMA Registry Examination (nonmember)
195	Health Information Management Certified Coding Associate (CCA)
250	Health Information Management Certified Coding Associate (CCA), through AHIMA (nonmember)
275	Health Information Management Certified Coding Specialist (CCS), through AHIMA (member)
385	Health Information Management Certified Coding Specialist (CCS), through AHIMA (nonmember)
300	Health Information Certified Coding Specialist Physician Based (CCS-P), through AHIMA (member)
385	Health Information Certified Coding Specialist Physician Based (CCS-P), through AHIMA (nonmember)
125	Medical Technology, ASCP Board of Registry—National
420	National Board for Certification in Occupational Therapy (NBCOT)
420	National Board for Certification in Occupational Therapy Assistant (NBCOT)
425	National Commission on Certification of Physician Assistant (NCCPA)
80	Phlebotomy Technician, ASCP Board of Registry National
54	Phlebotomy Technician License-California
687	Physical Therapist Assistant, California State Board and License
701	Physical Therapy, California State Board and License
125	Radiation Technology, American Registry
50	Radiation Technology, California License
190	Respiratory Therapy, NBRC National Certification
416	Respiratory Therapy, California State Certification.

NOTE: Fees are set by national and state organizations and are subject to change.

#### Student membership fees

15	American Health Information Management Association (AHIMA) student membership
98	American Physical Therapy Association (APTA) student
15	California Health Information Association (CHIA) student membership

#### ON- AND OFF-CAMPUS STUDENT HOUSING

Students may go to <[www.llu.edu/llu/housing](http://www.llu.edu/llu/housing)> for housing information and a housing application form.

#### ESTIMATED LIVING EXPENSES

\$8,010	On-campus, single student: nine months (dormitory fee, food, clothes, personal items, recreation, transportation)
\$5,900	Off-campus, single student living at home: nine months
\$10,800	Off-campus, single student providing own housing: nine months

#### MISCELLANEOUS EXPENSES

cost	Transportation for off-campus assignments (University sponsored)
cost	Membership fees
cost	Health care items not covered by health insurance
cost	Breakage, damage, loss of University equipment

#### AWARDS AND SCHOLARSHIPS

Awards for scholastic attainment and leadership ability have been made available to students whose performance and attitudes reflect well the ideals and purposes of the school.

#### SCHOOL-WIDE AWARDS/SCHOLARSHIPS

The Selma Andrews Award is open to all students of the school. Students are encouraged to apply to their departments for scholarships from this fund. There is no application deadline.

#### CARDIOPULMONARY SCIENCES

The American Medical Response (AMR) **Scholarship** is given to a current or past employee of AMR who demonstrates excellence in the clinical practice of emergency medical service (EMS) and outstanding academic achievement in the Emergency Medical Care Program.

The **CPS Scholarship for Clinical Excellence in Respiratory Care** is given to a student who demonstrates exceptional clinical skills and knowledge in the care of respiratory patients.

The **Emergency Medical Care Alumni Scholarship Award** is presented to a student who has shown exceptional quality of work in the Emergency Medical Care Program and related projects, with contributions to the Emergency Medical Care community through acts of diversity, service, or volunteerism.

The **Faculty Award** is presented to a student who has shown promise of outstanding professional achievement and whose performance is in harmony with the objectives and goals of the University.

The **Louisa Jezerinac Cardiopulmonary Scholarship Award** is given to a student whose patient care exemplifies the qualities of compassion and dedication.

The PA Faculty Award is presented to a physician-assistant student who has shown promise of outstanding professional achievement and whose performance is in harmony with the objectives and goals of the University.

The Spirit of LLU Physician Assistant Award recognizes students who have dedicated themselves to their professional goal, persevering with good humor in the face of adversity; have shown compassion for and sensitivity to others; have a positive attitude; and have served as positive ambassadors for this program throughout their PA program training.

The William von Pohle Memorial Respiratory Care

**Clinical Excellence Award** is given each year to the respiratory care student in his/her senior year who demonstrates excellence in clinical practice and an attitude consistent with the mission of Loma Linda University.

#### Clinical Laboratory Science

The **Affiliate Recognition Award** is given to a senior clinical laboratory science student who has demonstrated outstanding performance during clinical rotation—including cooperation, motivation, and an ability to work well with staff.

The **Chairman's Award** is given to a senior clinical laboratory science student and to a cytotechnology student in recognition of outstanding scholarship and leadership qualities that are in harmony with the objectives and goals of the University. Selection is based on the recommendation of the faculty.

The **Faculty Award** is presented to a senior clinical laboratory science student and to a cytotechnology student who have shown promise of outstanding professional achievement and who intend to pursue a career in the area of medical technology or cytotechnology. Selection is based on recommendation of the faculty.

The **Marlene Ota Scholarship** is awarded to a cytotechnology student who has demonstrated integrity, leadership, and academic excellence.

The **Moncrieff Scholarship Award** is presented annually to a clinical laboratory science student who has demonstrated superior scholarship; professional dedication; financial need; and such personal attributes as dependability, integrity, and initiative.

The **Walsch-Loock Scholarship Award** is presented annually to a clinical laboratory science student on the basis of scholarship, promise of professional achievement, and financial need.

#### Health Information Management

In the interest of promoting student involvement in the international mission of Loma Linda University, the **Audrey Shaffer Endowment** provides travel expenses for student clinical and affiliation experiences in health care facilities outside the United States. Candidates must demonstrate academic excellence and leadership qualities. Recommendations from department faculty and students are required.

The **Faculty Award** is presented to students who have shown promise of leadership, scholarship, and potential contribution to their chosen profession. One award is given annually to students graduating from the programs in health information administration and health information systems.

The **Health Information Management Student Awards** are given by classmates to the graduating students who have shown promise of leadership, scholarship, and potential contribution to their chosen profession. One award is given annually to students graduating from the programs in health information administration and health information systems.

The **Margaret B. Jackson Scholarship Award** is presented by the department to a senior on the basis of scholarship, promise of outstanding professional achievement, and financial need.

The **Sally Jo Davidian Scholarship** is presented to a student who demonstrates professionalism, leadership potential, scholastic achievement, and financial need. Preference is given to single mothers returning to college.

The **Smart Corporation Scholarship Award** is presented to a health information administration student on the basis of scholarship and financial need.

#### Nutrition and Dietetics

The **Fred Lambert Memorial Scholarship Award** is given annually to a junior who has demonstrated outstanding potential for success as an administrative dietitian. The award will be given based on academic success, involvement in social and professional activities, personal promotion of the profession and image of the administrative dietitian, and submission of an essay discussing how the food-service administrator can contribute to the mission of the Seventh-day Adventist Church.

The **Kathleen Keen Zolber Scholarship Award** is given by the department to selected juniors in recognition of scholarship and promise of outstanding professional achievement.

The **Lydia Sonnenberg Scholarship Award** is presented annually to selected junior students. Selection is based on academic performance as well as demonstrated skill and interest in publishing nutrition information for the public.

The **Martha Miller Scholarship Award** is given annually to a sophomore or junior student based on scholarship, demonstrated financial need, and promise of outstanding professional achievement.

The **Nutrition and Dietetics Alumni Association Scholarship Award** is given annually to a senior student who has demonstrated outstanding academic performance and promise of expertise in professional achievement.

The **Nutrition and Dietetics Faculty Award**, presented to selected junior students, is based on scholarship, promise of professional achievement, and demonstrated financial need.

The **Ruth Little Nelson Scholarship Award** is presented to selected students in the junior year. Selection is based on scholarship; leadership; financial need; and such personal attributes as integrity, dependability, and initiative.

The **Winifred Van Pelt Schmitt Scholarship Endowment** provides scholarships to nutrition and dietetics students who have demonstrated financial need, satisfactory progress toward a degree, and professional progress.

#### Occupational Therapy

The **Daniel Alan Gibson Memorial Scholarship Award** is given to M.O.T. degree students based on financial need, and recognizes commitment to focus on physical dysfunction/orthopaedics in occupational therapy.

The **Edwinna Marshall Scholarship Award** is given annually to M.O.T. degree students based on financial need, and recognizes potential for leadership and education in the field of occupational therapy.

The **Faculty Award** is presented to an M.O.T. degree student and to an OTA program student who have shown promise of outstanding professional achievement and whose performance is in harmony with the objectives of the University.

The **Inland Counties Occupational Therapy Association of California Award** is presented to senior OT and OTA students in recognition of excellent academic and clinical performance.

The **Lynn Arrateig Memorial Scholarship Award** is given annually to an OTA program or M.O.T. degree student based on financial need, and recognizes commitment to the practice of pediatrics or geriatrics in the field of occupational therapy.

The **Occupational Therapy Alumni Association Award** recognizes outstanding scholastic and professional achieve-

ment in occupational therapy. The award is presented to an M.O.T. degree student and to an OTA program student.

The Occupational Therapy Endowment Scholarship Award is given annually to OTA program and M.O.T. degree students based on scholarship, financial need, and promise of professional achievement.

The Rose Bucher Memorial Scholarship Award is given to M.O.T. degree students based on financial need and recognized commitment and creativity in the practice of occupational therapy.

The **Southern California Consultants Scholarship Award**, presented annually to two OTA students, is based on scholastic achievement and financial need.

### Physical Therapy

The Faculty Award is presented to a senior who has shown promise of outstanding professional achievement, and whose performance is in harmony with the objectives and goals of the University.

The Fred B. Moor Award is presented to a senior who has demonstrated exceptional clinical skills and knowledge in the care of physical therapy patients.

The Physical Therapy Alumni Association Achievement Award recognizes outstanding scholastic attainment and active participation in physical therapy student activities and community involvement.

The Physical Therapy Alumni Association Scholarship Award recognizes the student with the highest scholastic attainment in professional studies.

The Ron Hershey Student Endowment provides scholarship funds for students who demonstrate financial need and who exemplify the Christian qualities of love, patience, caring, humility, and a striving for excellence.

The Thomas G. Burke Memorial Scholarship Award recognizes the outstanding student dedicated to the pursuit of a second career.

### Radiation Technology

The Faculty Award is given by the department in recognition of superior scholarship.

The Walter L. Stilson Award is given to a student in each clinical facility who has shown promise of outstanding professional achievement and whose performance is in harmony with the objectives of the University.

### SPEECH-LANGUAGE PATHOLOGY AND AUDIOLOGY

The Evelyn Britt Promising Student Award is presented to students preparing for graduate work in speech-language pathology and audiology. It recognizes students who show promise of scholastic and professional achievement.

The Outstanding Senior Award is given to a student who has performed well academically, developed good clinical skills, and contributed to creating a positive learning environment within the department.

### Dean's Award

The Dean's Award is made annually in recognition of academic excellence and commitment to the objectives of the school.

### Chancellor's Award

The Chancellor's Award, established in 1960 as the President's Award, is made annually in recognition of superior scholastic attainment and active participation in the student community, within the framework of Christian commitment. A recipient is selected from each school of the University.

### ADDITIONAL REQUIREMENTS

For additional policies, governing Loma Linda University students, see Section II of this CATALOG, as well as the University *Student Handbook*. Students are responsible for informing themselves of and satisfactorily meeting all regulations pertinent to registration, matriculation, and graduation.





# School of Dentistry

## Departments and Programs

Dental Hygiene

General Dentistry

International Dentist

Advanced Dental Education

Dental Anesthesiology

Endodontics

Implant Dentistry

Oral and Maxillofacial Surgery

Orthodontics and Dentofacial Orthopedics

Pediatric Dentistry

Periodontics

Prosthodontics

## Dean's Welcome

Welcome to Loma Linda University, one of the most vibrant health-sciences centers in the United States. This CATALOG introduces you to our vision, mission statement, and core values. These serve as the foundation of our commitment to providing quality educational programs enriched through our Christian environment.



Our school has a proud tradition of clinical excellence—seeking to balance technical finesse with the highest standards of compassionate patient care. Each graduate leaves the school prepared for a lifetime of service to patients, community, and the profession. The ability to learn through service is viewed as a gift, enriching the lives of those served and those serving.

Oral health care is a vital and invigorating part of overall health. As biomedical knowledge grows at an explosive rate, our faculty are dedicated to a curriculum that produces progressive dental professionals. You will learn to use advanced materials and techniques, and will receive abundant experience in patient care. Our service-learning programs provide many opportunities for you to complement your education through the oral health care you perform at extramural clinics for those in need.

Our commitment to research has resulted in the expansion of laboratory space and facilities, the addition of faculty, and increases in funding for important research endeavors. Students have the opportunity to work with outstanding faculty in a wide variety of investigative efforts and to be part of a long-standing tradition of exceptional student-generated research.

We remain fully dedicated to excellence in dental education and service; however, it is the people who have been drawn here that make Loma Linda University School of Dentistry an exciting place to be. I welcome you to a lifetime of enriching experiences.

A handwritten signature in black ink that reads "Charles J. Goodacre".

Charles J. Goodacre, D.D.S., M.S.D.  
Dean, School of Dentistry.

## School Foundations

### HISTORY

A small but determined group of dentists met during the summer of 1943 in Grand Ledge, Michigan. Their purpose was to form an organization that would serve as a catalyst, urging the Seventh-day Adventist Church to sponsor a dental school where young adults could learn the dental profession in an environment consistent with their religious beliefs. These men were the founders of the National Association of Seventh-day Adventist Dentists (NASDAD).

Under the leadership of Dr. J. Russell Mitchell, the organization's first president, the goal of a Christian dental school began taking conceptual form. NASDAD expanded in membership and objectives through men such as Dr. C. C. Ray, who toured the country on his own time in search of fellow Seventh-day Adventist dentists who were willing to pursue NASDAD's goals.

Dr. M. Webster Prince served as president of NASDAD in 1948 and 1949. At a meeting in San Francisco in 1949, NASDAD members voted unanimously to support the dental school project. Later that year at a NASDAD session in Hinsdale, Illinois, the members pledged a strong financial base in support of their goals.

The momentum of the effort became evident in the early 1950s. The General Conference of Seventh-day Adventists, under the guidance of President W. H. Branson, asked Dr. Prince to conduct a feasibility study. Official action was taken in 1951 to authorize establishment of the School of Dentistry as a unit of Loma Linda University's School of Medicine. Dr. Prince was selected as the first dean of the School of Dentistry. His leadership in organizing and eventually administering the new School of Dentistry was facilitated by his prior experience as president of the Michigan Dental Association and as chair of the American Dental Association Council on Dental Education. Forty-two students comprised the inaugural class in the late fall of 1953.

A dental hygiene curriculum leading to a Bachelor of Science degree was developed in 1959 under the direction of Dr. Gerald A. Mitchell, chair of the Department of Periodontics. Violet Bates became chair of the new department, and the first class of ten dental hygienists graduated in 1961.

In 1960 Dr. Charles T. Smith became dean. During this period the school experienced positive growth in many areas. A dental assisting curriculum was developed in 1968 under the leadership of Betty Zendner. The first class graduated in 1969, receiving the Associate in Science degree. A dental auxiliary utilization (DAU) program was initiated to provide enhanced learning for dental students. The Monument Valley Dental Clinic for Navajo Indians was started in 1966, and Dean Smith succeeded in finding from public sources fiscal support for the clinic building and for faculty housing. New advanced-education (postdoctoral) programs were initiated in five clinical disciplines: orthodontics, oral surgery, periodontics, endodontics, and oral pathology.

During the 1970s the School of Dentistry continued its evolution into one of the premier clinical programs in the United States. Dr. Judson Klooster became dean in 1971. One of his major contributions

was the expansion of Prince Hall, which was completed in May 1976. The new building more than doubled the number of clinical units; provided facilities for specialized areas of clinical instruction; and included eight new research laboratories, new classrooms, seminar rooms, amphitheaters, urgently needed teacher office space, and a commensurate expansion of support facilities and services. The Oral and Maxillofacial Surgery Clinic was remodeled, and an outpatient surgicenter was developed to meet the needs of those patients requiring general anesthesia for dental treatment.

The School of Dentistry became an important regional resource for providing dental care for developmentally disabled children and adults, many of whom require such a treatment setting. The Biomaterials Research Laboratory was constructed; and new advanced-education programs were initiated in pediatric dentistry, implant dentistry, dental anesthesiology, and prosthodontics. A new program was established in 1985 to provide a U.S. dental education for foreign-trained dentists. An increasing number of dental professionals from other countries were seeking an American education and the opportunity to practice dentistry in the United States or to gain advanced knowledge to share in their own countries. The International Dentist Program continues to offer an intensive, twenty-one-month course of study leading to a D.D.S. degree. The program has added a six-month certificate program limited to dental missionaries from other countries who sense the need for updated continuing education.

In 2000, the first major expansion of the School of Dentistry in more than twenty years added 15,000 square feet to Prince Hall on the east side and provided two new patient entrances. The expanded Surgery Center for Dentistry and the enlarged Pediatric Dentistry Clinic were relocated to the ground floor. An additional student laboratory was also included on that level. On the second floor, the new space allowed for expansion of the predoctoral clinic, with thirty-six additional operatories.

## OUR MISSION

Loma Linda University School of Dentistry seeks to further the healing and teaching ministry of Jesus Christ by providing an environment in which:

- **Students** learn to provide high-quality oral health care based on sound scientific principles.
- **Patients** receive competent care that is preventive in purpose and comprehensive in scope, and that is provided with compassion and respect.
- **Faculty, students, and staff** value the patient relationship, respect diversity, and share responsibility by working together toward academic, professional, spiritual, and personal growth.
- **Scholarly activity and research** provide a foundation for evidence-based learning and enhance whole-person care.
- **The workplace environment** attracts and retains a superior and diverse faculty and staff who motivate, educate, and serve.

- **Our communities** (local, global, and professional) benefit from our service, stewardship, and commitment to lifelong learning.

## VISION

Loma Linda University School of Dentistry is a pre-eminent health care organization seeking to represent God in all we do. We are enthusiastically committed to excellent, innovative, comprehensive education of our students and whole person care of our patients.

Our students, staff, and faculty are empowered through an enabling environment that honors the dignity, diversity, and worth of everyone.

Our graduates are exemplary professionals and progressive clinicians of integrity.

Our Lord's example inspires us to enrich our local and global communities through service. This is our calling.

## CORE VALUES

- Belief in God
- Respect for the individual
- Principled spirituality
- Student focus
- Empathic care
- Commitment to service
- Pursuit of truth
- Progressive excellence
- Analytic thinking
- Effective communication

## General Information

### GENERAL REGULATIONS

Students of the University are responsible for informing themselves of and satisfactorily meeting all regulations pertinent to registration, matriculation, and graduation. Section III gives the general setting for the programs of each school. The subject and unit requirements for admission to individual professional programs are outlined in Section IV. It is important to review specific program requirements (Section IV) in the context of the general requirements (Section III) applicable to all programs.

### SPECIFIC PROGRAM REQUIREMENTS

Information on the preceding pages pertains to general requirements governing all students. The student is reminded of individual responsibility to be fully informed not only of these general requirements but also of the specific requirements in the following pages, which govern the curriculum of the chosen program.

## PROGRAMS AND DEGREES

The departments of the School of Dentistry offer a comprehensive range of programs. Each of the school's five programs draws on the offerings of the various departments.

1. The undergraduate curriculum, the DENTAL HYGIENE Program, leads to the Bachelor of Science degree and prepares the dentist's hygienist to enter a variety of careers. Dental hygiene is a four-year college curriculum; the junior and senior years are taken in the LLU School of Dentistry.

2. The four-year professional curriculum, the GENERAL DENTISTRY Program, leads to the Doctor of Dental Surgery degree and equips the general dentist to meet the needs of a diverse patient population.

3. The INTERNATIONAL DENTIST PROGRAM, a twenty-one-month (two academic years) curriculum, leads to a Doctor of Dental Surgery degree from Loma Linda University, upon completion of the program. The program is designed for the dentist whose dental degree was earned outside the United States.

4. The ADVANCED DENTAL EDUCATION PROGRAMS lead to postdoctoral certificates in eight specialty and nonspecialty areas of dentistry—and, at the student's option, additionally, to the Master of Science degree.

5. The COMBINED-DEGREES PROGRAMS lead to a Doctor of Dental Surgery degree (through the School of Dentistry) earned concurrently with a Master of Public Health degree (through the School of Public Health in the Dental Leadership Program)—D.D.S./M.P.H.; or lead to the Doctor of Dental Surgery degree (through the School of Dentistry) earned concurrently with a Master of Science degree or Doctor of Philosophy degree (through the Faculty of Graduate Studies and the School of Dentistry)—D.D.S./M.S. or D.D.S./Ph.D.

## COMBINED-DEGREES PROGRAMS

Information on the combined-degrees programs—their curricula, pre-entry requirements, distribution of instruction, graduation requirements, finances, etc.—may be obtained from the Faculty of Graduate Studies or from the School of Public Health and from each program director.

### D.D.S./M.P.H.

A combined-degrees Doctor of Dental Surgery and Master of Public Health program is open to the qualified student of dentistry who wants to influence and manage the future as a skilled leader—in public or private sectors—from large health care systems to mission hospitals, from research laboratories to primary care. The Master of Public Health degree can be taken, within a twelve-month period after either the second or third year of the D.D.S. program, in any of the following majors: biostatistics, environmental and occupational health, community wellness, epidemiology, health administration, health education, international health, maternal and child health, or nutrition.

### D.D.S./M.S.

A combined-degrees program leading to the Doctor of Dental Surgery and the Master of Science degrees is open to qualified students of dentistry. The student who is interested in establishing a broader professional base in science or who is looking toward a career in teaching or research may take an interim leave from the School of Dentistry after the second or third professional years, register in the Faculty of Graduate Studies, and fulfill professional degree requirements subsequent to or concurrent with completing course work and research for the Master of Science degree.

### D.D.S./PH.D.

The biomedical sciences program provides opportunity for well-qualified and motivated students to pursue both a professional and a graduate education and to prepare for careers in clinical specialization, teaching, or investigation in health and human disease. The student who has a baccalaureate degree and the approval of the Biomedical Advisory Committee may enter the combined-degrees program and work concurrently toward the Doctor of Dental Surgery and the Doctor of Philosophy degrees. A minimum of six years is required to complete a combined-degrees program, offered cooperatively by the School of Dentistry and the Faculty of Graduate Studies.

## Advanced Dental Education Programs Overview

JAMES D. KETTERING,

Associate Dean, Advanced Dental Education,  
School of Dentistry;

Coordinator, Graduate Programs in Dentistry,  
Faculty of Graduate Studies

The School of Dentistry offers advanced dental education programs in specialty and nonspecialty disciplines of dentistry. Graduate degrees—Master of Science and doctoral degrees—are available. The purpose of these programs is to offer candidates an opportunity to integrate advanced clinical training with meaningful exposure to applied basic science and research. For applications and additional information, interested applicants should contact the individual program director.

The School of Dentistry offers eight advanced dental education programs:

Advanced dental education programs leading to a professional certificate with an option to also complete the Master of Science degree are:

- Endodontics
- Implant Dentistry
- Oral and Maxillofacial Surgery
- Orthodontics and Dentofacial Orthopedics
- Pediatric Dentistry
- Periodontics
- Prosthodontics

Postdoctoral study leading to a professional certificate upon completion of the program is offered in—

- Dental Anesthesiology.

These programs are organized in line with the standards of the Council on Dental Education of the American Dental Association, and the objectives and content meet the requirements of the respective specialty boards. In addition, the programs in endodontics, oral and maxillofacial surgery, orthodontics and dentofacial orthopedics, pediatric dentistry, periodontics, and prosthodontics are accredited by the Commission on Dental Accreditation, a specialized accrediting body recognized by the Council on Postsecondary Accreditation and the United States Department of Education.

## Application and Admissions

The program admissions committees of the University intend that an applicant to any of the schools is qualified for the proposed curriculum and is capable of profiting from the educational experience offered by this University. The admissions committees of the school accomplish this by examining evidence of scholastic competence, moral and ethical standards, and significant qualities of character and personality. Applicants are considered for admission only on the recommendation of the program in which study is desired.

### PREDOCTORAL D.D.S. PROGRAM

The Admissions Committee looks for evidence of personal integrity, intellectual vigor, good health, self-discipline and motivation. In broad terms, the following are standards required for admission:

1. Intellectual capacity to complete the curriculum.
2. Emotional adaptability and stability.
3. Social and perceptual skills.
4. Physical ability to carry out observation and communication activities, and the possession of sufficient motor and sensory abilities to practice general dentistry.

All materials submitted for admission should be sent to:

Office of Admissions  
School of Dentistry  
Loma Linda University  
Loma Linda, CA 92350

### Required

Students preparing for the predoctoral program are required to complete a minimum of three academic years with no fewer than 96 semester or 144 quarter units in a college or university accredited by a regional accrediting association. Preference is given to applicants who have completed or will complete the requirements for a baccalaureate degree prior to admission. A maximum of 64 semester or 96 quarter units of credit may be accepted from an accredited junior or community college.

A complete academic year of classwork (8 semester or 12 quarter units) in general biology, general chemistry, organic chemistry, general physics, and English composi-

tion must be completed within five years prior to admission, with a grade of C or above in each course. A minimum grade-point average of 2.7 in science subjects and in nonscience subjects, averaged separately, is required. The average grade-point average for accepted students is substantially higher.

### Recommended

The subjects listed as required form the minimum background for professional study. In order to be better prepared with specific vocabulary and understanding, the applicant should particularly include science courses with content similar to courses offered during the first year of the professional curriculum. The applicant's purpose should be the pursuit of diverse knowledge, the cultivation of an inquiring mind, the practice of efficient methods of study, and the habit of thinking and reasoning independently. These are of paramount importance to the applicant's development as a unique and responsible human being.

The choice of electives can broaden the applicant's view of the scope of knowledge. Being well-read will give a perspective on the sweep of human thought throughout the ages, and often this will be of assistance in written and verbal communication and will improve the ability to think and express oneself well. Psychological, social, philosophical, and religious insights will help to develop basic resources for the solution of personal problems and the growth of that self-understanding the student must first have in order to understand and help associates.

### Transfer, course waiver

Credits from professional schools (business, medical technology, nursing, pharmacy, or medicine) do not fulfill admission requirements. Credit for studies taken at a military service school is granted to veterans according to recommendations in the *Guide of the American Council on Education* and/or the California Committee for the Study of Education. The University reserves the right to require satisfactory completion of written or practical examinations in any course for which transfer credit is requested.

An applicant from a college or university outside the United States or Canada or from a nonaccredited college or university in the United States must complete a minimum of one full academic year (24 semester or 36 quarter credits) in competition with other preprofessional students in an accredited college or university in the United States. A grade of C or above in each course completed is required. (A grade of C- will not be accepted.)

A course requirement may be waived if the applicant has previously taken the course and earned a grade of B or above, but no credit results. Evaluation for waiver of courses will be completed only after an applicant has been accepted to the program, and must be approved by the course director at this University and the school's associate dean for academic affairs. Tuition is not reduced if courses are waived or if a student takes less than a full load.

Transfer from another school of dentistry in the United States is not recommended and is considered only in unusual circumstances. A transfer applicant should expect to begin at the first-year level and will be considered only if there is space available at the appropriate level or in the dental class desired. An application for transfer will be considered when the following information is received in the school's Office of Academic Affairs:

- letter from applicant, stating reason for requesting

transfer;

- letter of recommendation from the dean of the dental school where the applicant is enrolled;
- official transcripts sent directly to the Office of Academic Affairs for both pre-dental and dental school courses completed;
- Dental Admission Test results.

#### Application procedure

The school participates in the American Association of Dental Schools Application Service (AADSAS). Cards requesting an AADSAS application are available at most colleges and universities and also on the Internet at <www.adea.org>; or e-mail at <aadsas@adea.org>. The application should be completed and returned to the Washington address indicated on the application. AADSAS processes this application and sends copies to the schools of the applicant's choice. The School of Dentistry at Loma Linda University recommends that applicants file their AADSAS application before October 1 in order to be competitive. To be given consideration for the next entering class, the student's application deadline is December 1. The following is a step-by-step process for completing an application to Loma Linda University.

1. **Supplementary application.** When an AADSAS application arrives at Loma Linda University, it is screened; and qualified applicants are sent a supplementary application for the School of Dentistry.
2. **Supplementary written materials.** The applicant must return the completed supplementary application and materials within 30 days. This includes: an essay specific to Loma Linda University, a wallet-sized photograph, and the application fee of \$75.
3. **Transcripts.** Official transcripts may be sent to AADSAS and then released by AADSAS to the School of Dentistry. When an applicant becomes an accepted student, official transcripts, mailed directly from all colleges/universities, are required. An applicant's file will not be given consideration by the Admissions Committee until all official transcripts are on file.
4. **References.** The applicant is asked to supply a minimum of three personal references. It is recommended that these include an academic reference from a science instructor; a reference from an employer; a character or religious reference such as from a minister; and a reference from a friend in the dental profession. If the applicant has attended a college or university that has a preprofessional committee that prepares a preprofessional evaluation, it is required that Loma Linda University be sent a copy of this evaluation from the committee. Members of the applicant's family are excluded from writing the required letters of reference, although letters will be accepted for the file in addition to those required. Recommendation letters may be sent to AADSAS and then released by AADSAS to Loma Linda University School of Dentistry.
5. **Dental Admission Test.** The applicant is required to complete—and must meet specific criteria related to performance on—the Dental Admission Test (DAT). Preference is given to applicants who have taken the test no later than October of the academic year preceding that for which admission is desired. The student entering the first year is expected to have taken the test within the past two years. If the test has been taken more than one time, the most recent scores are used for admission criteria. The committee reviews all scores on the test, giving priority to the academic average score and the perceptual ability score. The DAT scores must be on file at Loma Linda University before an acceptance to the School will be issued. Test results should be sent to Loma Linda University, School of Dentistry, Office of Admissions.
6. **Interview.** The applicant's records will be screened when the supplementary application, recommendations, and transcripts are on file. The applicant *may* then be invited to the School for a personal interview. An interview is required for admission. The interview provides an opportunity for evaluation of noncognitive factors, including communication skills, personal values, motivation, and commitment to goals of the profession; as well as genuine concern for others in the service of dentistry. At the time of the interview, a tour of the School will be given by a current student in the program.
7. **Observation.** It is important that preprofessional students seek experience observing and assisting in a dental office to become familiar with the work of a dentist or a dental hygienist. Prior to interviewing, applicants are expected to complete a minimum twenty hours of observation/work experience in a dental facility, ten of which must be done in a general practitioner's office.
8. **Acceptance.** The accepted student receives an acceptance letter and a follow-up letter with information relative to required forms and deposit deadlines.
9. **Pre-entrance health requirements/Immunizations**  
It is expected that necessary routine dental and medical care will have been attended to before the student registers.  
New students are required to have certain immunizations and tests before registration. Forms to document the required immunizations are provided for the physician in the acceptance packet sent to the student by the school. In order to avoid having a hold placed on the registration packet, the student is encouraged to return the documentation forms in the provided envelope to Student Health Service *no later than six weeks prior to the beginning of classes.*  
Students enrolling in the School of Dentistry must provide documentation of having had the following immunizations and tests:
  - MMRs—measles (rubeola), mumps, rubella (German measles) (or provide proof of two previous MMRs)
  - PPD (TB) skin test (current skin test result or x-ray report)
  - Tetanus/Diphtheria booster
  - Chicken pox blood test and/or immunization  
If no known history of chicken pox, then student may choose blood test (which may reveal pre-existing immunity) and/or immunization (if no prior immunity).
  - Hepatitis-B vaccination series  
Students who know themselves to have had hepati-

tis-B in the past should employ extra protection when involved in direct patient care and may request a modified curriculum, if necessary. This series of three vaccinations may be completed at this University (even if it was begun elsewhere) through the Student Health Service. (The student will be charged a fee.)

- A recent eye examination performed by an ophthalmologist or optometrist.

For further information, consult the *Student Handbook* 2002, Section V—University Policies: Communicable disease transmission prevention policy; and the Student Health Service office, extension 88770.

If a returning student is assigned to a clinical facility that requires a tuberculosis skin test, then the student is required to have the test within the six months before the assignment begins.

10. **Deposits.** The student accepted into dentistry must submit a deposit of \$1000 and the required forms to the Admissions Office. All deposits become part of the first quarter's tuition. Failure to submit this deposit will result in the loss of the applicant's position in the class. The remaining balance of the first quarter's tuition and fees is due no later than the day of matriculation in late September. If the applicant has submitted a completed application for financial aid by March 2, and if the Stafford application has been submitted by June 15, the final installment can be paid utilizing University-assisted sources.

## TECHNICAL STANDARDS

In harmony with its own education, research, and service objectives, and using the American Dental Educators Association suggested guidelines, Loma Linda University School of Dentistry has identified technical standards for its programs. The qualified applicant will meet, or will have the potential to meet, the following technical standards—standards that every student in the dentistry programs is expected to reach.

### Cognitive abilities

School of Dentistry students must have abilities that allow them to accurately and effectively measure, verify, calculate, reason, analyze, and synthesize. Students must be able to comprehend three-dimensional relationships and to understand the spatial relationships of structures in order to fully and completely solve dental problems. In addition, students must be able to visualize and comprehend physical demonstrations in the classroom, laboratory, and clinic. Effective problem solving requires students to gather, organize, and assess relevant information in order to arrive at an integrated solution.

### Observation

For learning to occur, students will be required to observe and interpret demonstrations and experiences. Such observation requires the functional use of vision, touch, hearing, and somatic sensation. Observation is further enhanced by the sense of smell.

Students must be able to acquire information from written documents; and to visualize information presented in images from papers, films, slides, or videos.

They must be able to interpret radiographic and other graphic images, with or without the use of assistive devices. Students must be able to observe patients accurately, at a distance and close at hand. They must be able to observe and appreciate verbal and nonverbal communications when performing dental operations or administering medications.

All students in the School of Dentistry must possess adequate visual and tactile skills to perform dental examinations and provide treatment. Visual acuity, accommodation, and color vision are necessary to discern differences and variations in color, shape, and general appearance between normal and abnormal hard and soft tissues. Touch and somatic sensation are required for effective learning, as well as for effective evaluation and treatment of patients. A student must also possess sufficient visual acuity to read charts, records, small print, and handwritten notations.

### Communication

Students in the School of Dentistry must be fluent in the use of standard written and spoken English. Thus students' communication with patients, faculty, and staff will be facilitated when eliciting or providing information; or when documenting changes in patients' mood, activity, and/or posture. Students must also be skilled in observing and understanding nonverbal communication. In addition, they must develop the professional judgment that will enable them to discern when and how to maintain patient confidentiality.

### Motor skills

School of Dentistry students should have sufficient motor and sensory capability in both hands to be able to provide general dental care. They must possess the motor and sensory capabilities to perform diagnostic procedures—including such diagnostic maneuvers as palpation, percussion, and auscultation; and to perform basic laboratory tests. Exercising these capabilities requires coordination both of gross and fine muscular movements, equilibrium, and functional tactile and visual senses.

Students must be able to operate foot controls, utilizing fine movements; and to operate high- or low-speed dental instruments, accurately performing movements of less than one-half millimeter. They must also demonstrate well-developed tactile sense and precise control while using dental hand instruments.

Students must be able to perform basic life-support (e.g., CPR), transfer and position disabled patients, and physically restrain patients who lack motor control. Additionally, they must be able to position or reposition themselves around the patient and dental chair while sitting or standing.

### Behavioral and social attributes

Students must possess the emotional stability and resilience required for full utilization of their abilities in the context of a full and challenging education program. Success in the educational program requires use of good judgment; prompt completion of all responsibilities attendant to the diagnosis and care of patients; and development of mature, sensitive, and effective relationships with patients.

It is also imperative that students be able to tolerate physically taxing workloads and to function effectively under stress. Students must be able to adapt to changing environments, to display flexibility, and to learn to function in the face of uncertainties inherent in the clinical

problems of many patients. Compassion, integrity, honesty, concern for others, interpersonal skills, interest, cultural sensitivity, and motivation are all personal qualities that will be assessed during the admissions and education process.

#### Disabled applicants and students

It is Loma Linda University's policy to comply fully with the provisions of The Americans with Disabilities Act [42 U.S.C., Sec. 12131 (2) (1990)]. The school is committed to providing dental education—including support services and reasonable accommodations for disabilities—to qualified applicants who will be able to perform all technical standards with or without accommodations; and for whom such accommodation does not fundamentally alter the School of Dentistry courses or create an undue burden.

During the application process, the school requests that an applicant disclose any disability for which an accommodation may be needed. The Admissions Committee requires written documentation of the disability, which they will review prior to making an assessment as to whether or not the applicant can be expected to perform the essential functions of the program.

A student who desires accommodation for any disability identified after admission must complete a request form available in the Office of the Associate Dean for Student Affairs for evaluation with appropriate University entities. Appropriate and reasonable accommodation will be provided, as necessary.

#### ADMISSION REQUIREMENTS FOR ADVANCED DENTAL EDUCATION PROGRAMS/POSTDOCTORAL PROGRAMS

An appropriate degree from an accredited college or university is required for admission into the Advanced Dental Education Programs and postgraduate programs. A doctoral degree in dentistry (Doctor of Dental Surgery or Doctor of Dental Medicine) or the equivalent is required for admission to all programs. The applicant should have achieved a general grade-point average on a 4-point scale of not less than 3.0, with no grade below 2.0. In addition to acceptable scholastic performance, the applicant must give evidence of personal and professional fitness for growth in the science and art of the intended dental discipline. For application deadlines, see section on each individual program.

After applicants are accepted into the advanced dental education programs in endodontics, oral and maxillofacial surgery, pediatric dentistry, periodontics, prosthodontics, or the postdoctoral program in implant dentistry, they may apply for admission to the Faculty of Graduate Studies for the purpose of earning an M.S. degree (in addition to the advanced program certificate). For the purpose of the Faculty of Graduate Studies application, a Graduate Record Examination (GRE) certificate is required at the time of application to the Faculty of Graduate Studies.

For additional information regarding the dates and times for GRE, call toll free 609/771-7670; or visit Web site <[www.gre.org](http://www.gre.org)>.

Applicants for whom English is a second language must show satisfactory results on the Test of English as a Foreign Language (TOEFL). For additional information, call toll free 800/257-9547.

#### Residence

The required time in residence varies with each program. For length of program, refer to information under program description.

#### Stipends

Stipends are provided in the dental anesthesiology and the oral and maxillofacial surgery programs. For details, contact the program administrators.

#### Tuition

Tuition and fees quoted in this CATALOG are for the academic year 2005-2006.

#### Thesis

Students on the Master of Science degree track are required to pursue a problem in basic or clinical research, the results of which are to be presented in thesis form according to standards set by the Faculty of Graduate Studies Council. Students may be required to defend the thesis orally.

#### General requirements

For information about requirements and practices to which all graduate students are subject, the student should consult Section II of this CATALOG.

## Student Life

#### POLICIES FOR THIS SCHOOL

The information on student life contained in this CATALOG is brief. The *Student Handbook 2002* more comprehensively addresses University and school expectations, regulations, and policies and is available to each registered student. Students need to familiarize themselves with the contents of the *Student Handbook*. Additional information regarding policies specific to a particular school or program within the University is available from the respective school.

#### CODE OF ETHICS

A school of dentistry is a place where the professionals of tomorrow are selected and trained in the development of professional and ethical attitudes that are consistent with the highest goals of the profession. It is for this purpose that the School of Dentistry has a code of ethics. This code is a means of educating and training the future dentist in areas of professional ethical activity, and is a means of developing an ethical and moral awareness that will help the individual serve the public and the profession in an enlightened manner. The Code of Ethics of the School of Dentistry as found in its entirety in the *Student Handbook 2002* shall apply to all students in the school—including dental hygiene, dentistry, international, graduate, and certificate students. In addition, residents, fellows, preceptors, research scholars, and exchange students involved in school advanced-education programs shall also be subject to all school policies.

## STUDENT ASSOCIATION

Membership in the Dental Students Association is open to all students. The objectives of the organization include creating a common bond among students—orienting them to organized dentistry, encouraging and fostering missionary activities, stimulating interest in current scientific development, providing programs of broad academic scope, promoting students' various interests, and providing social activities for students.

## SPECIAL OPPORTUNITIES

### Conventions

The annual Alumni-Student Convention, sponsored since 1960 by the Alumni Association, gives opportunity for students to meet alumni and hear presentations by prominent guest lecturers in dentistry.

Students have the opportunity to make research presentations in the form of table clinics. The winners are then invited to present their table clinics at state and national dental conventions.

A dedication service is held during the convention, giving students an opportunity to dedicate their professional life to Christ. First-year students (D1) are presented with personalized Bibles; graduating students (D4) are given personalized lab coats.

## Academic Information

### REGISTRATION

The student must register on or before the dates designated by the Office of University Records. Early registration is encouraged. Registration procedures include recording information on forms furnished by the Office of University Records, clearing financial arrangements with Student Finance, completing requirements of the Student Health Service, and having student identification pictures taken.

Late registration is permissible only in case of a compelling reason; a charge is made if registration is not completed by the designated dates. The student may not attend class without being registered, and in no case may registration take place later than the first week of the term. A change in registration after the second week affects the grade record. A student may not concurrently register for courses in another school of the University without permission of the associate dean for academic affairs.

### ATTENDANCE

Regular attendance at all appointments (class, clinic, laboratory, chapel) is required beginning with the first day of each term. A pattern of absence may be referred to the Academic Review Committee for consideration and action.

### LENGTH OF ACADEMIC RESIDENCE

To fulfill the requirement pertaining to length of academic residence, the student must be registered for a full course load at the University for the entire senior

year for the Bachelor of Science degree; and the entire D3 and D4 years for the Doctor of Dental Surgery degree.

### DEAN'S LIST

Outstanding academic performance will be rewarded by publication of the Dean's List each quarter. The eligibility requirements are:

- complete at least 12 units of graded course work during the quarter;
- achieve a term grade-point average of at least 3.5 with no grade lower than a B-;
- receive no Incomplete grades on the grade report.

### SPECIAL EXAMINATION

No provision is made for quizzes or examinations missed because of voluntary absences. An exception is made in the case of a disabling disease or other compelling emergency. An excused absence must be signed by a student health physician or the associate dean for student affairs and must be presented to the instructor within three days of the absence. To take an examination at a time other than that for which it is scheduled, the student must secure in advance the consent of both the instructor and the associate dean for academic affairs.

### REPEATING/REMEDIATING A COURSE

If a student receives an unsatisfactory or failing grade in a required course, it will be necessary for him/her to do additional work. Based on the original grade earned by the student, and upon the recommendation of the Academic Review Committee, one of the following plans will be pursued:

1. For courses with unsatisfactory performance (D+/D/U grades) the student must reregister for the course, review the course work independently, repeat required assignments or quizzes, and take any or all course examinations as required by the course director. The highest grade allowed for a remediated course is C. At the discretion of the Academic Review Committee and course director, the student may be required to repeat the course at the next course offering.
2. For courses with failing performance (F grades), the student must reregister for the course, attend the class and/or laboratory, and take all course examinations at the next regular course offering.

Both the original and repeat grades are entered into the student's permanent academic record, but only the repeat grade units are computed in the grade-point average.

### ACADEMIC CRITERIA FOR PROMOTION

#### Dentistry

##### Level D1 to level D2

- Cumulative G.P.A. at or above 2.0.
- Successful completion of D1 Comprehensive Examination.

**Level D2 to D3**

- Cumulative, didactic, and preclinical laboratory G.P.A. at or above 2.0.
- Successful completion of National Board Part I Qualifying Examination.

**Level D3 to D4**

- Cumulative G.P.A. at or above 2.0.
- Successful completion of National Board Examination Part I.

**Dental Hygiene**

- Junior to Senior
- Cumulative didactic and preclinical G.P.A. at or above 2.0
- Successful completion of junior clinic promotion OSCE.

**ACADEMIC REQUIREMENTS FOR GRADUATION****Dentistry**

- Cumulative G.P.A. at or above 2.0.
- No courses with failing or unsatisfactory grades for which remedial action has not been completed.
- Successful completion of National Board Examination Parts I and II.
- Successful completion of all clinical requirements.
- Successful completion of all service-learning requirements.

**Dental Hygiene**

- Cumulative G.P.A. at or above 2.0
- No courses with failing or unsatisfactory grades for which remedial action has not been completed.
- Successful completion of the Dental Hygiene National Board Examination.
- Successful completion of all clinical requirements.

**PROCEDURES FOR ACADEMIC REVIEW**

There are six Academic Review Committees: D1, D2, D3, D4, IDP, and Dental Hygiene. Membership of each committee consists of the associate dean for academic affairs, the associate dean for student affairs, the associate dean for admissions, and the course directors of all courses required of the respective class in the academic year. The associate dean for clinic administration and primary attending faculty are members of the D3/D4 Academic Review Committee. In addition, each committee has two student members appointed by the dean in consultation with the DSA officers. Student committee members will be in the class one year ahead of the class being reviewed.

The Academic Review Committees meet once per quarter to evaluate student academic and clinical performance and progress records. Students whose performance does not meet the stated academic standards and students who are being considered for discontinuation may be scheduled for a hearing with the committee.

The committee also recommends to the dean all appropriate candidates for promotion, academic probation, repeat, or other appropriate actions; as well as students who should receive special recognition for academic excellence.

The process for evaluation of academic performance is as follows:

1. The Academic Review Committee—by reviewing grades, reports, and other pertinent information—identifies students whose academic and/or clinical performance is below acceptable levels.
2. The associate dean for student affairs notifies a student facing possible academic sanctions regarding the time and place for a meeting called for the purpose of allowing the student to appear before the committee to present reasons why action should not be taken. The Academic Review Committee considers the student's presentation and all available information before making a recommendation.
3. The dean may enforce one or more of four academic sanction options:
  - Academic probation
  - Remedial action
  - Academic leave of absence
  - Academic discontinuation
 Please refer to Academic Disciplinary Policy for more specific descriptions regarding each academic sanction.
4. Appeals of Academic Review Committee decisions may be appealed to the dean. Such appeals are not expected to be routine and should be considered only in circumstances where new and relevant information exists that was not available for consideration by the Academic Review Committee. The dean will review the matter and either render a decision or appoint a three-member ad hoc committee. Members of this committee will not have been involved in the Academic Review Committee decision process. The ad hoc committee will determine whether the process was appropriately followed, review new information, and judge whether the record supports the decision. They will report their findings and recommendation to the dean, who will decide if the appealing student will be permitted to continue participating in classes and/or clinical assignments during the appeal proceedings.

**ACADEMIC DISCIPLINARY POLICY****Academic probation**

Academic probation is a specified period of time during which the student is given an opportunity to comply with specific academic standards. Such action must be confirmed by memorandum to the student.

**Criteria for placement on academic probation**

A student will be placed on academic probation if s/he meets one or more of the following conditions:

1. Term or cumulative grade-point average (G.P.A.) below 2.0.
2. Failing (F/U) or unsatisfactory (D+/D) grades in any course required for the degree.

3. Clinical performance below minimum expected for current academic level.
4. Social/behavioral/ethical problems that significantly impact academic and/or clinical performance.

#### Level of academic probation

The level of academic probation indicates the seriousness of the cumulative academic deficiency. However, depending on the seriousness or nature of the academic deficiency, a student may be considered for academic leave of absence or discontinuation at any level of probation.

- Level 1 First term on academic probation.
- Level 2 Second term on academic probation, consecutive or nonconsecutive.  
EXCEPTION: Continued academic probation due to failing grade in a course that cannot be repeated until a later term.
- Level 3 Third term on academic probation, consecutive or nonconsecutive. If a student is unable to remove academic probationary status within the following term, s/he will be considered for academic discontinuation.  
EXCEPTION: Continued academic probation due to failing grade in a course that cannot be repeated until a later term.
- Level 4 If a student meets criteria for academic probation for a fourth term, consecutive or nonconsecutive, s/he will be considered for academic discontinuation.

#### Conditions for a student on academic probation

A student on academic probation:

1. May not serve as an officer for any class, school, or extracurricular organization.
2. May not take any elective courses.
3. May not participate in any elective off-campus service learning or mission activities.
4. Remains on academic probation until all the terms of the probation sanctions have been fulfilled, unless the student is discontinued.

#### Remedial action

As a condition for continued enrollment, remedial action may consist of:

1. counseling, tutoring; and/or repeating assignments, or course work, or completing additional assignments or course work possibly including repeating an academic year or portion thereof.
2. Other specified requirements.

#### Academic leave of absence

Academic leave of absence is a specified period of time during which the student is withdrawn from the academic program. Upon request to and approval by the Academic Review Committee, the student may return to the program at a year/term level specified by the committee. The student may be requested to fulfill specific requirements prior to reentering the academic program.

#### Guidelines for placement on academic leave of absence

The following are guidelines for selection of academic leave of absence as the academic sanction deemed best to aid the student in ultimately becoming

a competent dentist or dental hygienist. Academic leave of absence may be considered for a student who is in one or more of the following situations:

- Student has a serious academic deficit that cannot be removed while continuing with current course work.
- At the end of the academic year, student does not meet the criteria for promotion to the next academic year.
- Student has three consecutive quarters on academic probation.
- Student has not passed the National Board Examination on schedule after two attempts and requires full study time to prepare for the National Board Examination.
- Student fulfills criteria for academic discontinuation yet shows promise for future success despite current deficiencies.

Return from an academic leave of absence requires that the student reapply for admission by written request to the associate dean for academic affairs. The student must meet the requirements for readmission specified by the Academic Review Committee at the time the leave of absence was granted. The requirements for readmission may also be reviewed by the Academic Review Committee.

#### Academic discontinuation

Guidelines for academic discontinuation are as follows:

##### D1 Year

- Any term with one or more failing grades, regardless of term or cumulative G.P.A.
- Three or more unsatisfactory or failing grades within the academic year, regardless of term or cumulative G.P.A.
- Three consecutive quarters on academic probation.
- Failure to fulfill terms of academic probation within the specified time period.
- Failure to meet criteria for promotion to D2 year by the end of the D1 year.

##### D2 Year

- Any term with one or more failing grades, regardless of term or cumulative G.P.A.
- Four or more unsatisfactory or failing grades since enrollment in the program, regardless of term or cumulative G.P.A.
- Failure to fulfill terms of academic probation within the specified time period.
- Level 4 academic probation
- Failure to meet criteria for promotion to D3 year by the end of the D2 year.

##### D3 Year

- Any term with one or more failing grades, regardless of term or cumulative G.P.A.
- Five or more unsatisfactory or failing grades since enrollment in the program, regardless of term or cumulative G.P.A.
- Failure to fulfill terms of academic probation within the specified time period.

- Level 4 academic probation.
- Failure to meet criteria for promotion to D4 year by the end of the D3 year.

#### D4 Year

- Failure to pass either section of the National Board Examination within three attempts.
- Failure to achieve eligibility for graduation within five full academic years of enrollment in the dental program. Exception for students who are required to repeat an academic year or who are on a split program. These students must achieve eligibility for graduation within one year of the new graduation date assigned at the time of change to an alternate program.

#### Dental hygiene juniors

- Any term with one or more failing grades, regardless of term or cumulative G.P.A.
- Three or more unsatisfactory or failing grades within the academic year, regardless of term or cumulative G.P.A.
- Three consecutive quarters on academic probation.
- Failure to fulfill terms of academic probation within the specified time period.
- Failure to meet criteria for promotion to DH Senior year by the end of the DH junior year.

#### Dental hygiene seniors

- Failure to pass the National Board Examination within three attempts.
- Failure to achieve eligibility for graduation within three full academic years of enrollment in the dental hygiene program.

In some situations the Academic Review Committee may recommend that a student repeat an academic year (or portion thereof) as an alternative to discontinuation.

### STUDENT-INITIATED ACADEMIC GRIEVANCE PROCEDURE

If a student wishes to contest a grade, s/he should discuss the grade first with the instructor, where appropriate; then with the course director, if applicable; and finally with the department chair. If the student is not satisfied, s/he may then appeal to the associate dean for academic affairs (for further discussion of the academic grievance process, see Loma Linda University *Student Handbook*).

### SERVICE LEARNING

The Service Learning Program at Loma Linda University School of Dentistry continues the original purpose of the school—to train dental health professionals to provide service to underserved populations, both locally and abroad.

Field experience for students of dentistry and dental hygiene includes extramural opportunities within the U.S. and in foreign countries. In addition to providing clinical treatment, service-learning experiences include local health fairs and elementary school dental health presentations. Service experiences may last from one day to several weeks.

All dental and dental hygiene students are required to complete assigned service-learning rotations and minimum clock hours as described in each program.

Students are also required to be in good and regular standing to be eligible to participate in elective international service-learning experiences.

### LEARNING ENVIRONMENT

Because the study of dental sciences and arts is based on a foundation in essentially the same science subjects as are studied in medicine and allied health curricula, the School of Dentistry shares with the School of Medicine the facilities for teaching basic sciences, the Alumni Hall for Basic Sciences.

Classrooms, laboratories, student lounges, teachers' offices, and clinical facilities related solely to dentistry occupy the School of Dentistry building, named in honor of M. Webster Prince, the first dean. Prince Hall is on the University mall, facing the University Church and adjacent to the Medical Center. The facilities effectively accommodate collaboration with the Medical Center in ongoing research and service programs.

The total resources of the University constitute a wealth of opportunity for the student with initiative and willingness to develop individual capacity to the fullest extent. Students find varied opportunities for serving and learning in the immediate University community, in school-sponsored service-learning clinics, in clinical and research electives, and in diverse volunteer programs.

### BASIC SCIENCES DEPARTMENTS SERVING THE SCHOOL OF DENTISTRY

The Loma Linda University departments of basic sciences include *anatomy, biochemistry and microbiology*, and *physiology and pharmacology*. The basic sciences serve as the foundation for the dental sciences by leading toward an understanding of normal structure and function, as well as introducing the basis for pathology in the practice of dentistry.

Subjects are taught in the first year of the dental hygiene and the first two years of the general dentistry curricula as parts of three conceptually integrated sequences of courses—sequences in physiology, in anatomy, and in applied science. Throughout the basic sciences, an appreciation of God's creation and His wisdom is reinforced through the study of human biology. Students are encouraged to extend their knowledge and apply it for their own well-being and for the well-being of their patients.

The Department of Anatomy provides students with the opportunity to learn the fundamental morphology of the human body, including gross anatomy, histology, neuroanatomy, and embryology.

The Department of Biochemistry enables students to learn the fundamentals of biochemistry as they apply to the practice of dentistry.

The Department of Physiology and Pharmacology enables the student to describe the normal physiological functions of the major body systems as they relate to the mastery of dentistry; and to apply the principles

and basic concepts of drug action, safety, and disposition.

This basic science focus provides a basic fund of knowledge that is essential for the practice of dentistry and dental hygiene. The faculty are dedicated to providing students with tools that expand their thinking and challenge them to ask probing questions and to earnestly search for answers. Their aim is to prepare students to excel scientifically. The higher aim is, through the Christian atmosphere of this University, to prepare students to become truly compassionate dentists.

## Financial Information

### FINANCIAL POLICIES

The Office of the Dean is the final authority in all financial matters and is charged with the interpretation of all financial policies. Any exceptions to published policy in regard to reduction or reimbursement of tuition must be approved by the dean. Any statement by individual faculty members, program directors, or department chairs in regard to these matters is not binding on the school or the University unless approved by the dean.

Registration is not complete until tuition and fees on the required installment are paid; therefore, the student should be prepared to make these payments during scheduled registration for each academic year. There may be adjustments in tuition and fees as economic conditions warrant.

### GENERAL FINANCIAL PRACTICES

The student is expected to arrange for financial resources to cover all expenses before the beginning of each school year. Previous accounts with other schools or this University must have been settled.

### SCHEDULE OF CHARGES (2005–2006)

(subject to change by Board of Trustee action)

#### DENTAL HYGIENE

##### TUITION/FEES\*

Junior Year: \$19,934  
Senior Year: \$26,578

##### INSTRUMENTS AND RENTAL FEES

Junior Year: \$ 5,044  
Senior Year: \$ 0

##### TEXTBOOKS/MANUALS

Junior Year: \$ 915  
Senior Year: \$ 248

##### LABORATORY FEES

Junior Year: \$ 150  
Senior Year: \$ 80

##### SUPPLIES

Junior Year: \$ 50  
Senior Year: \$ 180

#### TECHNICAL SUPPORT FEES

Junior Year: \$ 450  
Senior Year: \$ 600

#### OTHER CHARGES

Junior Year: \$ 0  
Senior Year: \$1,055

**NOTE:** All figures listed for dental hygiene are estimates based on the best information available at the time of publication and are subject to change. See notes following dentistry figures.

### DENTISTRY

#### TUITION/FEES\*

First Year: \$34,774 Autumn, Winter, Spring Quarters  
Second Year: \$42,128 Rates effective beginning Summer Quarter  
Third Year: \$42,128 Rates effective beginning Summer Quarter  
Fourth Year: \$42,128 Rates effective beginning Summer Quarter

#### INSTRUMENTS AND RENTAL FEES

First Year: \$5,977  
Second Year: \$3,793  
Third Year: \$ 216  
Fourth Year: \$ 171

#### TEXTBOOKS/MANUALS

First Year: \$1,100  
Second Year: \$1,260  
Third Year: \$1,200  
Fourth Year: \$ 300

#### LABORATORY FEES

First Year: \$ 135  
Second Year: \$ 140  
Third Year: \$ 120  
Fourth Year: \$ 40

#### SUPPLIES

First Year: \$ 127  
Second Year: \$ 452  
Third Year: \$ 216  
Fourth Year: \$ 404

#### TECHNICAL SUPPORT FEES

First Year: \$ 450  
Second Year: \$ 600  
Third Year: \$ 600  
Fourth Year: \$ 600

#### OTHER CHARGES\*\*

First Year: \$ 398  
Second Year: \$ 933  
Third Year: \$ 310  
Fourth Year: \$ 77

**NOTE:** All figures for dentistry and dental hygiene are estimates based on the best information available at the time of publication and are subject to change.

\*Tuition is charged in four equal amounts, Summer through Spring Quarters. The amounts listed are for the 2005-06 academic year only. Students should plan on an annual increase consistent with inflation in the education sector.

Since tuition rates generally increase 5 to 7 percent annually, one can approximate what the future year's tuition will be.

\*\*Includes the cost of gold, which is variable, depending on actual usage and market value.

### ESTIMATED LIVING EXPENSES (BOARD AND ROOM) FOR DENTISTRY AND DENTAL HYGIENE STUDENTS

On-campus student (\$955/mo.)

\$8,595 9 months

\$11,460 12 months

Off-campus student (\$1,215/mo.)

\$10,935 9 months

\$14,580 12 months

### ON- AND OFF-CAMPUS STUDENT HOUSING

Students may go to <[www.llu.edu/llu/housing](http://www.llu.edu/llu/housing)> for housing information and a housing application form.

### DENTAL HYGIENE AWARDS

Dental hygiene students are eligible to receive awards by demonstrating scholastic attainment, leadership ability, technical and professional competency, and other accomplishments and achievements that reflect the ideals of the dental hygiene profession.

The DEAN'S AWARD is given for excellence in the combined characteristics of clinical ability and professionalism. Selection is based on the recommendation of the dental hygiene faculty and the dean.

The BATES AWARD is given to the student who demonstrates notable achievement during training. Selection is by vote of the faculty.

The CALIFORNIA DENTAL HYGIENISTS' ASSOCIATION OUTSTANDING LEADERSHIP AWARD is presented by the California Dental Hygiene Association to a student demonstrating professional leadership. The recipient of this award is selected by the dental hygiene class and faculty liaison.

The DENTAL HYGIENE ACADEMIC EXCELLENCE AWARD is presented for exceptional performance on the Dental Hygiene National Board Examination.

The KLOOSTER HUMANITARIAN AWARD is given to the student who demonstrates a spirit of giving, kindness, and enthusiasm. Selection is by vote of the faculty.

The MIDDLETON AWARD is given in recognition of high standards of service, spiritual leadership, and dedication to church and humanity. The recipient of this award is chosen by the class.

The MITCHELL AWARD is given by vote of the class to the student considered to be the most outstanding leader during the two years of dental hygiene training.

The RESEARCH AWARD is given to the student who demonstrates a spirit of giving, kindness, and enthusiasm. Selection is by vote of the faculty.

The SIGMA PHI ALPHA AWARD constitutes election to the national honor society for dental hygienists. It is based on scholarship and character and is limited to 10 percent of the class, chosen from the top 20 percent scholastically.

The TRI-COUNTY DENTAL HYGIENIST'S SOCIETY AWARD is given in recognition of outstanding student contribution to the professional association. Selection is by vote of the Tri-County Society in conjunction with the faculty liaison.

The STUDENT OF THE YEAR AWARD is given to the student who embodies the attributes of excellence and professionalism—the *ideal student*. Selection is by vote of the faculty.

The CLINICIAN'S AWARD is given to the student who demonstrates outstanding clinical achievements and the highest level of concern for patients. Selection is by vote of the faculty.

### DENTISTRY AWARDS

Dentistry students are eligible to receive awards of various kinds for demonstrated excellence, scholastic attainment, leadership ability, technical ability, professional proficiency, initiative, and other accomplishments or achievements, according to the bases established by the donors:

#### General awards

Academy of General Dentistry  
Academy of Operative Dentistry  
Alpha Omega Scholarship  
American Academy of Dental Practice Administration  
American Academy of Gold Foil Operators  
American Academy of Oral and Maxillofacial Pathology  
American Academy of Oral and Maxillofacial Radiology  
American Academy of Oral Medicine  
American Academy of Orofacial Pain  
American Academy of Pediatric Dentistry  
American Academy of Periodontology  
American Association of Endodontists  
American Association of Oral & Maxillofacial Surgeons  
American Association of Oral Biologists  
American Association of Orthodontics  
American College of Dentists, Southern California Section  
American College of Prosthodontists  
American Dental Society of Anesthesiology  
American Student Dental Association  
California Dental Association  
CDA Foundation Scholarships  
Delta Dental Student Leadership Award  
Dental Foundation of California  
Dentsply Student Clinician Award  
G. Hartzell Clinician Award  
International College of Dentists  
LLU Center for Dental Research  
Omicron Kappa Upsilon William S. Kramer Award  
Organization of Teachers of Oral Diagnosis  
Pierre Fauchard Academy  
Preclinical Basic Science Award  
Southern California Academy of Endodontics  
Southern California Academy of Oral Pathology  
Southern California Society of Dentistry for Children

**School of Dentistry awards**

Academic Excellence Award  
 Ben W. Oesterling Award  
 Fixed Prosthodontics Department Award  
 Graduate Implant Dentistry Award  
 Oral Surgery Department Award  
 Service Learning Award  
 Wilfred A. Nation Award

**ADDITIONAL SPECIAL AWARDS****ALUMNI ASSOCIATION**

The Alumni Association Award is given for manifested qualities and abilities indicative of potential for professional and community leadership.

**CHANCELLOR'S AWARD**

The Chancellor's Award is made annually in recognition of superior scholastic attainment and active participation in the student community, within the framework of Christian commitment. One recipient is selected from each school of the University.

**NASDAD**

An award is given by the National Association of Seventh-day Adventist Dentists to promote scholarship and to encourage high standards of character and conduct and the demonstration of leadership ability.

**OKU**

Omicron Kappa Upsilon (OKU), the national honor society for dentistry, was founded in 1914 for the purpose of promoting scholarship among dental students. Only students who rank in the upper 20 percent of the class qualify for consideration. A maximum of 12 percent of each graduating class is eligible for alumni membership.

**PRINCE**

M. Webster Prince, the first dean of the School of Dentistry, established in 1957 an annual award to be given to a senior recognized by the senior class and the faculty as having outstanding qualities of scholarship, leadership, and stewardship.

**INTERNATIONAL DENTIST PROGRAM AWARDS**

Students in the International Dentist Program are eligible to receive awards based on accomplishments and achievements that reflect the ideals of the program.

**ADDITIONAL REQUIREMENTS**

For additional policies governing Loma Linda University students, see Section II of this CATALOG, as well as the University *Student Handbook*. Students are responsible for informing themselves of and satisfactorily meeting all regulations pertinent to registration, matriculation, and graduation.





# School of Medicine

## Departments and Programs

Medicine

Medical Scientist

## Dean's Welcome

Thank you for your interest in Loma Linda University School of Medicine. This CATALOG will provide you with detailed information about our people, programs, and facilities; as well as our requirements and expectations.

Medical education remains our number-one priority. The school offers quality programs in medical education for medical students, combined-degrees students, house staff, alumni, and professional peers within a system of demonstrated Christian values and beliefs. Our faculty are committed to ensuring that those we educate will develop the skills and intellectual curiosity needed for success as lifelong learners in a changing world.

We welcome your interest.



Roger Hadley, M.D.  
Dean, School of Medicine



## School Foundations

### HISTORY

The professional curriculum in medicine, usually requiring four academic years of study and experience in a university and hospital setting, was first offered at Loma Linda University in 1909. More than nine decades later, the events since 1909 seem blurred by the rapid changes that institutions of higher learning experience in an effort to keep pace with the growth of knowledge.

### SINCE 1909

The first two years of medicine were always taught on the Loma Linda campus. From 1913 to the mid-1960s, the third and fourth years were taught in Los Angeles at what is now White Memorial Medical Center (the first part of which was built in 1918) and at nearby Los Angeles County Hospital (now Los Angeles County/USC Medical Center). Construction of Loma Linda University Medical Center (inclusive of clinical, teaching, and research facilities) allowed the entire four-year curriculum to be offered on and near the Loma Linda campus, beginning with school year 1966-67. The medical center was occupied in July 1967.

## Our Mission

The mission of the School of Medicine is to continue the healing and teaching ministry of Jesus Christ, "To make man whole" (Luke 9:6).

### PREPARING THE PHYSICIAN

Our overriding purpose is to foster the formation of Christian physicians, providing whole-person care to individuals, families, and communities. Fulfilling this responsibility requires:

#### Education

Creating an environment in which medical students, graduate students, and residents will acquire the knowledge, skills, values, and attitudes appropriate to Christian health professionals and scholars.

#### Research

Cultivating a creative environment for inquiry and discovery of new routes to wholeness through basic and clinical research.

#### Service

Providing timely access to cost-effective, comprehensive, whole-person care for all patients, regardless of their circumstances or status.

#### Developing the whole person

Affirming the Christian view of wholeness—which recognizes that the needs of patients go beyond the healing of the body, and that the development of students involves more than the training of the mind; promoting physical, intellectual, social, and spiritual growth in our faculty and our students; and transforming our daily activities into personal ministries.

#### Reaching the world

Providing whole-person care wherever the opportunity arises; participating with the world community in the provision of local medical education; providing international physicians and scientists the opportunities for professional interaction and enrichment; sharing the good news of a loving God as demonstrated by the life and teachings of Jesus Christ—these are the goals of the students, faculty, and graduates of the School of Medicine.

## General Regulations

Students of the University are responsible for informing themselves of and satisfactorily meeting all regulations pertinent to registration, matriculation, and graduation. Section III gives the general setting for the programs of each school. The subject and unit requirements for admission to individual professional programs are outlined in Section IV. It is important to review specific program requirements (Section IV) in the context of the general requirements (Section III) applicable to all programs.

## Application and Admissions

The program admissions committees of the University intend that an applicant to any of the

schools is qualified for the proposed curriculum and is capable of profiting from the educational experience offered by this University. The admissions committees of the school accomplish this by examining evidence of scholastic competence, moral and ethical standards, and significant qualities of character and personality. Applicants are considered for admission only on the recommendation of the program in which study is desired.

## THE STUDY OF MEDICINE

Preparation for the practice of medicine begins early in life and early in the student's schooling. The greater the aptitudes for and interests in learning widely and appreciatively in the major areas of knowledge—the natural sciences, the humanities, the behavioral sciences—the more able and versatile the student is likely to become.

In selecting students, the Admissions Committee of the School of Medicine looks for applicants who are best suited to fulfill the mission of the school and to successfully practice medicine. The school desires students who demonstrate ability to learn independently, to think critically, and to articulate clearly—both orally and in written form—their ideas and opinions. It is important that students in the School of Medicine demonstrate excellent interpersonal skills and show evidence of sensitivity to the needs of humanity.

The Admissions Committee of the School of Medicine puts forth considerable effort to ensure that an applicant is qualified for medical school. The applicant's credentials are reviewed to assess scholastic performance. The committee also looks for prerequisite qualities of character and personality, potential for self-direction and the use of discriminating judgment, and dedication to the ideal of service to society.

## GENERAL ENTRANCE INFORMATION

A total of 85 semester (128 quarter) units of credit from an accredited college is required for acceptance by the School of Medicine. Preference is given, however, to college graduates. Credit must be presented for the following subjects:

	SEM./QTR. HRS.
General biology or zoology, with laboratory	8/12
General or inorganic chemistry, with laboratory	8/12
Organic chemistry, with laboratory	8/12
Physics, with laboratory	8/12
English, equivalent to satisfy baccalaureate degree requirement	
Religion, as required by the college attended	

### Required:

Keyboard and computer skills

### Recommended:

Introductory course in basic statistics

Biochemistry, strongly recommended

Science credits earned in professional schools (e.g., allied health professions, business, dentistry, nursing, or pharmacy) do not fulfill requirements for admission to medicine.

CLEP and Pass/Fail performances are not acceptable for the required courses.

The Medical College Admission Test (MCAT) is required. Scores older than three years will not be considered.

## APPLICATION PROCEDURE AND ACCEPTANCE

It is important to know the specifics of the application process and to begin the application process well in advance of the date of anticipated (or desired) entrance to medical school.

### Where to write

The School of Medicine is a member of the American Medical College Application Service (AMCAS). Applications must be submitted through AMCAS. Their application is available on the web at <[www.aamc.org/students/amcas/application.htm](http://www.aamc.org/students/amcas/application.htm)>.

### Deadline

Application should be made directly to AMCAS between June 1 and November 1 for entry in August of the following year.

### Fees

The AMCAS fee is required each time an application is submitted. An additional fee to the School of Medicine is required with each supplementary application.

### Procedure

The application procedure is as follows:

1. The applicant submits a formal application to AMCAS, with fee and requested transcripts. The applicant's evaluated data are forwarded to the School of Medicine by AMCAS.
2. When the application is received from AMCAS, Loma Linda University School of Medicine requests completion of a supplementary application and reference forms. The prospective student should provide evidence of exposure to health care through personal involvement, or in other ways confirming the applicant's decision to become a physician.
3. After the supplementary application and letters of reference have been submitted and reviewed, the applicant may be invited for an interview.
4. The information submitted by the applicant through AMCAS, the supplementary application, the letters of reference, and the interview reports are then evaluated by the Admissions Committee of the School of Medicine. This committee determines whether an applicant is accepted or rejected. All applicants are notified of the final decision of the Admissions Committee regarding their application. Acceptance notices are sent to regular applicants beginning December of the year preceding admission to the School of Medicine, continuing until the class is filled.
5. The accepted applicant sends a written acceptance of his/her offer of admission as a student, together

with a \$100 acceptance deposit, by the announced date (about thirty days after the notification of acceptance). This deposit is refundable until May 15 of the year in which the student has been accepted for entry.

In summary, the Admissions Office requests the following:

- Loma Linda University School of Medicine secondary application and \$75.00 application fee.
- Appraisal of the applicant's character, ability, and suitability for a medical career by persons knowledgeable about the applicant's past performance.
- A preprofessional recommendation packet, if available, from the applicant's undergraduate college/university.
- Applicant's availability for interviews.

#### Pre-entrance health requirement and health insurance

Students must meet the immunization requirements as stated. In addition, students are expected to have routine dental and medical care and elective surgery attended to before registering for medical school.

All School of Medicine students are provided with a health insurance policy through the University's Department of Risk Management. This policy remains in effect for students who are regularly enrolled, provided they register and pay tuition and fees on time each quarter. Since the maximum benefit of the policy (as of the time this CATALOG went to press) is \$100,000 and does not cover preexisting illnesses or dental or optical care, students are encouraged to maintain a personal, current policy that covers preexisting illnesses and/or has a higher benefit. A student who does not have health insurance coverage for his/her spouse/children will need to purchase it through the University's Department of Risk Management at the time of registration. Government regulations prohibit the use of student loan funds to provide medical insurance or services for a student's spouse or children.

Students who wish to review a copy of the current student health plan or have further questions about the plan should call Risk Management (909/558-4386). Annual tuition also covers the cost of disability insurance. Details will be presented during orientation or upon request.

#### EARLY-DECISION PROGRAM

A highly qualified applicant to medical school may apply between June 1 and August 1 and be guaranteed a decision by October 1. During that period of time, the applicant may not apply to any other medical school; and if the applicant is accepted at Loma Linda University, (s)he is committed to that decision. If the applicant is not accepted by October 1, (s)he may apply to any school desired. An applicant not accepted by October 1 will be considered in the regular applicant pool. On the AMCAS application the applicant indicates that (s)he is an early-decision applicant and agrees to comply with the constraints of that program.

#### DEADLINES

June 1 to November 1 (of the year preceding the year of admission to the School of Medicine) is the period for submission of applications for the first-year class.

August 1 (of the year preceding the year of admission) is the deadline for submission of application under the Early-Decision Program.

September 1 (of the year preceding the year of admission) is the deadline for the submission of credentials for the Early-Decision Program.

November 15 (of the year preceding the year of admission) is the deadline for receipt of all supporting credentials for the regular applicant pool.

May 15 (of the year of admission) is the date beyond which the deposit of \$100 is not refundable.

#### TRANSFER

Under exceptional circumstances, the school accepts applicants into the junior year who are transferring from other U.S. medical schools. Such transfers must be for compelling circumstances and are subject to availability of space and approval of the Loma Linda University School of Medicine Dean's Administrative Committee.

The University reserves the right to require of an applicant satisfactory completion of written or practical examinations in any course for which transfer credit is requested. Successful completion of USMLE Step I is required.

#### MEDICAL SCIENTIST PROGRAM

Students interested in the Medical Scientist Training Program should consult the School of Medicine. (See Medical Scientist Program in Section IV).

## Student Life

The information on student life contained in this CATALOG is brief. The most recent *Student Handbook* 2002 more comprehensively addresses University and school expectations, regulations, and policies; and is available on the University Web site and to each registered student and to prospective students who request a copy in writing from the School of Medicine, Office of the Associate Dean for Student Affairs. Students are expected to familiarize themselves with the contents of the *Student Handbook* and to abide by its policies. Additional information regarding policies specific to a particular school or program within the University is available from the respective school.

#### STUDENT ORGANIZATIONS

The purpose of Loma Linda University School of Medicine student organizations is to:

- encourage high Christian ideals among medical students.
- involve medical students in developing and furthering their education.
- enhance involvement in and loyalty to Loma Linda University.

- unite medical students to seek constructive solutions to problems.
- foster leadership among medical students.

At registration into the School of Medicine, students automatically become members of the School of Medicine Student Association. Other student organizations that operate within the School of Medicine and that are represented on the School of Medicine Senate include the following:

The American Medical Association—Medical Student Section (AMA-MSS), Loma Linda University Chapter

The American Medical Student Association (AMSA), Loma Linda University Chapter

The Christian Medical and Dental Association (CMDA)

The Organization of Student Representatives (OSR) to the Association of American Medical Colleges (AAMS)

Student National Medical Association (SNMA) LLU Chapter

## Curriculum

### WHOLE-PERSON FORMATION

Personal and professional growth for the student in medicine is the focus of the disciplines in the school, the faculty in the School of Medicine, and the Faculty of Religion. Courses and content are offered to emphasize biblical, ethical, and relational aspects of the physician's personal and professional development. The core for Whole-Person Formation—fourteen quarter hours of religion and ethics—is provided during the first three years of the medicine curriculum.

## Academic Information

The academic progress of each student is monitored by the Academic Review Committee. Specific policies for handling misconduct (academic or nonacademic) are published in the *Student Handbook* 2002.

### COMMUNICATIONS

Communications to the medical student regarding academic and clinical assignments, scholarship opportunities, and other important information are routed through the Office of the Dean. The student mailboxes and bulletin board are in the school's administrative area, located in the Medical Center. It is the responsibility of students to check their e-mail and mailboxes and the bulletin board daily.

### REQUIRED SUPPLIES

#### Microscope

The student is expected to have access to a satisfactory compound microscope (usually one rented from the school) that meets the following requirements:

- The microscope shall be no older than fifteen years.
- The lenses shall be in good condition and shall include scanning and oil-immersion objectives.
- The equipment shall include an Abbe condenser with rack and pinion adjustment, an iris diaphragm, and a mechanical stage.

#### Textbooks

Students are required to purchase the textbooks adopted by the School of Medicine Curriculum Committee.

#### Instruments

Students are required to purchase the instruments adopted by the physical diagnosis course.

## PRACTICES AND REGULATIONS

### Length of academic residence

To fulfill the degree requirement pertaining to length of academic residence, it is the usual policy that the student must be registered for full-time course work during the entire junior and senior academic years for the Doctor of Medicine degree.

### Course exemptions

Students who seek exemption from registering for courses that they took prior to entering the School of Medicine must qualify for the exemption by passing a comprehensive examination covering the course material in question.

Should the student qualify, in lieu of the regular course the student will be required to participate in an advanced program that may include additional studies, research activities, and/or teaching. A written paper will be required from all students completing the advanced program.

The course director, the associate dean of educational affairs, and the student will work together to determine the content of the advanced program. Full tuition, equivalent to that of the regular program, will be charged.

### Examinations

Students must take examinations at the scheduled time. Students who arrive more than 15 minutes late to an examination—or after another student has left during the examination for any reason—will be denied the opportunity to take the examination.

Should a student miss an examination because of an excused absence, the examination cannot be made up at a later time. Instead, the comprehensive final examination in the course for which the missed examination occurred will be weighted an amount extra, proportional to the weighting of the missed examination(s). In addition, course directors may require other remediation at their discretion.

In order to have an excused absence, the student must obtain a written excuse from the Office of the Dean prior to the administration of the test in question. This written excuse must then be provided to the course director. Students missing examinations for health reasons must provide documentation from Student Health that they were indeed ill. Whether or not this documentation is an adequate excuse for missing an examination will be left to the discretion of the Office of the Dean.

Students who miss examinations without prior approval from the Office of the Dean have an unexcused absence. As a result, the student will receive a zero for the missed examination(s).

In the event of a bona fide emergency, where prior approval is not feasible, the Office of the Dean must be contacted as soon as possible. Failure to do so will result in an unexcused absence.

#### Grading policy

Course directors submit grades at the end of the course, indicating the overall evaluation of the student's performance in the course. The grade reflects the success or failure of the student in meeting the objectives of the course in terms of knowledge, skills, attitudes, and values. The grade will be recorded as SATISFACTORY if the student exceeded the minimum requirements for overall performance. The grade assigned will be UNSATISFACTORY if the student did not meet the minimum requirements for overall performance. The grade assigned will be MARGINAL PASS if the student met but did not exceed the minimum requirements for overall performance.

Complete promotion and retention policies are distributed to each class at orientation.

#### Class standing

Class standing is determined by the Office of the Associate Dean for Educational Affairs and is based on student performance on in-house, faculty-generated examinations and on NBME subject examinations.

#### Promotion

Promotion is contingent on satisfactory academic performance. Both cognitive and noncognitive evaluations of academic performance—as well as assessment of personal suitability to assume the responsibilities of the medical profession—are utilized in making promotion decisions. The Academic Review Committee of the School of Medicine periodically reviews student performance and progress and recommends promotion, retention, or dismissal on the basis of the overall academic record. The *Student Handbook* contains additional details regarding the criteria used by the Academic Review Committee for promotion decisions.

#### Academic probation

Students whose cumulative academic record at the end of any academic year is less than satisfactory are placed on academic probation.

#### Withdrawal

To withdraw from a course(s), the student must file a Change of Program form; to completely withdraw from school, a Total Withdrawal form must be completed. These forms should be completed and submitted on the last day of class attendance. The date of withdrawal used in calculating tuition refunds will be the date on which the properly completed form is submitted to the Office of University Records.

#### USMLE Steps I and II policy

States vary in the number of times a student can attempt USMLE examinations and still be eligible for licensure. A significant number of states allow no more than three attempts. The school has defined its own limits for number of attempts allowed. Our policy requires students enrolled in the Loma Linda University School of Medicine to pass Step I in no more than three tries.

Students must complete the clinical course work required for graduation within three years of starting the clinical curriculum; they are permitted a maximum of four sequential attempts to pass Step II of the USMLE. The student's first attempt at passing Step II of the USMLE must take place only after s/he has satisfactorily passed all junior clerkships and prior to his/her completion of all required senior clinical course work.

A student who has failed Step II but who has completed all course curriculum requirements must remain enrolled in the School of Medicine as a directed-study student until s/he either has passed Step II of the USMLE or failed Step II of the USMLE for the fourth time. During this directed study, the student will be charged tuition.

### DOCTOR OF MEDICINE DEGREE

The School of Medicine requires that a candidate must have met the following requirements for the Doctor of Medicine degree:

- Completed all requirements for admission.
- Attended an accredited medical school for four academic years, the last two of which must have been spent at this school.
- Completed honorably all requirements of the curriculum, including specified attendance, level of scholarship, length of academic residence, and credit units.
- Completed additional special examinations covering any or all subjects of the medical curriculum as may be required.
- Successfully completed USMLE examinations (Steps I and II), as specified—of both clinical skills and knowledge components.
- Given evidence of moral character, of due regard for Christian citizenship, and of consistent responsiveness to the established aims of the University and of the school.
- Discharged financial obligations to the University.

The candidate is required to participate in graduation exercises upon completion of the academic program. If the candidate is out of sequence with his/her current class but would like to participate in the commencement exercises, s/he must have completed a minimum of three months of the required senior clerkships, i.e., medicine, surgery, family medicine, neurology, ambulatory care, and intensive care/emergency medicine by April 1 of the year of graduation. Consent for the student to be absent, granted by the chancellor of the University, is contingent on the recommendation of the dean to the chancellor.

The families and friends of graduates are invited to be present at the official Conferring of Degrees service.

### COMBINED-GRADUATE-DEGREES PROGRAMS

Loma Linda University is committed to fostering the investigative skills of its medical students. Students interested in pursuing careers in academic medicine and medical research may wish to enroll in one of the combined-degrees programs:

## MEDICAL SCIENTIST PROGRAM (M.D./PH.D.)—SM/GS

The Medical Scientist Program is designed to develop a student's independence and competence as an investigative scientist and clinician. It provides students with a broad educational base for the practice of medicine and medically related research. The program is administered jointly by the School of Medicine and the Faculty of Graduate Studies. During the first three years of the program, students follow an integrated curriculum that includes medical courses, graduate education, and research training. In the first year the curriculum includes a course sequence—taught by an interdisciplinary faculty—that integrates aspects of biochemistry, genetics, molecular biology, cell physiology, and cell and molecular ultrastructure into a rigorous survey of cellular biology. In addition to this foundation, students learn of new developments in the basic sciences and biomedical sciences through weekly seminars and monthly correlative sessions. During subsequent years, formal courses continue to broaden and integrate into a meaningful whole an understanding of the clinical consequences of cellular events.

Beginning in the fourth year and continuing for two or more years, students pursue full-time research on a project of their own design within the graduate programs of human anatomy, biochemistry, microbiology and molecular genetics, physiology, or pharmacology. Research training within these programs is available in nationally recognized research laboratories in the School of Medicine. After completing the Ph.D. degree, students return to the medical curriculum for the two years of clinical training required to obtain the Doctor of Medicine degree.

For acceptance into the Medical Scientist Program, graduation from an accredited college is required. Students must simultaneously submit applications to the School of Medicine and the Faculty of Graduate Studies. Scores on the general test of the Graduate Record Examination are required. The Department of Biochemistry requires and the Department of Physiology and Pharmacology recommends a basic course in calculus and two quarters of physical chemistry. Students who have completed at least 8 units in biochemistry may qualify for reduced biochemistry course work in the Medical Scientist Program.

For information regarding tuition waivers and scholarships, contact the director of the Medical Scientist Program.

## COMBINED DEGREES (M.D./M.S. OR M.D./PH.D.)—SM/GS

The M.D./Ph.D. Combined-Degrees Program may be obtained through the School of Medicine. It includes many of the features of the Medical Scientist Program. Students in the combined-degrees program complete the first two years of the standard medical curriculum. This is followed by three or more years of graduate course work and research to qualify for a Ph.D. degree, or at least one year for an M.S. degree, before commencing the last two years of the medical school curriculum—the clinical training—for the

Doctor of Medicine degree. Majors are offered in anatomy, biochemistry, microbiology and molecular genetics, physiology, or pharmacology.

For the M.D./M.S. and M.D./Ph.D. Combined-Degrees Programs, the prerequisites and Graduate Record Examination requirements are similar to those described for the Medical Scientist Program, except that biochemistry is not required.

## LICENSING EXAMINATIONS

### National

The graduate who holds credentials from the USMLE may be granted a license by endorsement of the examining board of most states. Additional requirements made by some states are given in a pamphlet that may be obtained from the Office of the Dean or from the Federation of State Medical Boards, 400 Fuller Wiser Road, Suite 300, Euless, TX 76039-3855.

## RESIDENCY PROGRAMS

Loma Linda University Medical Center and other hospitals affiliated with Loma Linda University School of Medicine provide a variety of graduate medical-education programs. These include residencies in anesthesiology, combined medicine/pediatrics, dermatology, emergency medicine, family practice, internal medicine, neurology, neurological surgery, obstetrics and gynecology, occupational medicine, ophthalmology, oral surgery, orthopaedic surgery, otolaryngology, pathology, pediatrics, physical medicine/rehabilitation, plastic surgery, preventive medicine, psychiatry, radiation oncology, diagnostic radiology, general surgery, thoracic surgery, urology, and general vascular surgery.

Subspecialty residencies are offered in cardiovascular disease, gastroenterology, rheumatology, pulmonary disease/critical care medicine, neonatal-perinatal medicine, orthopaedics (hand surgery), pediatric anesthesiology, pediatric critical care medicine, pediatric emergency medicine, vascular/interventional radiology, neuroradiology, pediatric radiology, emergency medicine/pediatrics, pain-management anesthesiology, and child neurology.

Graduate physicians wishing to apply for entrance into these programs should apply to the director of the specialty program.

Graduate dentists who seek residencies in dental anesthesia, endodontics, oral implantology, orthodontics, pediatric dentistry, periodontics, and prosthodontics should apply directly to the School of Dentistry.

## POSTGRADUATE TRAINING

In harmony with the needs of medicine today, the curriculum leading to the Doctor of Medicine degree is planned with the assumption that all students will take standard postgraduate training in one of the fields of medicine. This means serving as a resident for a minimum of three years in a hospital approved for this training by the Council of Medical Education and Hospitals of the American Medical Association.

The Office of the Associate Dean for Educational Affairs supplies information and assistance for the arrangement of residencies. Since the school participates in the National Residency Matching Program, selection through this means constitutes approval by the School of Medicine.

### CONTINUING MEDICAL EDUCATION

Recognizing the imperative of lifelong learning for professionals, the School of Medicine supports a program of continuing medical education for physicians beyond their formal postgraduate years. The Office of Continuing Medical Education is accredited by the Accreditation Council for Continuing Medical Education to provide Category I continuing medical-education credit for physicians. Course offerings include weekly, bi-weekly and monthly School of Medicine departmental grand rounds and a large number of one-day and multiday conferences and workshops that are presented locally and nationally for School of Medicine faculty, alumni, and practicing physicians within the geographic area in which the conferences are presented.

For more information please write to:  
Thomas Zirkle, M.D., Assistant Dean for  
Continuing Medical Education  
Loma Linda University Medical Center, Room A537  
Loma Linda, CA 92350;  
or telephone 909/558-4963.

### CLINICAL FACILITIES

Clinical instruction takes place primarily at Loma Linda University Medical Center, which includes Loma Linda University Children's Hospital; and at Loma Linda University East Campus Specialty Hospital, Faculty Medical Offices (FMO), Jerry L. Pettis Memorial Veterans Medical Center, Riverside County Regional Medical Center, and Loma Linda University Behavioral Medicine Center, and White Memorial Medical Center. Also utilized are San Bernardino County General Hospital, Kaiser Foundation Hospital, and Glendale Adventist Medical Center.

### THE INSTRUCTIONAL RESOURCES

#### Loma Linda University Medical Center (LLUMC)

The Medical Center is a major teaching center serving San Bernardino and Riverside counties. In addition to its large population of referred patients, the Medical Center is also the Level 1 trauma center for the region and is the tertiary-care center for high-risk obstetrics and neonatal intensive care. An extension houses the Loma Linda Cancer Center and the Proton Treatment Center for cancer therapy. All patients in the Medical Center are available for medical student, resident, and fellowship training.

#### Loma Linda University Children's Hospital

The Children's Hospital provides a single, centralized location where newborns, infants, and children can receive comprehensive medical care. Being seen at a comprehensive center for children's health care assures parents and their children that all aspects of the child's health will be closely monitored and under-

stood. Loma Linda University Children's Hospital staff—pediatric nurses, physicians, surgeons, anesthesiologists, radiologists, and other professionals—work together to assure that every patient receives the highest possible quality of medical attention.

The organization of a children's hospital also means that the hospital's staff is chosen from among people who are specially trained and have a deep interest in children's health care. Every Children's Hospital employee is highly skilled in dealing with children and has made the care of children a personal priority. The Children's Hospital is known as *the place for little faces*.

#### Loma Linda University East Campus Specialty Hospital

The East Campus Specialty Hospital (the former Loma Linda Community Hospital) is a teaching resource for students in family medicine, physical medicine and rehabilitation, orthopaedics, and clinical neuroscience. In addition, it serves as the primary inpatient training site for house staff in family medicine.

#### Faculty Medical Offices (FMO)

The Faculty Medical Offices include facilities for all specialties and an outpatient surgery suite that handles approximately 30 percent of all the surgery done at the Medical Center. The FMO is utilized for students' outpatient experience in nearly all specialties.

#### Jerry L. Pettis Memorial Veterans Medical Center

The Jerry L. Pettis Memorial Veterans Medical Center serves a wide geographic area and cares for a large population of veterans. Outpatient clinics and inpatient wards are available for student and resident teaching. The residency programs are integrated with the University Medical Center and are under the supervision of the faculty of the School of Medicine. The Dean's Committee helps to coordinate the patient care and teaching activities of the veterans medical center.

#### Riverside County Regional Medical Center

The Riverside County Regional Medical Center is located twenty miles south of Loma Linda in the city of Riverside. The patient population reflects an inner-city profile with a large concentration of urgent medical and surgical, trauma, obstetrics, and pediatrics cases. All patients are available for student, resident, and fellowship training.

#### Loma Linda University Behavioral Medicine Center

The Loma Linda University Behavioral Medicine Center—a freestanding, full-service psychiatric hospital—opened in early 1991. Loma Linda University Behavioral Medicine Center offers adult, child, adolescent, and chemical-dependency services, including inpatient and partial hospitalization. Special emphasis is given to services that provide the integration of Christian faith with psychiatric care for patients desiring such. This expansion of clinical services greatly enhances the teaching of medical students and residents, as well as the clinical research potential.

#### White Memorial Medical Center

The medical center is located approximately seventy miles west of Loma Linda in Boyle Heights in the city of Los Angeles. The patient population reflects an

inner-city profile with a large concentration of urgent medical and surgical, trauma, obstetrics, and pediatrics cases. All patients are available for student, resident, and fellowship training.

#### Other facilities

Also utilized are Arrowhead Regional Medical Center, Kaiser Foundation Hospitals, and Glendale Adventist Medical Center.

## Research Centers

Basic science investigation is advanced, and patient treatment is enhanced through the groundbreaking research conducted at the four centers of the School of Medicine.

### CENTER FOR MOLECULAR BIOLOGY AND GENE THERAPY

The Center for Molecular Biology and Gene Therapy conducts basic science research and training in the field of cellular and molecular genetics within the context of a Christian health-sciences university. The goals of the center are to:

- Establish and maintain an active research program in the field of cellular and molecular genetics.
- Conduct basic-science scholarly research that provides a foundation for molecular medicine at this University.
- Apply molecular-genetic basic-science research to the development of cellular and genetic therapies for treatment of neurological disorders as well as diseases such as cancer.
- Develop and promote courses to train faculty and students at this University in cellular and molecular-genetic technologies.

The center's core facility, the DNA laboratory, provides services to the University research community—such as DNA sequencing and oligo nucleotide synthesis (synthesizing small DNA fragments or small genes); and uses real-time PCR equipment to measure DNA and RNA in small amounts and to amplify levels in tissue or cell samples.

### CENTER FOR PERINATAL BIOLOGY

The primary research focus of the Center for Perinatal Biology is investigation of developmental fetal and neonatal biology and physiology. The majority of the funding to support this research is derived from competitive grants awarded by the National Institutes of Health; additional funding is provided by the National Science Foundation, the American Heart Association, the March of Dimes Birth Defects Foundation, and other agencies.

The biomedical scientists in this internationally renowned research center also teach basic science courses in the School of Medicine; as well as graduate courses in their disciplines: physiology/ pharmacology, gynecology/obstetrics, pathology/ human anatomy, biochemistry/microbiology, and pediatrics.

For the graduate students, postdoctoral fellows, and beginning investigators—who spend from two-to-

four years in research and training in fields related to developmental physiology—the center is an ideal environment. A number of visiting scholars from other universities also work in the center during sabbaticals or other interims.

### MUSCULOSKELETAL DISEASE CENTER

The Musculoskeletal Disease Center (MDC) pursues research in molecular medicine, including gene therapy and molecular genetics, as its primary approach to diseases of the musculo-skeletal system. The gene-therapy research involves local and systemic therapy for musculo-skeletal diseases, particularly osteoporosis. The Osteoporosis Research Clinic, which is a part of the MDC, offers state-of-the-art x-ray imaging for bone-density scans; and conducts clinical research studies in numerous areas other than osteoporosis.

Areas of research interest relevant to the MDC include:

- Signal transduction mechanisms involved in mediating the effects of mechanical strain to culminate in increased bone formation.
- Molecular mechanism of action of anabolic agents—including fluoride, a bone-cell mitogen.
- Role of the IGF system in the pathogenesis of bone loss and hip fracture.
- Identification of and functional studies of genes involved in the musculoskeletal system.

Medical students and postdoctoral fellows from around the world receive training in the MDC laboratories, and participate, often with honors, at local and national basic research and clinical research meetings. They are given many opportunities for collaboration with other research laboratories, nationally and internationally.

### NEUROSURGERY CENTER FOR RESEARCH, TRAINING, AND EDUCATION

The Neurosurgery Center for Research, Training, and Education has as its primary focus the improvement of patient care. These goals are met by the development of new biologically and technologically advanced diagnostic procedures, minimally invasive surgical techniques, and innovative instrumentation. The center functions in collaboration with the School of Public Health through its clinical and basic science departments and its Center for Health Research [biostatistical services] Consulting Group.

Currently the center is the recipient of a five-year NIH competitive grant to determine the role of iron perturbations in metabolism in the pathogenesis of Alzheimer's disease. This multidisciplinary study involves the Departments of Biochemistry, Radiology, Cell and Molecular Biology, Radiobiology, Psychiatry, Geriatric Medicine, and Biostatistics. The center is also interested in the development of new hemostatic agents that involve the control of hemorrhage. To this end it has developed new procoagulants and surgical devices in collaboration with industry. The center works in close collaboration with industrial resources for both testing and development of new surgical

instrumentation. The director and associate director of the center hold numerous international and United States patents on surgical instruments and other surgical devices. The center provides:

- Research and training resources for education in general surgery, vascular surgery, and neurosurgery; as well as continuing-medical education (CME) approval to provide preceptorships for medical students, surgical residents, faculty, outside physicians, and national and international visiting scholars on sabbatical.
- Opportunities for predoctoral and postdoctoral training in both biochemistry and cell biology, particularly as it relates to neurodegenerative disease.
- A curriculum for training in laparoscopic surgery.
- Instrumentation and laboratories for endoscopic experience.
- A computerized data bank, which is currently accessing cases of mild cognitive impairment, looking for determinants that lead to the development of Alzheimer's disease.
- CME-approved training in sutureless vascular anastomosis techniques.
- A video network connecting LLU operating rooms with other institutions that are a part of the Center of Excellence Program.

The Neurosurgery Center for Research, Training, and Education plays an important role in multidisciplinary research, interfacing with many other departments within the school as well as with outside institutions—such as the National Institutes of Health; the MRI Institute of Biomedical Research in Detroit; and foreign medical institutions, including the Free University of Berlin and Nanjing University.

## Financial Information

The Office of the Dean is the final authority in all financial matters and is charged with the interpretation of all financial policies. Any exceptions to published policy regarding reduction or reimbursement of tuition must be approved by the dean. Any statement by individual faculty members, program directors, or department chairs regarding these matters is not binding on the school or the University unless approved by the dean.

Registration is not complete until tuition and fees on the required installment are paid; therefore, the student should be prepared to make these payments during scheduled registration for each academic year. There may be adjustments in tuition and fees as economic conditions warrant.

### GENERAL FINANCIAL PRACTICES

The student is expected to arrange for financial resources to cover all expenses before the beginning of each school year. Previous accounts with other schools or this University must have been settled.

### VETERAN'S BENEFITS

A student eligible to receive veteran's benefits under the current enactment should—

- contact the Office of University Records within the first week following registration, and
- have a certificate of eligibility sent to the Office of Admissions and Records at Loma Linda University.

In order for a medical student to be eligible to receive educational assistance from the Department of Veteran's Affairs, s/he must maintain a satisfactory grade for all required courses in the School of Medicine for the year that s/he is currently enrolled. If the student's grades reflect unsatisfactory progress, the student will not be certified for the Department of Veteran's Affairs educational benefits until his/her probationary status has been removed and s/he is certified to be in good and regular standing.

Under Title 38 of the U. S. Code, Loma Linda University is approved for the training of veterans and other eligible persons. Information regarding eligibility for any of these programs may be obtained by calling 1-888/GIBILL1. Students receiving veteran's benefits, but who fail for three consecutive quarters to maintain the required cumulative grade-point average (G.P.A.) for graduation, will have their benefits interrupted; and the Veterans Administration (VA) office will be notified.

Application for benefits must be made directly to the VA and may be done via the web. The Office of University Records serves as the certifying official for Loma Linda University. Students should contact the certifying official prior to their first enrollment certification. For more information, open links to the VA web site ("Students" and "Prospective Students") on the LLU home web page at <<http://www.llu.edu>>.

### SCHEDULE OF CHARGES 2005-2006

#### TUITION

\$32,195	Full time
\$8,048	Full time, per quarter

#### FEES

\$452	Per quarter: student services, health insurance, etc.
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#### SUPPLIES AND INSTRUMENTS (estimated)

\$3,200	Per school-calendar year
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#### LIVING EXPENSES (estimated)

\$11,652	Dormitory student, per school-calendar year
\$7,680	Off-campus student living with parent or relative, per school-calendar year
\$15,360	Community student providing own housing, per school-calendar year

### ON- AND OFF-CAMPUS STUDENT HOUSING

Students may go to <[www.llu.edu/llu/housing](http://www.llu.edu/llu/housing)> for housing information and a housing application form.

**SPECIAL CHARGES 2005-2006**

- §75 Supplemental application (non-refundable), in addition to AMCAS fee
- §100 Acceptance deposit
- §50 Late-payment fee
- §10 Late financial charge (beginning second week after published registration date)
- cost Health care items not covered by health fee or insurance
- cost Library fine or loss, parking fine, property breakage or loss
- cost Health coverage for spouse and family
- §50 Late registration (beginning first day after published registration date, plus \$3 per additional day)
- §20 Returned-check fee

**AWARDS****Bernard Briggs Award**

The Bernard Briggs Award is presented to an outstanding student entering the field of anesthesiology who exhibits the dedication, enthusiasm, and commitment of the visionary physician and distinguished mentor for whom it is named.

**Chinnock Award**

The Robert F. Chinnock Award is presented annually to a student who has demonstrated outstanding performance in clinical and academic pediatrics.

**Comstock Award**

The Comstock Award is given annually to the senior student with the most distinguished performance in internal medicine. Selection is based on scholarship, interest in science interest, skill, devotion to patient care, and personal attributes of dependability and integrity as demonstrated by the physician for whom the award is named, Daniel D. Comstock.

**Donald E. Griggs Award**

The Donald E. Griggs Award is presented annually to a senior student selected for meritorious scholarship and service—the highest grade in the clinical rotations of medicine—reflecting those qualities demonstrated by the physician and teacher for whom the award is named.

**Hinshaw Award**

The Hinshaw Award, named for David B. Hinshaw, Sr., is presented annually to a senior student who has demonstrated outstanding qualities of leadership and scholarship and who is entering a general surgery residency program as a categorical resident with the intention of pursuing a career in general surgery.

**Guy M. Hunt Award**

The Guy M. Hunt Award is presented annually by the Department of Neurology to a senior student who combines outstanding academic achievement and the spirit of gentle caring that was exemplified by Dr. Hunt.

**Hoxie Award**

The Hoxie Award is presented annually by the Department of Medicine to a senior medical student whose meritorious scholarship—exceptional performance

in medicine, with emphasis in research—and service reflect those qualities demonstrated by the physician and teacher for whom the award is named, Harold J. Hoxie.

**Benjamin Kovitz Award**

The Benjamin Kovitz Award is presented to a senior medical student who has demonstrated qualities of leadership and scholarship in the field of psychiatry.

**Walter P. Ordelleide Award**

The Walter P. Ordelleide Award is given annually by the Department of Family Medicine to a senior student who has demonstrated outstanding scholarship and leadership, and who has fostered the promotion and advancement of family medicine.

**Chancellor's Award**

The Chancellor's Award (formerly the President's Award), established in 1960, is presented annually in recognition of superior scholastic attainment and active participation in the student community, within the framework of Christian commitment. One recipient is selected from each school of the University.

**Society for Emergency Medicine Award**

The Society for Emergency Medicine Award is presented to the senior medical student who has demonstrated excellence in the specialty of emergency medicine.

**Varner J. Johns, Jr., Award**

The Varner J. Johns, Jr., Award is given to a graduating senior who is recognized as an outstanding student with the potential of becoming a future faculty member in the Department of Medicine.

**Alumni Association—Herber Award**

The School of Medicine Alumni Association Award is given annually to students who demonstrate outstanding leadership in furthering the mission of Loma Linda University School of Medicine.

**Wil Alexander Whole Person Care Award**

The Wil Alexander Whole-Person Care Award recognizes two senior medical students who have demonstrated to their peers and colleagues during their clinical years a growing excellence in the physical, mental, emotional, spiritual, and relational care of their patients as part of the art of medical practice.

**Alpha Omega Alpha Honor Society**

Students are recommended for membership in the national honor medical society, Alpha Omega Alpha. This honor is extended to students in the fourth year. Membership is determined based on scholastic, professional, and personal performance. The School of Medicine was granted a charter April 1, 1957, to establish the Epsilon Chapter.

**American Medical Women's Association Award**

The AMWA award is presented based on demonstrated professional competence and promise of professional achievement.

**Roger W. Barnes Award**

The Roger W. Barnes Award is presented to a senior student who has demonstrated to an unusual degree the qualities of compassion, kindness, and humility—as exhibited by the physician and teacher for whom the award is named.

**Harold F. Ziprick Award**

The Harold F. Ziprick Award is presented annually by the Department of Gynecology and Obstetrics to a senior student in recognition of overall academic achievement and clinical performance in gynecology and obstetrics as demonstrated by the physician and teacher for whom the award is named.

**ADDITIONAL REQUIREMENTS**

For additional policies governing Loma Linda University students, see Section II of this CATALOG, as well as the University *Student Handbook*. Students are responsible for informing themselves of and satisfactorily meeting all regulations pertinent to registration, matriculation, and graduation.







# School of Nursing

## Departments and Programs

### UNDERGRADUATE PROGRAM

- B.S. degree
- A.S. degree option

### GRADUATE PROGRAM

- M.S. degree
- Postbachelor's and Post-master's degree certificates

### Clinical options

- Adult and Aging Family
- Adult Nurse Practitioner
- Family Nurse Practitioner
- Growing Family
- Neonatal Critical Care CNS/Nurse Practitioner
- Pediatric Nurse Practitioner
- School Nursing

### Nursing administration options

- Nursing Administration
- Nursing Management

### Doctoral program

- Ph.D. degree

### Combined-degrees programs:

- Advanced-Practice Nursing with Public Health
- Advanced-Practice Nursing with Biomedical and Clinical Ethics

Nursing (1170 Durfee Avenue, Suite G, South El Monte, CA 91733) in 2003.

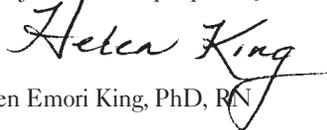
## Dean's

## Welcome

We are delighted to have you as a student in the School of Nursing and are committed to helping you achieve worthwhile educational and professional goals. This *Student Handbook* has been put together to inform you of our expectations of a beginning nurse, the rules and regulations of the school and the University, and the resources available to help you complete the nursing program successfully.

Our goal is to provide an environment where you can gain the knowledge and learn the skills and attitudes to become a competent, compassionate professional nurse. But more than that, while you are a student here, we want to provide you with the opportunities to grow spiritually and to learn and practice a healthy, responsible lifestyle.

Please use the resources and support systems within the school and University to help you grow as a professional and as a person. They have been put in place just for that purpose. Have a good year.



Helen Emori King, PhD, RN

Dean, School of Nursing



## Our Mission

The mission of the School of Nursing, in accord with the comprehensive mission of Loma Linda University, is the education of professional nurses who are dedicated to excellence in nursing science. Individuals from diverse ethnic, cultural, and racial backgrounds are encouraged to embrace opportunities for lifelong growth and satisfaction from a career committed to health care. Baccalaureate and graduate nursing programs contribute to the development of expert clinicians, educators, administrators, and researchers who benefit society by providing and improving delivery of whole-person care to clients—individuals, families, groups, and communities. Committed to Christian service and distinctive Seventh-day Adventist ideals, the school seeks to reflect God's love through its teaching and healing ministry.

### GOAL OF UNDERGRADUATE PROGRAM

The goal of the undergraduate program is to prepare competent nurses who are committed to compassionate, Christian service. Upon completion of the baccalaureate degree program, the nurse will be able to:

1. Think critically and use systematic planning processes in assisting clients to achieve and maintain optimal wellness.
2. Respect the uniqueness of individuals from physiological, psychological, sociocultural, developmental, and spiritual perspectives; and recognize the individual's right of self-determination.
3. Synthesize principles and concepts from nursing, the sciences, and the humanities to provide appropriate and effective client care in a variety of settings.
4. Provide optimum nursing care to clients through effective leadership and management and through collaboration with other members of the health care team.
5. Demonstrate professional competence; technical skills; and appropriate functioning in roles essential for implementing primary, secondary, and tertiary interventions in a variety of clinical settings.
6. Promote optimal wellness for self and clients.
7. Participate in efforts to improve professional nursing and health care delivery.
8. Critically evaluate and utilize research knowledge in nursing practice.
9. Contribute to society by demonstrating continued growth in personal and professional competence and Christian values.
10. Demonstrate an academic foundation for graduate study.

## School Foundations

### HISTORY

The School of Nursing, established in 1905, was the first in a group of schools which in 1961 became Loma Linda University. In 1907 the first class to graduate included seven students—five women and two men. In 1949 the School of Nursing became a college-based program granting the baccalaureate degree. The first master's degrees in nursing were granted in 1957. The Associate in Science degree program was begun as an integral part of the school in 1970. The School of Nursing received its first accreditation by the National League for Nursing (NLN) (61 Broadway, New York, NY 10006) in 1951. The most recent accreditations were by the Commission on Collegiate Nursing Education (One Dupont Circle NW, Suite 530, Washington, DC 20036-1120) in 1999; and the California Board of Registered

## GOALS OF GRADUATE PROGRAM

The goal of the master's degree program is to prepare nurse leaders with a Christian perspective who will contribute to professional nursing through clinical practice, teaching, administration, and research. Upon completion of the master's degree program, the nurse will:

1. Use advanced knowledge acquired from nursing and cognate sciences as a basis for advanced nursing practice.
2. Demonstrate the ability to synthesize and guide appropriate applications of empirical research findings as the foundation for evidence-based practice.
3. Collaborate with clients, health professionals, and organizations for the purpose of improving the delivery of health care and influencing health policy.
4. Demonstrate advanced knowledge and expertise in a selected clinical area and professional nursing role.
5. Improve nursing practice and health care by using effective leadership, management, and teaching skills.
6. Develop personally and professionally through continued inquiry and scholarly endeavor.
7. Demonstrate and promote ethical and Christian values, respecting the uniqueness of others.
8. Have a foundation for doctoral studies.

## GOALS AND OBJECTIVES OF THE PH.D. DEGREE IN NURSING

1. To prepare nursing scholars for leadership in education, health care administration, clinical practice and research within a global community.
2. To prepare nurse scientists who are committed to the generation and dissemination of knowledge relevant to the development of nursing science and practice.
3. To prepare individuals whose wholistic perspective encompasses social, cultural, political, ethical and spiritual dimensions in their scholarship practice.
4. To prepare individuals to engage in interdisciplinary discourse and scholarship.

## Philosophy

In harmony with Loma Linda University and the Seventh-day Adventist Church, the School of Nursing believes that the aim of education and health care is the development of wholeness in those served. Individuals, created to reflect the wholeness of God's character, have been impaired by the entrance of sin, disease, and death. God's purpose is the restoration of each person to the original state at Creation. God works through human agencies to facilitate individual wholeness.

Nursing functions to assist individuals and societal groups to attain their highest potential of wholeness. Through a variety of roles, nurses put into practice a body of knowledge and a repertoire of skills to assist

the human system with health problems. The School of Nursing provides an environment in which students and faculty can grow in professional competence and Christian grace.

## PHILOSOPHY OF NURSING EDUCATION

In support of the philosophy, mission, and values of Loma Linda University and the philosophy, mission, and values of the School of Nursing, the faculty affirms the following beliefs:

- Learning is an interactive process that involves all of the learner's faculties.
- A learning environment nurtures the development of potential, promotes maturation of values, cultivates the ability to think critically and independently, and encourages a spirit of inquiry.
- Clinical experiences are essential to the development of professional and technical nursing competence.
- Students—influenced by the effect of physiological, psychological, sociocultural, developmental, and spiritual variables on their lives—learn in different ways and bring different meanings to the learning experience.
- Students participate in development of the science and practice of nursing.

## AGENCY MEMBERSHIP

The School of Nursing holds agency membership and actively participates in the following major professional organizations: American Association of Colleges of Nursing, National League for Nursing, and Western Institute for Nursing.

## General Regulations

Students of the University are responsible for informing themselves of and satisfactorily meeting all regulations pertinent to registration, matriculation, and graduation. Section III gives the general setting for the programs of each school. The subject and unit requirements for admission to individual professional programs are outlined in Section IV. It is important to review specific program requirements (Section IV) in the context of the general requirements (Section III) applicable to all programs.

## STUDENT POLICIES

School of Nursing students are expected to adhere to the policies of the University as presented in the *Student Handbook* under the heading "Standards of Academic Conduct Policy."

## Application and Admissions

The program admissions committees of the University intend that an applicant to any of the schools is qualified for the proposed curriculum and is capable of profiting from the educational experience offered by this University. The admissions committees

of the school accomplish this by examining evidence of scholastic competence, moral and ethical standards, and significant qualities of character and personality. Applicants are considered for admission only on the recommendation of the program in which study is desired.

## UNDERGRADUATE APPLICATION

### Apply early

Correspondence and interviews should be scheduled well in advance of the cut-off dates. Undergraduate applicants are advised to submit application forms, test scores, letters of recommendation, and the application fee after at least one quarter of college work. Applicants seeking admission will need to have the application process completed by the dates indicated in the following.

### Application deadlines

Fall Quarter admission application must be completed by March 15 of the year of desired admission.

Winter Quarter admission application must be completed by September 30 of the year prior to desired admission.

Spring Quarter admission application must be completed by December 15 of the year prior to desired admission.

Applications are invited from those interested in attending a Christian school of nursing and whose beliefs are consistent with the mission of Loma Linda University and the School of Nursing. Priority will be given to those coming from within the Seventh-day Adventist educational system.

### Application fees

An application fee of \$60 and a testing fee of \$60 are charged. Other fees are itemized under the Schedule of Charges in the Financial Information section.

### Essential skills

The practice of professional nursing has minimum entry qualifications. Registered nurses are expected to have certain physical abilities as well as competencies in reasoning and thinking. The skills are considered essential to the practice of nursing and are therefore skills required of all applicants to the School of Nursing. These include the abilities indicated in the following four areas:

- **Psychomotor (Physical) Skills**
  - ~ Work with inanimate objects including setting up, operating (controlling), manipulating, and handling.
  - ~ Stand, walk, carry, sit, lift up to fifty pounds, push, pull, climb, balance, stoop, crouch, kneel, turn, twist, crawl, and reach—within a clinical setting.
  - ~ Assess and intervene in the care of patients, using the physical senses—sight, touch, taste, smell, hearing.
- **Cognitive (Thinking) Skills**
  - ~ Work with intangible data, such as numbers, symbols, ideas, and concepts.
  - ~ Perform mental cognition tasks, including problem solving, prioritizing, and accurate measur-

ing; following instruction; and using cognitive skills to synthesize, coordinate, analyze, compile, compute, copy, and compare.

- ~ Communicate with others, using verbal and nonverbal skills. Recall written and verbal instructions, read and comprehend, and write clearly. Negotiate, instruct, explain, persuade, and supervise.
- **Affective (Human Relations) Skills**
  - ~ Interact positively with individuals and groups of people directly and indirectly.
  - ~ Control emotions appropriately and cope with stressful situations.
  - ~ Respond appropriately to criticism and take responsibility for one's own actions, behaviors, and learning.
  - ~ Evaluate issues and make decisions without immediate supervision.
- **Task (Work Function) Skills**
  - ~ Function independently on work tasks.
  - ~ Demonstrate safety awareness.
  - ~ Recognize potential hazards.
  - ~ Respond appropriately to changes in work conditions.
  - ~ Maintain attention and concentration for necessary periods.
  - ~ Perform tasks that require set limits.
  - ~ Ask questions and request assistance appropriately.
  - ~ Perform within a schedule requiring attendance.
  - ~ Carry a normal work load.

## CARDIOPULMONARY RESUSCITATION (CPR) CERTIFICATION

All School of Nursing students are required to have a valid cardiopulmonary resuscitation certificate in order to take clinical nursing courses. Students are responsible for the annual renewal of their CPR cards.

## ADMISSION REQUIREMENTS

### Admission to the basic nursing program

The following are considered prerequisites for admission to the undergraduate program in nursing:

1. A high school diploma or its equivalent from an accredited secondary school.
  2. High school algebra I and II with a grade of C or better, or college intermediate algebra.
  3. One year of high school physics with a grade of C or better, or college introduction to physics.
  4. Basic computer literacy.
  5. Transcripts of at least the first full term of college course work, with a minimum G.P.A. of 3.0 on all college course work. Grades below a C are non-transferable.
- Course descriptions or outlines will be required for clinical nursing courses in order for the school to determine the amount of transfer credit to be granted.

- Science courses taken more than five years ago may not be accepted for transfer.
- 6. An interview with the director of admissions. The Admissions Committee is looking for individuals who reflect a high degree of personal integrity, dependability, self-discipline, intellectual vigor, and a caring and thoughtful manner.
- 7. International students, see “International Students” in Section II.
- 8. An entrance test, required of all incoming students who are not registered nurses. This examination must be taken at Loma Linda University School of Nursing.

#### Admission as a licensed vocational nurse

In addition to prerequisites listed for students admitted to the undergraduate program without a previous college degree, the following requirements apply:

1. The applicant must be a licensed vocational nurse in the state of California.
2. Course work will be evaluated to determine transfer status in clinical nursing classes.
3. The licensed vocational nurse may choose to complete 45 quarter units of nursing as prescribed by the California State Board of Registered Nursing and be eligible to sit for the NCLEX-RN. This option does not meet degree requirements.

For information and assistance regarding entrance, the student is invited to contact the School of Nursing Office of Admissions.

#### Admission as a registered nurse

The applicant must have the following:

1. A high school diploma or its equivalent from an accredited secondary school.
2. All college/nursing transcripts with a 2.5 cumulative G.P.A. Grades below a C are nontransferable. Courses taken more than five years ago may not be accepted for transfer unless the registered nurse has been in active practice for at least one year during the past three years.
3. An interview with the director of admissions. The Admissions Committee is looking for individuals who reflect a high degree of personal integrity, dependability, self-discipline, intellectual vigor, and a caring and thoughtful manner.
4. International students, see “International Students” in Section II.
5. An Associate in Science degree or diploma from an accredited school of nursing.
6. A license to practice nursing in California as a registered nurse.
7. Completed all non-nursing requirements or their equivalents on the lower-division level. The applicant must have a minimum of 87 quarter (61 semester) units to be eligible for upper-division status.

If the registered nurse (RN) is a graduate of an accredited nursing program, the nursing credits will be accepted as equivalent to the School of Nursing lower-division courses. For unaccredited schools, or for additional information regarding transfer credit, see section on “Transfer Credit.” Credit for 300-level nursing courses will be granted at the satisfactory completion of NRSG 337.

## Student Life

The information on student life contained in this CATALOG is brief. The *Student Handbook* more comprehensively addresses University and school expectations, regulations, and policies and is available to each registered student. Students need to familiarize themselves with the contents of the *Student Handbook*. Additional information regarding policies specific to a particular school or program within the University is available from the respective school.

### PROGRAMS OF STUDY

The School of Nursing offers a baccalaureate degree program that is designed to prepare competent, beginning-level professional nurses who are committed to excellence in practice and to Christian principles. For those desiring it, an Associate in Science degree is available at the end of five to six quarters when the student meets the requirements of the California Board of Registered Nursing. Continuing education programs are approved by the California Board of Registered Nursing for continuing education requirements.

The master’s degree program in nursing, offered by the School of Nursing and the Faculty of Graduate Studies, is designed to prepare nurses for Christian leadership in clinical practice, teaching, administration, or research.

### STUDENT INVOLVEMENT

The school administration encourages the student to become actively involved in the Associated Students of Nursing. Student representatives are members of the Undergraduate Faculty Council and may contribute to the administrative decision-making process formally or informally.

### STUDENT ORGANIZATIONS

The following student organizations enable the student to participate in cultural, social, professional, and citizenship aspects of university life.

#### Associated Students of Nursing (ASN)

The ASN is a student organization that is sanctioned by the School of Nursing. This association is comprised of all the students of nursing and is administered by elected students and two faculty sponsors. The objectives of this organization are to serve as a channel for communication between students and faculty and to facilitate personal and professional growth by meaningful participation in all aspects of student life.

#### Loma Linda University Student Association (LLUSA)

The LLUSA has three purposes: to promote communication among the students, to present students’ views to the administration, and to assist in the programming of social and religious activities. The LLUSA provides opportunities to develop and refine a wide range of professional leadership and fellowship skills. The office is located in the Drayson Center. For more information, call 909/558-4978.

**Class organizations**

The members of each class level organize, elect officers, and promote such projects and activities as constitute their major interests and concerns.

**HONOR SOCIETY**

Through the Nursing Honor Society, which was established in 1973, the School of Nursing further fosters academic excellence and the pursuit of Christian graces. In 1975, in recognition of the school's aim of excellence, this honor society, by vote of the national society, became an official chapter of Sigma Theta Tau, International, the international honor society for nursing. Installation of the Loma Linda University School of Nursing's Gamma Alpha Chapter occurred on April 11, 1976. Students and faculty of the School of Nursing, and other nurses of excellence, upon meeting the established criteria and eligibility requirements may, by invitation, become members of the Gamma Alpha Chapter of Sigma Theta Tau, Incorporated, the international honor society for nursing.

## Academic Policies and Practices

**ACADEMIC RESIDENCE**

To qualify for an Associate in Science degree from Loma Linda University, the student must take a minimum of 24 units while in residence at the University; to qualify for a Bachelor of Science degree from Loma Linda University, the student must take a minimum of 32 of the last 48 units—or a minimum of 45 total units—while in residence. A minimum of three clinical nursing courses is required as part of these units.

**Percentage breakdown for grading**

The undergraduate division of the School of Nursing uses the following percentages for computing grades:

94 -100%	A
91 - 93%	A-
88 - 90%	B+
85 - 87%	B
82 - 84%	B-
79 - 81%	C+
76 - 78%	C
71 - 75%	C-
68 - 70%	D+
63 - 67%	D
Below 62%	F

**NURSING COURSES****Nursing course grades**

Most nursing courses in the undergraduate curriculum are divided into approximately equal components of theory and clinical laboratory practice. A grade for a nursing course represents a combination of the theory and the clinical laboratory grades. In order to pass a nursing course, a student must receive a grade equivalent to a C or above in both the theory

and clinical laboratory sections of the course. A grade of C- or below places the student on provisional status and the course must be repeated.

**Clinical laboratory**

Laboratory assignment is under the direction of the instructor. In this assignment the student has supervised experience in the care of patients. Tardiness or unexcused absences from clinical laboratory is cause for failure. Absences due to extenuating circumstances (e.g., personal illness or death in the family) must be made up. When a clinical laboratory is made up during nonclinical time, there is a \$50 make-up fee.

**Clinical practice**

Nursing students are required to practice in client-care settings under the supervision of a registered nurse. Each student will be expected to be able to apply basic theoretical concepts to clinical practice by assessing; planning; implementing nursing procedures; and evaluating the care of individuals, families, and communities. In the performance of routine nursing care, all students will function within the policies of the clinical agency and demonstrate the professional behavior outlined in the University CATALOG and University *Student Handbook*.

Students are expected to be knowledgeable about clients and their problems and about the plans for care prior to actually giving care: They must come prepared for the clinical experience and must adequately assess a client using the Neuman-Systems Model. Students are expected to perform skills safely. Students whose performance is deemed unsafe may be dropped from the clinical course.

**Repeating a course**

Any nursing course or named cognate course taken while a student at Loma Linda University School of Nursing in which the earned grade is C- or lower must be repeated before the student can progress to another course. When a student repeats a course, both the original and repeat grades are entered on the student's permanent record; but only the repeat grade and credit are computed in the grade point average and included in the total units earned.

Named cognates are: biochemistry, developmental psychology, epidemiology, ethics, nutrition, sociology, and statistics.

**Withdrawing from a course**

A nursing student may withdraw only once from a nursing or named cognate course. A student may withdraw (W), failing, from no more than two quarters.

**CREDIT BY EXAMINATION****Challenge/equivalency examinations**

An undergraduate student may meet academic requirements by passing an examination at least equal in scope and difficulty to examinations in the course. Undergraduate students with prior education in nursing or in another health care profession are eligible to challenge nursing courses required for California state licensure. The applicant's background in health care theory and clinical experience must be commensurate with the theory and skills required for the course.

To be eligible to write the NCLEX-RN examination, the student must have completed all required nursing course work listed in this CATALOG. Further, the student needs to be aware that, under the laws of California, a candidate for the examination is required to report all misdemeanor and felony convictions. If a candidate has a criminal history, the California Board of Registered Nursing will determine the eligibility of that individual to write the licensing examination.

Challenge examinations in nursing courses include both a written examination covering theory and an examination of clinical competence.

Progression to the next level in the program is permissible only after successful completion of the challenge examination. A grade of S is recorded for challenge credit earned by examination only after the student has successfully completed a minimum of 12 units of credit at this University with a G.P.A. of 2.0 or above. A fee is charged for a challenge examination. For further information, see the "Schedule of Charges."

#### Advanced Placement Program

Credit toward graduation may be accepted by the school for an entering student who has passed one or more examinations of the Advanced Placement (AP) Program with a score of 3, 4, or 5.

### ACADEMIC PROGRESSION

Progression is contingent on satisfactory scholastic and clinical performance and the student's responsiveness to the established aims of the school and the nursing profession.

Students are considered to be making satisfactory progress as long as they maintain a C average (2.0 G.P.A.) and complete the total number of units required per year:

YEAR	CUMULATIVE TOTAL
1 <sup>st</sup>	29
2 <sup>nd</sup>	48
3 <sup>rd</sup>	96
4 <sup>th</sup>	144
5 <sup>th</sup>	193

#### Probation status and dismissal

Students whose cumulative G.P.A. at the end of any quarter is less than 2.0 for undergraduate students and 3.0 for graduate students are placed on academic probation, and the number of units for subsequent registrations is restricted to a maximum of 12 units per quarter. Students with 2 quarters of unsatisfactory performance jeopardize their standing in a degree or certificate program.

For undergraduate students a grade of C (2.0) is the minimum passing grade for nursing and required cognate courses. Required cognates include: biochemistry, developmental psychology, epidemiology, ethics, nutrition, sociology, and statistics. Each nursing course and/or required cognate taken while enrolled at Loma Linda University in which a student receives a C- or below must be repeated. A nursing course or required cognate may be repeated only once. A student with a C- or below in a nursing or required cognate is placed on probation.

A student on probation status will be required to take NRS 244 under the supervision of the Learning Assistance Program (LAP) and to communicate regu-

larly with the academic adviser. Students on probation status may take only one clinical nursing course at a time. When the course work has been repeated successfully, the probation status is removed and the student is returned to regular status. Enrollment in the School of Nursing will be terminated if a student receives two provisional grades in nursing or required cognates.

### GRADUATION REQUIREMENTS

A candidate for a degree shall have:

1. Completed all requirements for admission to the respective curriculum.
2. Completed honorably all requirements of the curriculum, including specified attendance, level of scholarship, and length of residence.
3. Completed a minimum of 193.0 quarter units for the baccalaureate degree or 140.0 quarter units for the associate degree, with a minimum G.P.A. of 2.0 overall and in nursing.
4. Given evidence of moral character, of due regard for Christian citizenship, and of consistent responsiveness to the established aims of the University and of the respective discipline.
5. Discharged financial obligations to the University.

*It is the responsibility of the student to see that all requirements have been met.*

A student who completes the requirements for a degree at the end of the Spring Quarter is expected to be present at the University's ceremony for conferring of degrees and the presenting of diplomas. Permission for the conferral of a degree in absentia is granted by the University upon recommendation of the dean of the school.

A student who completes the requirements for a degree at the end of the Summer, Autumn, or Winter Quarter is invited, but not required, to participate in the subsequent conferring of degrees. Degrees are conferred at graduations only.

The University reserves the right to prohibit participation in commencement exercises by a candidate who has not satisfactorily complied with all requirements.

### LICENSING

The National Council Licensure Examination for Registered Nurse (NCLEX-RN), which must be passed successfully to practice, is conducted throughout the year by the California Board of Registered Nursing. Application forms may be obtained from the Office of the Associate Dean of the Undergraduate Program; or from the state office at 1170 Durfee Avenue, Suite G, El Monte, CA 91733. The nurse registered in the state of California may be granted licensure through endorsement by other states.

## Financial Information

The Office of the Dean is the final authority in all financial matters and is charged with the interpretation of all financial policies. Any exceptions to published policy in regard to reduction or reimbursement of tuition must be approved by the dean. Any statement by individual faculty members, program directors, or department chairs in regard to these matters is not binding on the school or the University unless approved by the dean.

Registration is not complete until tuition and fees for the required installment are paid; therefore, the student should be prepared to make these payments during scheduled registration for each academic year. There may be adjustments in tuition and fees as economic conditions warrant.

### GENERAL FINANCIAL PRACTICES

Before the beginning of each school year, the student is expected to arrange for financial resources to cover all expenses. Previous accounts with other schools or with the University must have been settled.

### SCHEDULE OF CHARGES 2005-2006

The charges that follow are subject to change without notice.

#### TUITION

	<b>Tuition charge—undergraduate nonclinical, special, certificate, and part-time students</b>
\$465	Credit, per unit
233	Audit, per unit
	<b>Tuition charge—graduate</b>
\$465	Credit, per unit
	<b>Applied music charges</b>
varies	The School of Nursing's tuition does not include applied music charges.

#### OTHER ACADEMIC CHARGES

	<b>Application (nonrefundable)</b>
\$60	Testing fee
60	Regular
100	Deposit to hold place in class
	<b>Examinations</b>
\$233	Per unit credit (challenge, equivalency)
50	Early examination
	<b>Special fees</b>
\$393	Per quarter for NRSNG 497 Advanced clinical experience
	<b>Finance</b>
\$50	Tuition installment
50	Late payment
25	Returned check

#### Registration

\$50	Late-registration fee (after first day of class)
2	Per copy of regular student transcript

#### Miscellaneous expenses

\$1,500	Estimated annual expense for items such as textbooks, supplies, student uniforms, equipment, etc.
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#### Licensing examinations

\$105	Application (subject to change)
32	Fingerprinting (required)
200	NCLEX-RN (National Council Licensure Examination for RN) (subject to change)
30	Interim permit to practice nursing before NCLEX-RN results

### ON- AND OFF-CAMPUS STUDENT HOUSING

Students may go to <[www.llu.edu/llu/housing](http://www.llu.edu/llu/housing)> for housing information and a housing application form.

#### OTHER CHARGES

\$50	Laboratory make-up fee
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#### Nursing and government loans

Loans are available both to undergraduate and graduate nursing students who are eligible to participate in government loan programs such as Stafford and Nursing Student Loan Program.

#### Nursing Education Loan Repayment Program

The Nursing Education Loan Repayment Program (NELRP) offers registered nurses substantial assistance (up to 85 percent) to repay educational loans in exchange for service in eligible facilities located in areas experiencing a shortage of nurses. For eligibility information for this program and for the list of eligible health care facilities, check <http://bhpr.hrsa.gov/nursing/loanrepay.htm>

### AWARDS HONORING EXCELLENCE

Awards for excellence in nursing, scholastic attainment, and leadership ability are made available to students whose performance and attitudes reflect well the ideals and purposes of the school. Selection of students is based on the recommendation of the faculty to the dean.

#### FINEMAN AWARD

The Allan Fineman Memorial Award, established in 1974, is presented by the Fineman family in honor of their father, who was a patient in the University Medical Center. This award is based on outstanding caring traits in rendering professional nursing service.

#### RNBS AWARD

The RNBS award is presented to the senior registered-nurse student who has demonstrated exceptional competence in scholarship and in the clinical practice of nursing.

**DEAN'S AWARD**

The Dean's Award, established in 1971, is presented to an outstanding student in each program on the basis of the student's demonstrated commitment to academic excellence and to the objectives of the school.

**PRESIDENT'S AWARD**

The President's Award, established in 1960, is presented annually in recognition of superior scholastic attainment and active participation in the student community, within the framework of Christian commitment. One recipient is selected from each school of the University.

**Scholarships and grants**

The School of Nursing has a variety of scholarships that have been endowed by alumni and friends. Most of the scholarships are awarded on the basis of academic/clinical performance, financial need, and citizenship. The Office of the Dean can provide the student with more information about each scholarship, as well as with application forms.

- Alumni Scholarship
- Black Student Scholarship
- Catherine Christiansen Scholarship
- Dean's Nursing Scholarship
- Ellen Rickard Memorial Scholarship
- Emori Nursing Scholarship
- Halpenny Memorial Scholarship
- Harry M. Woodall Scholarship
- Hispanic Student Scholarship
- Isabelle Wilson Rees Scholarship
- Lucile Lewis Scholarship
- Marjorie D. Jesse Scholarship
- Maxwell/Martin Scholarship
- Nelson Nursing Scholarship
- Rosie Voss Worthy Nursing Scholarship
- School of Nursing Scholarship
- School of Nursing Undergraduate Scholarship
- Webb Scholarship

**MINORITY HEALTH PROFESSIONS EDUCATION FOUNDATION /REGISTERED NURSE EDUCATION SCHOLARSHIP PROGRAM**

This scholarship program is designed to increase the number of appropriately trained professional nurses, to encourage underrepresented minorities to pursue the nursing profession, and to encourage professional nurses to practice direct patient care in medically underserved areas of California. Scholarships are awarded to nursing students throughout the state of California.

**MAXWELL/MARTIN FUND**

This fund is available to graduate students for assistance with tuition and fees, and is awarded on the basis of demonstrated financial need and/or scholastic achievement. It was established in honor of the late R. Maureen Maxwell, RN, Ed.D., emeritus professor and former director of the graduate division of the School of Nursing; and in honor of the late Dorothy M. Martin, RN, Ph.D., former professor of physiology and nursing research at Loma Linda University School of Nursing.

**ADDITIONAL REQUIREMENTS**

For additional policies, governing Loma Linda University students, see Section II of this CATALOG, as well as the University *Student Handbook*. Students are responsible for informing themselves of and satisfactorily meeting all regulations pertinent to registration, matriculation, and graduation.





# School of Pharmacy

Degree Offered

Pharm.D.

## Dean's Welcome

Welcome to the Loma Linda University School of Pharmacy. I am so pleased to see the Class of 2009 become reality and to welcome such a well-prepared, motivated, and diverse group of individuals into the fourth class. The Classes of 2006, 2007, and 2008 look forward to “showing you the ropes” and serving as friends and mentors during your time at Loma Linda University.



The 2004-2005 year was an exciting time of phenomenal program growth, expansion of faculty and staff, personal and professional achievements by the members of the school, and continuation of our Candidate status through the Accreditation Council for Pharmacy Education (ACPE)—and full membership in the American Association of Colleges of Pharmacy (AACCP).

We thoroughly expect 2005-2006 to be equally busy and gratifying as student numbers grow from 130 to 195, as new faculty continue to come to LLU, and as each new course is added and taught within our curriculum.

The program of study leading to the Pharm.D. degree is the first to be offered by this newly created LLU school, and it is the only such program within the world-wide network of Seventh-day Adventist higher education institutions. This pioneering effort is the result of years of planning, preparation, hard work, and prayer. Our efforts have been truly blessed with an abundance of resources in the form of high-quality physical facilities, along with knowledgeable, diverse, and dedicated personnel.

The four years of your studies will be filled with introductions to the various pharmacy disciplines of biomedical sciences, pharmaceutical sciences, social and administrative sciences, as well as the pharmacy practice areas of therapeutics, drug information, pharmaceutical care, and experiential education.

In addition, courses from the University's Faculty of Religion serve to enhance the spiritual growth of students.

Classroom studies are only a part of what it takes to mold a future pharmacist. Ample opportunities will be in place for students to experience the real world of pharmacy and to hone their sense of professionalism and service. I encourage you to take full advantage of all that comes your way. “By giving more to your profession, you reap far more in return.”

On a global scale—as well as on campus—there will be opportunities for students and faculty to participate in outreach and service programs with populations underserved by the health care system. This ability to perform meaningful service is a gift which enhances the lives of both those being served and of those serving.

As the newest school at LLU, we join with the Faculty of Religion and the Schools of Nursing

Medicine, Dentistry, Allied Health, Public Health, Science and Technology, and the Faculty of Graduate Studies in sharing the proud heritage of a century of health professions education. The University motto—“To make man whole”—combined with the mission of continuing the teaching and healing ministry of Jesus Christ is the foundation of all its programs.

The school's faculty and staff and I are fully dedicated to excellence in pharmaceutical education and service. During your four years of study, I invite you to learn more about the profession of pharmacy and the special things that make Loma Linda University unique. I am glad that you have chosen to join our program and to begin the journey towards a rewarding and fulfilling professional career.

Avis J. Ericson, Pharm.D.  
Interim Dean  
School of Pharmacy  
Loma Linda University

## School Foundations

### HISTORY

In 1994 a school of pharmacy was proposed to the Loma Linda University Board of Trustees—a program that had been included in earlier University strategic planning initiatives. The board voted in 1995 “to continue to approve in principle the establishment of a School of Pharmacy at Loma Linda University and to authorize administration to continue with plans for such a school.”

The first dean was appointed in 1996, and a pharmacy advisory committee began reviewing curriculum proposals and drafting a mission statement for the new school. In 2001 an executive associate dean was added to the administrative roster.

The primary work of 2001-2002 centered on formulation of program plans, curriculum development, and preparation of documentation for the Accreditation Council for Pharmacy Education (ACPE). In addition, recruitment began for faculty and administrative and staff positions, as well as for students who would enter the inaugural class.

On September 19, 2002, orientation began for the first class of the School of Pharmacy. These thirty-four students, “the pioneering class of 2006,” adopted as their theme “working to be patient advocates.”

June 27, 2003, marked a milestone in the history of the school. The Accreditation Council for Pharmacy Education awarded Candidate status to the program, with a school goal of full accreditation status by 2006. Candidate status allowed the School of Pharmacy full membership in the American Association of Colleges of Pharmacy (AACCP). The school's first administrative and faculty delegates were welcomed and seated in the 2003 House of Delegates session.

The 34 students of the class of 2006 were joined by 42 students in the class of 2007 and 55 in the class of 2008. The Class of 2009 adds 65 students, which is the intended size of each subsequent class. As of the 2005-2006 school year, the school's three departments—the Departments of Pharmaceutical Sciences,

Social and Administrative Sciences, and Pharmacy Practice—were served by twenty-five full-time faculty members, twelve staff, and numerous contract and voluntary educators.

## Mission, Goals, and Values

### OUR MISSION

The mission of the Loma Linda University School of Pharmacy is to continue the teaching and healing ministry of Jesus by:

- Educating competent, caring pharmacists who will serve as integral members of the health care team;
- Expanding through research the development of therapeutic regimens that will advance the knowledge and technology available for the treatment of disease; and
- Providing high-quality pharmaceutical care to all those within the global sphere of influence of Loma Linda University.

The School of Pharmacy is committed to the education of pharmacists of the highest ethical and professional standards to deliver competent and compassionate pharmaceutical care. A diverse and dynamic educational environment produces students who are practitioners, health professionals, and providers of humanitarian service to a global community. Graduates will be dedicated to lifelong learning; developing new knowledge; advancing standards of practice; and integrating physical, mental, social, and spiritual dimensions of health.

### OUR GOALS

The goals of the Loma Linda University School of Pharmacy are to:

- Provide pharmaceutical care in a global community.
- Expand and disseminate pharmaceutical knowledge through research and scholarly activities.
- Promote integrity and high ethical standards in conjunction with empathic attitudes that contribute to the well-being of patients and society.
- Engender and nurture the desire to serve mankind.
- Create an educational environment supportive of diverse populations and learning styles.
- Demonstrate pharmacy leadership within the University and the region.
- Encourage cultivation of self-education habits that foster lifelong learning.
- Instill positive personal health lifestyles that promote wholeness, wellness, and spiritual values.
- Incorporate educational techniques and technologies that best serve student learning.
- Promote responsible management of health care resources and the environment.

### OUR VALUES

The School of Pharmacy centers its academic and co-curricular activities around nine values. These are:

- Competence
- Scholarship
- Integrity
- Global outreach
- Service
- Leadership
- Lifelong learning
- Wholeness
- Spirituality

## General Regulations

Students of the University are responsible for informing themselves of and satisfactorily meeting all regulations pertinent to registration, matriculation, and graduation. Section III gives the general setting for the programs of each school. The subject and unit requirements for admission to individual professional programs are outlined in Section IV. It is important to review specific program requirements (Section IV) in the context of the general requirements (Section III) applicable to all programs.

## Admissions Information

The program admissions committees of the University intend that an applicant to any of the schools is qualified for the proposed curriculum and is capable of profiting from the educational experience offered by this University. The admissions committees of the school accomplish this by examining evidence of scholastic competence, moral and ethical standards, and significant qualities of character and personality. Applicants are considered for admission only on the recommendation of the program in which study is desired.

### Prerequisites for admission

Applicants given preference will have successfully completed a baccalaureate degree in chemistry, biology, physics, or a related scientific field. The minimum requirement for acceptance without the B.S. or B.A. degree is completion of the 60 semester- or 105 quarter-credit prepharmacy program (see Prerequisite course requirements). This usually requires two-to-three years of college-level study.

Students who already have a bachelor's degree must insure that all of the prepharmacy requirements in the sciences, mathematics, and general education (communication, humanities/fine arts, and social sciences/behavioral studies) have been completed. In order for a course to fulfill the biology and chemistry prerequisites, it must be at the level of those required for a major in the field; introductory courses are not acceptable.

### PREREQUISITE COURSE REQUIREMENTS

	Semester/Quarter hours
General biology, with laboratory	8 / 12
General chemistry, with laboratory	8 / 12
Organic chemistry, with laboratory	8 / 12
General physics, with laboratory	8 / 12
Calculus (integral and differential)	4 / 8

English composition	6 / 9
Speech communication	3 / 4
Humanities/Fine arts*	12 / 18
Social or behavioral sciences**	
Economics	3 / 4
Psychology	3 / 4
Electives	6 / 10

### Computer competency examination

Students must demonstrate computer proficiency prior to enrollment by passing a computer competency examination given by the School of Pharmacy, which includes use of an e-mail system (including attaching a document); and basic skills using a word processing program (Word, WordPerfect), a presentation program (PowerPoint), and a spreadsheet program (Excel). Students must also be capable of searching the Internet.

\*Humanities/Fine arts: Generally courses that come from the following disciplines:

Civilization	Literature
Ethics	Performing or visual arts
Fine arts	Philosophy
Foreign languages	Religion
History	Other

\*\*Social Sciences/Behavioral Sciences: Generally courses that come from the following disciplines:

Anthropology	Political science
Cultural diversity	Psychology
Economics	Sociology
Geography	

Anatomy becomes a prerequisite for entry effective Autumn 2006.

## Student Life

The information on student life contained in this CATALOG is brief. The *Student Handbook 2002* more comprehensively addresses University and school expectations, regulations, and policies and is available to each registered student. Students need to familiarize themselves with the contents of the *Student Handbook*. Additional information regarding policies specific to a particular school or program within the University is available from the respective school.

The School of Pharmacy prepares a school-specific Student Handbook, which is provided to all students. Regulations, policies, procedures, and other program requirements are contained in this handbook.

## Academic Policies and General Regulations

### EXPERIENTIAL EDUCATION

The School of Pharmacy participates in the California Board of Pharmacy's approved 1,500-hour Supervised Experiential Program. This program helps to fulfill part of the requirements that students must meet in order to take the California Pharmacist Licensure Examination or the North American Pharmacist Licensure Examination (NAPLEX).

Successfully completing the School of Pharmacy's didactic and experiential programs, and successfully passing the California and/or NAPLEX examination, allows a student to become a registered pharmacist (RPh).

The experiential program consists of a variety of early, intermediate, and advanced experiences designed to provide the student with professional experience through the use of a structured and supervised program of study. Students participating in the experiential program will receive a Loma Linda University *School of Pharmacy Experiential Program Manual*. Guidelines and policies are listed in this manual and must be adhered to for successful completion of the program.

Didactic education is a systematic approach intended to convey instruction and information (classroom, laboratory, recitation, etc.). Experiential education is related to or derived from providing experiences in real-life professional settings. In pharmacy education, the experiential component is designed to provide in-depth exposure to and active participation in selected pharmacy-practice settings. Pharmacy students are exposed to prescription processing, compounding, documenting services, obtaining drug histories, drug-therapy monitoring, counseling, evaluating drug usage, drug-distribution systems, and other relevant pharmacy-practice activities.

Under the philosophy of pharmaceutical care, the School of Pharmacy offers early and intermediate experiential courses that support students' growth, strengthen their self-confidence, and prepare them to function as self-directed learners. The advanced-practice experiences are designed to help students integrate and refine the skills learned in the first three years of pharmacy (didactic) course work.

The ultimate goal of the experiential program is to produce well-rounded, competent, caring, responsible, professionals who can deliver exemplary pharmaceutical care, as well as effectively communicate with diverse patients and colleagues.

In order to complete the curriculum successfully, graduate from the School of Pharmacy, and become a licensed pharmacist, the student is required to complete a minimum of 1,500 hours of practice experiences. The director of experiential education coordinates the three school-based levels of experiential education and also assists with the state-mandated experience (internship) described below.

### INTRODUCTORY PHARMACY-PRACTICE EXPERIENCES (IPPE)

The goal of the introductory experiential education is to expose students to practitioners who provide pharmaceutical care. Under the tutelage of a School of Pharmacy preceptor, who is also a licensed pharmacist, the student may have some exposure to direct patient care. This early exposure helps the student become familiar with the health care environment, learn the unwritten rules of how to navigate in a busy practice setting, and begin developing the confidence that will be required in future clinical experiences.

## ADVANCED PHARMACY-PRACTICE EXPERIENCES (APPE)

Students are required to complete six, six-week advanced practice experiences in specific clinical areas. Four will be in required fields: ambulatory care; community practice; internal medicine; and a specialty population (pediatrics, psychiatry, or geriatrics). Two experiences will be in elective fields (see curriculum section).

### PREREQUISITES FOR APPE

In order to progress to the advanced pharmacy-practice experiences, a student must meet the following requirements:

- **Assessment examination:** Students must pass the PY3 end-of-year comprehensive assessment examination.
- **PY4 standing:** Students must achieve PY4 standing, as defined by the School of Pharmacy. The Office of Student and Professional Affairs will notify the director of experiential education when students successfully complete all PY3 work, including seminar attendance.
- **Immunizations:** Students must safeguard themselves and be sure that all University-required immunizations are up to date. Students are responsible for keeping the records of their own immunizations accessible. For the protection of patients and the students themselves, it is highly recommended that students receive the influenza vaccine in October during their PY4 year. Some sites may require this immunization.
- **Tuberculosis screening:** Students must be screened and cleared for tuberculosis (complete a PPD test or chest x-ray) during July of the PY4 year (immediately before starting the advanced practice experiences in August). A record of this clearance must be on file in the office of the director of experiential education.
- **Intern license:** Students must hold a valid California Pharmacists Intern License throughout the advanced practice experiences.
- **Intern hours:** Students must have completed at least 150 intern hours prior to the beginning of advanced practice experiences.
- **CPR/First aid:** Students must hold valid certification in both CPR and first aid. Effective dates must be current through the PY4 year.
- **Portfolio:** Prior to beginning rotations, the student's professional portfolio must be up to date and must concur with the School of Pharmacy's guidelines.
- **Background check:** Facilities require a background check of all personnel, including students who are placed on site for practice experiences. Some institutions may require the student to sign a confidentiality agreement or disclosure statement.
- **Student health card:** Students must carry the Loma Linda University student health insurance card with them at all times.

## EXPERIENTIAL EDUCATION REQUIREMENTS

The majority of the student's time during experiential courses is out-of-the-classroom activity and under the direct supervision of a School of Pharmacy preceptor. Although the student generally will be off campus, Loma Linda University's code of conduct and the guidelines found in this University CATALOG remain in effect throughout the pharmacy program. In addition, the following guidelines apply to all professional pharmacy students assigned to experiential sites or rotations.

- Attendance is mandatory. Punctuality is expected, and excessive tardiness will not be tolerated.
- Students must have a working e-mail account (that is on record with the Office of Experiential Education and the Office of Student and Professional Affairs) and are required to check the account at least daily to keep informed of important information or announcements.
- All experiential-education assignments are made through the Office of Experiential Education and are the responsibility of the director of experiential education. No student is allowed to change rotation sites without the express written consent of the director. Switching sites without such consent may result in a student failing the rotation.
- Students are not to function as an agent or employee of the site. The student must identify him-/herself as a pharmacy student from the Loma Linda University School of Pharmacy. While participating in this graded experience, students shall not, under any circumstances, receive financial remuneration from the experiential site. Failure to adhere to this policy will result in suspension and removal from the rotation as well as receipt of a failing grade in the course.
- All financial obligations associated with the student's pharmacy education are the responsibility of the student. These responsibilities include transportation, food, lodging, and any other incidental costs related to off-site assignments. Concurrent employment during the experiential experience is not encouraged and does not exclude or excuse students from any responsibilities associated with course requirements.

### PORTFOLIO DEVELOPMENT

Documentation of a personal philosophy, along with goals, methods for improvement, accomplishments, self-evaluation, and reflection are useful tools in long-term professional development. Over the four years of the pharmacy program, students will be required to develop and keep updated a professional portfolio.

Although portfolio content may be highly individualized and reflect personal aspirations and experiences, the School of Pharmacy will stipulate certain inclusions. The portfolio may be built to emphasize some areas (e.g., professional service) and place little or no emphasis on others. Ideally, it is a tool that is utilized in a periodic evaluation process.

The portfolio should be considered a work in progress. There are no absolute right or wrong things to include. The portfolio is always a reflection of the

student and those activities that are building his/her professional history. As such, it provides valuable insights into a student's thinking, planning, self-evaluation, and goal-setting activities at multiple steps along the journey.

A variety of seminars and working groups will be used over the four-year program to help students begin and refine their portfolios. This work will occur with assistance from the student's faculty adviser and other mentor/role-model professionals.

It is important to update portfolios with recent activities added on a regular basis. Some students find that daily or at least weekly updating is advisable in order to capture the most complete information. It is difficult to maintain an accurate and detailed portfolio if revising is done at longer intervals. When possible, information from previous educational, personal, and work experiences should be added to the developing portfolio to set a baseline of comparison to current goals and accomplishments.

The following information is often included as a part of individual portfolio sections:

- Philosophy statement related to area
- Goals for activities
- Performance on key assignments
- Methods to improve and expand
- Special recognitions/evaluations
- Self-evaluation/reflection

## PORTFOLIO CONTENT

Listed below are major portfolio sections that students should consider using. The emphasis may change over time to reflect current activities. Some sections may include additional information (as shown) to supplement the general areas:

### Classroom learning activities

### Internship/Experiential activities

#### Professional

- Professional organizations: member/officer/committees
- Conventions/meetings attended (as a delegate/officer/attendee/presenter)
- Projects ongoing
- Continuing pharmaceutical education (CPE) attended presentations/projects for the general public

#### Service/Outreach

- Community service/Mission efforts activities

#### Personal development

- Growing spirituality—in classroom/clinical/research/patient care settings

#### Research

- Research/projects—current/planned/completed:
 

Clinical research	Basic/bench research
Resident projects	Special projects

## Other activities of note

- In addition, students will be asked to include sections in their portfolio that focus on the values, mission, and goals of the School of Pharmacy. Such reflections may include the following areas:

### Reflections on School of Pharmacy values, mission, and goals

Teaching and learning	Health care team
Competence	Pharmaceutical care
Ethics and integrity	Compassion and empathy
Humanitarian efforts	Service and outreach
Professional standards	Leadership
Diversity	Global community
Lifelong learning	Spirituality

#### Wholeness/Wellness Research

Integration of physical, mental, social, and spiritual dimensions of health

Sharing knowledge with patients and health care professionals

Responsible management of health care resources and the environment

At the time of application to the program, students are required to prepare a personal statement, which includes comments on three of the nine values important to Loma Linda University School of Pharmacy. These values are:

- Competence
- Scholarship
- Integrity
- Global outreach
- Service
- Leadership
- Lifelong learning
- Wholeness
- Spirituality

It is expected that the final program course—Reconnections—will encourage students to share the evolution of their growth in a number of these areas.

## PHARMACY SEMINARS

It is required that each Doctor of Pharmacy student satisfy the seminar requirement before being cleared for graduation. This activity is considered to be an enrichment that will orient the student to a broad range of current professional issues and concerns, as well as demonstrate the need for and foster a love for lifelong learning.

Over the duration of the four-year program the following policies apply to pharmacy seminars:

- Each student must attend a minimum of twelve ACPE-approved continuing pharmaceutical education programs or other pharmacy seminar. At least two must be attended during each academic year of enrollment.
- A maximum of two seminars per meeting or conference may be attended to meet this requirement.
- Attendance at the opening general session of a

conference cannot be used to meet this requirement.

- A Pharmacy Seminar Attendance Documentation Form must be completed for each program attended. This form must be turned in to the Office of Student and Professional Affairs within fourteen days of the seminar attended. The student should also keep a copy for his/her files.

This seminar requirement must be met during the student's enrollment in the School of Pharmacy and is separate from course registrations. Attendance at medical grand rounds outside the requirements of an experiential education course can be counted as part of this requirement.

Seminar activities that qualify to meet this requirement are those that have received prior approval from the Office of Student and Professional Affairs. Students should check with the office before attending programs. In general:

- Local pharmacy association meetings are approved.
- State pharmacy association meetings are approved.
- National pharmacy association meetings are approved.

## LICENSURE, INTERNSHIP, AND THE CALIFORNIA STATE BOARD OF PHARMACY

### General information

In order to participate in introductory and advanced pharmacy-practice experiences (IPPE and APPE), the student must hold a current California Pharmacist Intern License. It is the responsibility of the Office of Student and Professional Affairs to notify the California Board of Pharmacy of any student who discontinues the pursuit of his or her degree, withdraws from courses, or is dismissed from the program. Such students are also required to return their Intern License to the board within the timeframe required by law.

The required forms, examination dates, and licensure requirements are available at the California State Board of Pharmacy Web site, [www.pharmacy.ca.gov](http://www.pharmacy.ca.gov). Students are strongly encouraged to visit this site on a regular basis to monitor changes.

### Pharmacist intern hours

The California State Board of Pharmacy requires 1,500 hours of acceptable intern experience. Other states have different requirements (see specific criteria for each state in which licensure is desired). The School of Pharmacy's introductory and advanced pharmacy-practice experiences will fulfill 600 of these hours.

The remaining 900 hours must be completed outside the School of Pharmacy curriculum and consist of employment in a pharmacy under the immediate, direct and personal supervision of a pharmacist. This experience must be predominately related to selling drugs, compounding prescriptions, preparing pharmaceutical preparations, keeping records, and making reports required by California and federal regulations.

The student is eligible to take the North American Pharmacist Licensure Examination (NAPLEX) after completing 1,000 internship hours; but the 1,500-hour requirement must be completed before the student may become licensed. The summer after the first professional year (PY1) is ideal for students who are licensed pharmacist interns to begin to earn required intern hours. It is the individual student's responsibility to ensure that all requirements for licensure are met, and also that all forms are properly completed and promptly sent to the California Board of Pharmacy within the specified timelines. Beginning with the second professional year of study (PY2), internship hours may be earned during quarter breaks and the summer. They may also be earned after graduation.

The following recommended schedule for completing intern experiences will allow the student to obtain sufficient hours to sit for NAPLEX. It is the student's responsibility to complete the appropriate number of hours for licensure.

### Recommended Timetable for Earning Intern Hours (maximum)

Time	Possible hours	Countable in California	Cumulative TOTAL (maximum)
Summer after PY1 year	400	400	400
PY2 Christmas break	80	80	480
Summer after PY2 year	400	400	880
PY3 Christmas break	80	80	960
Summer after PY3 year	80	80	1040
PY4 Christmas break	80	80	1120
Curricular practice experiences	1,720	600	1,720
After graduation	As needed to reach 1500		

\*Currently, there is approximately a two-month period between taking the examination and receiving test results. During this time, graduate interns can complete additional hours.

## INTERN PHARMACIST LICENSE

Each first-year professional student (PY1) must submit a completed California State Board of Pharmacy Application for Registration as an Intern Pharmacist and a \$65 check (made payable to the California Board of Pharmacy) to the Office of Student and Professional Affairs—see Web page <[http://www.pharmacy.ca.gov/pdfs2/intern\\_application\\_pkt.pdf](http://www.pharmacy.ca.gov/pdfs2/intern_application_pkt.pdf)>. This document and payment are due during student orientation.

Students are responsible for keeping their pharmacist intern license current and valid. The Board of Pharmacy must be notified of any change in address, student status, or name change. A photocopy of a valid intern pharmacist license must be on file in the school's Office of Experiential Education.

## LICENSURE EXAMINATION IN CALIFORNIA AND OTHER STATES

To become licensed as a pharmacist in California, the student must:

- Be a graduate of a school of pharmacy that is accredited by the Accreditation Council on Pharmaceutical Education and that is recognized by the California State Board of Pharmacy (such as Loma Linda University).
- Complete a total of 1,500 hours of acceptable intern experience (a minimum of 1,000 of these hours must be completed in order to take the examination).
- Submit proof of completion of the 1,500 hours (completed documents), along with completed Institutional and Community Experience Affidavits (see [www.pharmacy.ca.gov](http://www.pharmacy.ca.gov)).
- Pass both multiple-choice and essay sections of the NAPLEX.
- Submit the required licensure fee.

Licensure in other states is granted after the student passes the NAPLEX. Requirements for eligibility vary from state to state and may be verified by checking the NABP Web site, <[www.nabp.org](http://www.nabp.org)>. Generally, Loma Linda University's experiential requirements, coupled with following the school's recommendations for obtaining intern experience, will meet the hours needed to sit for the NAPLEX in most states.

## CONTINUING PHARMACEUTICAL EDUCATION

Successful completion of the School of Pharmacy program and passing of the licensure examination are only the first steps in becoming a professional pharmacist. Each state requires adherence to some method of validation for continuing pharmaceutical education (CPE) in order to maintain an active license to practice. Practitioners licensed in more than one state must be sure to comply with each state's requirements.

In recognition of the importance of lifelong learning, Loma Linda University School of Pharmacy has a seminar attendance requirement for graduation. Attending and reflecting upon professional programs is part of continuing professional development (CPD).

Most states define their requirements in terms of continuing education units (CEUs). In general, one hour of programming is counted as 1 hour of CPE and 0.1 CEUs. In addition to attending conferences or seminars, other methods can be used to obtain needed credits, such as completion of self-study sections from professional journals or on-line sources.

Programs that offer CPE hours must qualify and be accredited by the Accreditation Council on Pharmaceutical Education (ACPE) or their respective state board of pharmacy. The ACPE adheres to strict standards on the types of programming acceptable for credit and ensures that providers comply with proper record keeping and documentation requirements.

In California, registered pharmacists are required to earn 30 hours (3.0 CEUs) of continuing pharmaceutical education every two years and pay a fee to the California State Board of Pharmacy to keep their license current. Other states may require more or

fewer hours of CPE, require validation on a yearly basis, and/or stipulate specific topics in which to get credits.

The School of Pharmacy recommends that students develop the habit of regularly attending programs that offer CPE, and that they become diligent in keeping track of CPE statements of credit. Such statements may be required by the state board of pharmacy, along with the periodic relicensure application and fee.

## E-MAIL ACCOUNTS/MESSAGES

All pharmacy students are provided with a Loma Linda University e-mail account. The address will be assigned during registration. A substantial portion of the School of Pharmacy's communication will be via e-mail, and failure to receive a message because of an inactive or unchecked e-mail account is not a valid excuse. Problems that may occur with students having the same last name and first initial will be handled through the Media Services Department.

Students are responsible for keeping their e-mail accounts open and accessible. A current e-mail address must be on file with the Office of Student and Professional Affairs. Student should monitor, at least daily, their account for important messages or notices sent by the School of Pharmacy. An important notification could be sent with less than 24 hours notice.

## COMPUTERS

As part of its educational mission, the School of Pharmacy requires the utilization of computers, computer systems, and networks. On-campus computing resources are intended for University-related purposes, including:

- direct and indirect support of instruction,
- research and service missions,
- university administrative functions,
- student and campus-life activities, and
- the free exchange of ideas within the University community and among the University and the wider local, national, and global communities.

The School of Pharmacy is also bound by the Appropriate Use of Technology Policy, as described below. Students are also referred to the Loma Linda University *Student Handbook* for a more detailed explanation of the University's policy on computer use.

## TECHNOLOGY POLICY

The following is intended to ensure that all members of the University computing community shall be given privacy in their work; that no one shall be subjected to abusive behavior by others using the system; that the resources available to the community shall not be consumed by only a few individuals; and that computer resources shall not be destroyed by electronic vandalism. It should be clearly understood that the following points are illustrative and not all-inclusive:

- Only authorized persons—defined as students, faculty, staff, and members of Loma Linda University-sanctioned programs—may use Loma Linda University's computing facilities and equipment (computers, printers, networks, software,

etc.); and these may be used only for legitimate purposes relating to teaching, course work, research, and administration at Loma Linda University.

- Members of an academic community are entitled to privacy in their work. It is a violation of University policy to obtain a password that belongs to someone else or to access another user's files or e-mail account on the network. These violations are forms of theft and will not be tolerated.
- Accessing any file other than one's own is prohibited, unless that file has been made publicly accessible. Reading, writing, and editing directories and/or passwords belonging to others is prohibited. This prohibition includes, but is not limited to, files left on a floppy or hard disk, misplaced or discarded listings on storage media, etc.
- Posting a message under someone else's name is prohibited.
- Taking advantage of another person who inadvertently leaves a computer without logging out is no different than entering an unlocked room and stealing or reading a personal letter, or destroying property.
- Using LLUNet to annoy or harass is prohibited. This applies to the use of phone mail, electronic mail, conferencing, news group bulletin boards, and message facilities. This includes, but is not limited to, flooding individuals or news groups with large volumes of electronic mail designed to disrupt and/or annoy.
- State law sets forth the definition of obscene material. The code also states that the distribution, production, or sale of obscene items is illegal, and punishable by law. Federal law also criminalizes the transportation of such materials in interstate commerce.
- Loma Linda University must comply with these laws and will enforce them among all students, faculty, staff, and visitors. Furthermore, the placement of pornographic and obscene material on a Loma Linda University computer or server is a violation of Loma Linda University policy. Violators will be subject to the disciplinary action of expulsion and/or termination.

#### CHAPEL, PHARMACY FORUM, AND PROFESSIONAL DEVELOPMENT ATTENDANCE

Chapel, pharmacy forum, and professional development are required activities for the School of Pharmacy. These weekly (or more frequent) events are important to the professional and spiritual growth of students. Both aspects of growth are key objectives of the Loma Linda University School of Pharmacy program.

For the purposes of record keeping, being marked tardy twice will be counted as one absence. Honors, awards, and scholarships presented by the School of Pharmacy will use the attendance record of those under consideration as one of the criteria for awards. Students who miss an excessive number of chapels, pharmacy forums, or professional development meetings will be ineligible to be considered for the Dean's

List, honor roll, honor society memberships, and other awards and honors.

Students who have perfect attendance at chapel, pharmacy forum, and professional development will have their names entered into an "incentive" drawing at the end of each quarter.

#### CHAPEL

Attendance will be taken by University officials at all chapel sessions and daily during Week of Devotion. Student marked absent from a third chapel during a quarter must go to the Del Webb Library and review the tapes of all missed chapels and submit a written synopsis of each to the Office of Student and Professional Affairs within the prescribed timeframe. Throughout the academic year, this make-up requirement will also be triggered once a student has been recorded as absent from five chapels.

Each additional chapel missed over the limits established above will require five hours of University-chapel service activities to be completed by the student. The Office of Student and Professional Affairs, together with the dean and the University chaplain, will determine when, where, and how this service will be performed.

#### PHARMACY FORUM

Attendance will also be taken at all pharmacy forum meetings. A second absence during any quarter may lead to a grade of U (unsatisfactory). Each additional pharmacy forum missed over the limits established above will require five hours of School of Pharmacy service activities to be completed by the student. The Office of Student and Professional Affairs, together with the dean, will determine when, where, and how this service will be performed.

#### PROFESSIONAL DEVELOPMENT

Attendance will be taken at the professional development meetings. A second absence during any quarter may lead to a grade of U (unsatisfactory). Each additional professional development meeting missed over the limits established above will require five hours of School of Pharmacy service activities to be completed by the student. The Office of Student and Professional Affairs, together with the dean, will determine when, where, and how this service will be performed.

#### BULLETIN BOARDS

Students are responsible for monitoring on a regular basis all notices placed on School of Pharmacy bulletin boards. Additionally, notices may be handed out in class or placed in the student's mailbox.

#### CODE OF CONDUCT

Joining the Loma Linda University family is an honor and requires each individual to uphold the policies, regulations, and guidelines established for students, faculty, administration, professional and other employees; and the laws of the state of California.

Each member is required to adhere to and conform to the instructions and guidance of the leadership of their respective area.

Therefore, the following are expected of each member of the Loma Linda University family:

- **To respect themselves:** Each member of the Loma Linda University family will exhibit a high degree of maturity and self-respect and will foster an appreciation of other cultures, of one's own cultural background, and of the cultural matrix from which Loma Linda University was born. Such appreciation will sustain respect for those cultural and spiritual values well into the future.
- **To respect the dignity, feelings, worth, and values of others:** Each member of the Loma Linda University family will respect one another and visitors as if they were guests in one's home. Therefore, to accost and cajole, coerce, or pressure students, faculty, staff, parents, or others to adopt one's religious beliefs; to engage in gender or sexual harassment; to use vile, obscene or abusive language or exhibit lewd behavior; to possess weapons such as knives or firearms; or to be involved in the possession, use, distribution, or sale of illegal drugs is strictly prohibited and is in direct violation of the Loma Linda University code, on or off campus.
- **To respect the rights and property of others and to discourage vandalism and theft:** Each member of the Loma Linda University family will refrain from illegal activity, both on and off campus, and will be subject to all applicable provisions listed in this CATALOG and any other University publication.
- **To prohibit discrimination, while striving to learn from differences in people, ideas, and opinions:** Each member of the Loma Linda University family will support equal rights and opportunities for all—regardless of age, gender, race, religion, disability; ethnic heritage or socioeconomic status; political, social, or other affiliation or disaffiliation; or sexual preference.
- **To practice personal, professional, and academic integrity; and to discourage all forms of dishonesty, plagiarism, deceit, and disloyalty to the code of conduct:** Personal, professional, and academic integrity is paramount to the survival and potential of the Loma Linda University family. Therefore, individuals found in violation of Loma Linda University's policies against lying, cheating, plagiarism, or stealing are subject to disciplinary action, which may include dismissal from the University.
- **To foster a personal, professional work ethic within the Loma Linda University family:** Each employee and student of the Loma Linda University family must strive for efficiency and job perfection. Each employee must exhibit a commitment to serve, and job tasks must be executed in a humane and civil manner.
- **To foster an open, fair, and caring environment:** Each member of the Loma Linda University family is assured equal and fair treatment in the adjudication of all matters. In addition, it is understood that intellectual stimulation is nurtured

through the sharing of ideas. Therefore, the school will maintain an open and caring environment.

- **To be fully responsible for upholding the Loma Linda University code:** Each member of the Loma Linda University family will embrace all tenets of the code of conduct and is encouraged to report all code violations.

## PROFESSIONAL DRESS

### General guidelines

- Individuals are to wear the Loma Linda University identification badge at all times.
- The wearing of hats indoors is not acceptable. Head coverings are not allowed unless required in the work area or worn for specific religious reasons.
- Laboratory coats are to be worn only while in the laboratory or while engaged in direct patient-care activities, or as otherwise directed or required by a faculty member.
- Words, pictures, and/or symbols displayed on clothing are to be consistent with an Adventist Christian institution; and sensitive to a diverse faculty, staff, and student population.
- Professional dress is required.
- All garments must be clean, pressed, and of proper fit.

### Professional dress by gender—men

- Men wear a dress shirt with short or long sleeves, a necktie, khaki or dress pants, socks, and comfortable shoes or low-heeled dress shoes. Clothing and shoes should be in conservative colors, clean, tasteful, and in good condition.
- Men do not wear sleeveless shirts; jogging suits; or sweats, shorts, or cutoffs.
- In laboratory and patient-care areas, footwear must adequately protect the feet.
- Open-toe shoes or sandals are not to be worn in laboratories, patient-care areas, or while on experiential rotations.

### Professional dress by gender—women

- Women wear a shirt or blouse, khaki or dress pants, skirt or dress (appropriate business length).
- Footwear should include low-heels, midheels, or comfortable shoes in conservative colors, that are clean, tasteful, and in good condition.
- Sleeveless tops are acceptable if in line with modest appearance.
- Women do not wear leggings, tight stretch pants, mini-skirts, or low-cut tops.
- In laboratory and patient care areas, footwear must adequately protect the feet.
- Open-toe shoes or sandals are not to be worn in laboratories, patient-care areas, or while on experiential rotations.

### Unacceptable attire

The following items are considered unacceptable at all times:

- Any garment that is dirty, torn, frayed, or exces-

sively over- or undersized for the wearer;

- Jeans of any color that have holes or are worn, frayed, or faded;
- Sweat suits, sweat pants, or sweat shirts;
- Shorts or halter tops;
- Underwear or t-shirts worn as outer garments;
- Tops that reveal cleavage or midriff;
- Pants that expose underwear or midriff skin;
- Footwear such as thongs, moccasins, or work or hiking boots;
- Facial jewelry—(specifically eyebrow, nose, and lip rings, posts, studs, or chains, etc.).

#### **Jewelry**

The preference of the school is that no jewelry be worn except wedding bands, watch, or medic-alert bracelet. Jewelry, if worn, must be moderate and professional in appearance and within the following guidelines:

- Necklace or chain—small and inconspicuous;
- Earrings—limited to one per ear, worn no longer than the bottom of the earlobes.
- Recognition pin, button, or badge—as provided by school or Loma Linda University administration;
- Costume pin or brooch—simple;
- Rings—low profile, limited to one finger per hand.

#### **Grooming**

- Grooming and style must be practical so that one's duties can be performed without embarrassment, inconvenience, or threat to safety.
- Personal hygiene and good grooming are required; individuals are to be well groomed and professional in appearance.
- Males with mustaches and beards must keep them neatly trimmed. Side hair must be well trimmed and neat.
- Men's hair must be neatly trimmed and not fall below the collar. Ponytails, spikes, and dreadlocks are not acceptable.
- Women's hair, if long, may be required to be tied back. Spikes and dreadlocks are not acceptable.
- Hair must be clean, neat, and a normal color.
- Tattoos are strongly discouraged. If present, they must be kept covered.

#### **Cosmetics and nails**

- The emphasis is on natural appearance (e.g., eyebrows natural looking, eye shadow and mascara used only in moderation).
- Fragrances must be inconspicuous; excessive fragrances are not appropriate. Avoid using heavily scented colognes, perfumes, after-shave, powders and/or other toiletries; these can often be a source of sensitivity to others.
- Fingernails should be be closely trimmed, maintained in a professional manner, and must not interfere with patient care or professional duties. Nail polish, if worn, should be clear or light in color.
- Artificial fingernails are not allowed in patient-care areas because they not only harbor bacteria,

but they also interfere with important functions.

#### **Required in the laboratory and for direct patient-care activities**

- Individuals are to wear the University ID badge at all times.
- When wearing a laboratory coat, the name tag must be on the coat at all times.
- Neck chains or earrings may not be worn by men.
- In laboratory and patient-care areas, footwear must adequately protect the feet.
- Open-toe shoes or sandals are not to be worn in laboratories, patient-care areas, or while on experiential rotations.

#### **Casual dress guidelines**

- Casual wear is appropriate only for specified days or events. On all occasions, attire must be modest.
- In settings where shorts are specified as acceptable, they must be clean, neat, and no shorter than midhigh.

#### **Violations of appearance standards**

Violations of appearance standards will be reported by faculty members. These violations are referred to the Office of Student and Professional Affairs or the assistant dean for academic affairs. Following an investigation, the faculty member and/or administrative personnel will meet with the student in an attempt to arrive at a resolution/correction of the matter. Failure to arrive at a mutually agreeable resolution/correction will result in a referral to the Academic and Professional Standing Committee, which will follow the committee's normal due-process procedures.

#### **HONOR ROLL AND DEAN'S LIST**

The Office of Student and Professional Affairs compiles a list of students who have demonstrated their academic excellence by achieving an outstanding grade point average each quarter. A student who earns a 3.30-3.69 grade point average, with no incomplete grades, during a term is given honor roll standing. A student who earns a 3.7 or better grade point average, with no incomplete grades, is given Deans' List standing.

#### **PERFORMANCE LEVEL**

In order to remain at regular academic status, pharmacy students must maintain a cumulative grade point average of 2.3. Failure to maintain good academic performance will result in action by the Academic Standing Committee. In addition, a grade of at least a "C-" must be earned in any course for which credit is to be applied towards the Doctor of Pharmacy degree.

In order to have any grade changed, the student must repeat the course. This includes attending lecture and/or laboratory sessions as required, completing assigned work, and taking any required examinations. Courses being repeated by a student will have tuition charged on a per credit-unit basis, using the current fee schedule established by the school. Both the origi-

nal and repeat grades are entered in the permanent records, but only the second grade is computed in the grade-point average.

A course may be repeated only once.

Continuation in the pharmacy program is seriously jeopardized for the student who consistently earns grades below C+. Students who receive less than a C- grade in a course will be monitored closely for academic progression.

### ACADEMIC PROBATION

Students will be placed on academic probation if they have a cumulative grade-point average less than 2.3 at the end of any quarter. Students on academic probation for two consecutive quarters jeopardize their standing in a degree program.

Students on academic probation will be required to meet with their adviser to determine what steps are needed to increase academic performance. The number of units for subsequent registrations may be restricted. The student will be expected to adhere to the plan worked out with the adviser. The adviser will inform the Academic Standing Committee of the student's compliance and progress. Academic probation will be lifted when the cumulative G.P.A. rises above 2.3.

### ACADEMIC DISMISSAL

A student will be dismissed from the School of Pharmacy if the cumulative G.P.A. remains less than 2.3 for three consecutive quarters. A dismissed student may reapply and be considered for readmission. The Admissions Committee will review each case separately and reserves the right to determine the provisions for each individual situation. The committee will define the readmission conditions for each student.

A student is eligible to reapply and be considered for readmission the next academic year after studies in the School of Pharmacy have been discontinued.

### GRADE APPEALS

A student has the right to file an appeal if there is disagreement over the score received on an individual test, final examination, or assignment. The appeal must be in writing, using the procedures outlined in the section on Grievance Procedures (in this CATALOG). Appeals must be filed within seven business days following the return of the examination or assignment in question. For final examination-grade appeals, the appeal must be filed within seven days after the end of finals week. For appeals of final course grades, the appeal must be filed within twenty-one days after the published date that grades are due at the end of an academic term and shall also follow the procedures outlined in the Student Grievance Procedures section. Any examination or assignment returned to the instructor for specific question(s) review or for an appeal is also subject to further review of other questions.

### REVIEW OF EXAMINATIONS

Students shall have ample opportunity to review their examinations within a reasonable time frame after the test has been given. Instructors must either return the graded examination for the student to keep or permit the student to review his or her examination in class or other set time during recitation periods. For examinations not returned, an additional test review may be requested by the student. This should be done in a prescheduled, arranged format agreed upon between the student and instructor and set at a time convenient to both. An instructor may prohibit the taking of notes during an examination-review session in order to maintain question security. Any examination given back to the instructor for specific question(s) review is also subject to further review of other questions.

### MAKE-UP EXAMINATIONS

Instructors must implement a make-up examination policy in their course. This procedure must be clearly stated in the course syllabus and be discussed with students on the first day of class. It must prescribe exactly what will happen if a student misses an examination, quiz, final, or other point-generating activity. If rescheduling is an option that the instructor chooses, the test should be given as soon as is convenient for the instructor.

In the absence of a specific course policy set by the instructor, the contingency School of Pharmacy policy shall apply. An instructor's policy may be more stringent or less strict than these back-up guidelines.

- For unexcused absences, a zero score shall be entered as the grade for the missed examination, quiz, assignment, final, or other point-generating activity.
- For excused absences of an examination or quiz, the instructor may either reschedule a make-up test or have the point value of the missed assessment activity added to the final examination. The instructor is permitted to offer less credit for a make-up activity than the original activity was worth.
- For excused absences of a presentation, activity as a team member, or other point-generating activity, the student shall receive a zero grade entered for the activity unless the instructor is willing and able to reschedule the activity.

### EXAMINATION TARDINESS

Students arriving late for an examination, quiz, final, or other point-generating activity may be denied admission to class, at the instructor's option, until the activity is over. Once a student who has been taking the examination or quiz has left the room (either after completing the test or for another reason) *no* one shall be allowed to enter the room for the purpose of starting the examination or quiz. In general, an instructor should not let the first student leave the room until:

- After 1 minute for an unannounced quiz of less than 10 minutes duration;

- After 5 minutes for a scheduled quiz of 10-to-20 minutes duration;
- After 15 minutes for a scheduled examination of 50-to-90 minutes in duration; or
- After 20 minutes for a scheduled final examination of 100-to-120 minutes in duration.

## EXAMINATIONS

Students who have completed an examination (or quiz) must turn in the examination or quiz to the proctor and leave the room and general vicinity immediately. Please refer to the examination-tardiness policy for exceptions to this rule.

## PROFESSIONAL INTEGRITY

In addition to emphasizing academic excellence and integrity, Loma Linda University School of Pharmacy also stresses professional growth, development, excellence, and integrity. Chronic tardiness to or numerous absences from courses and/or other required activities are considered inappropriate professional behavior and show a lack of commitment to professional growth. Students exhibiting such behaviors may be placed on professional probation until such time as the behavior has been modified. Students who have been placed on professional probation are not eligible to hold ASP/SNPhA or class offices, or to receive any honors or awards. A student may also be dismissed from the program, after due process, as a result of conduct unbecoming to a pharmacist.

## STUDENT PROGRESSION

The curriculum is designed to be followed in a stepwise, block manner. All prerequisites must be completed before a student can enroll in a course. Students must pass all the professional courses in each year before enrolling in courses in the next year (i.e., PY1 courses must be completed before entering PY2 courses, etc.). In addition, each student must pass the end-of-year comprehensive qualifying examination; failure to pass this examination may delay progression into the next year's course work.

In addition to the Loma Linda University academic regulations, the rules outlined below will be used to provide for the immediate intervention of the Academic Standing Committee. If it is deemed necessary, the committee may intervene at times other than specifically stated below in order to ensure the academic integrity of the School of Pharmacy.

The following rules apply to student performance in course work and progression through the curriculum toward graduation:

- Students are required to enroll in and complete courses in sequence, completing at each level all prerequisites. No student will be permitted to take courses out of sequence or enroll in a course without having satisfied the prerequisites.
- A minimum grade of C- is required to pass all pharmacy courses and electives.
- Students are required to keep abreast of school/class activities by checking e-mail, bulletin boards, student mailboxes, and postal mail at the

address on record.

- Students are required to follow the dress code of the school as an integral part of their training and professionalization.
- Student attendance in classes is considered the cornerstone of professional behavior and is expected in all classes, especially during point-generating activities. Experiential education activities and other off-site activities have a mandatory attendance requirement.
- Experiential education program sites (introductory and advanced) are provided off campus. Some of these sites may be located a significant distance from Loma Linda University. Students are responsible for their transportation and possible relocation to their assigned site and for their own housing during this period.
- The faculty of the School of Pharmacy reserves the right to revise the curriculum at any time to assure that students acquire the most current and relevant training possible. If curricular changes become necessary, every effort will be made to apprise students of the change and how it impacts their course of study. However, assurance of well-prepared graduates will prevail as the dominant concern.
- One of the requirements for progressing from one professional year to the next is passing a comprehensive, qualifying examination covering the previous three quarters' course work. Failure to pass these examinations may delay progression into the next year's course work.
- The School of Pharmacy will graduate only those students it deems ready—morally, ethically, and professionally—to practice pharmacy; and consequently will reserve the right to withhold the recommendation for graduation of any student who does not conform to these standards.
- One of the requirements for graduation is passing a NAPLEX-style comprehensive examination. Each student must score 75 percent or better; failure to pass this examination may delay the graduation of the student.
- A student may be dismissed from the program, after due process, as a result of conduct unbecoming to a professional pharmacy student or a pharmacist.

## INFECTION CONTROL/BIOHAZARD-EXPOSURE REDUCTION

At the first pharmacy forum of each new academic year, students must be certified or recertified in Loma Linda University's infection control and biohazards training. The primary purpose of this training is to:

- minimize the student's exposure to biohazardous materials;
- increase awareness of blood-borne pathogens (BBPs) that may result from contact with blood, body fluids, or tissues; and
- make students aware of the University's policies and procedures on exposure to blood-borne pathogens (see *Student Handbook*).

A copy of Loma Linda University's *Infection Control Manual* is on file in the Office of Student and Professional Affairs. The school emphasizes the importance of individuals taking personal responsibility for their own health and safety and asks that all students follow universal precautions and University policy and procedures as a means of safeguarding their own health.

Observing standard precautions is the single best strategy to reduce the risk of blood-borne pathogens (BBP) exposure. This includes using adequate barrier protection (gloves, safety glasses, mask) when performing any activities in which the potential exists for BBP exposure. Familiarity with and use of safety devices on needles, syringes, and intravenous equipment can also reduce the risk of accidental BBP exposure but will vary among medical institutions. Completion of the hepatitis B immunization series with documented presence of antibody to hepatitis B should provide full protection from transmission of this virus. Loma Linda University students are to complete immunizations as part of their pre-entrance health requirements. The School of Pharmacy expects full compliance with these requirements and makes every effort to verify that a student's immunizations are complete.

Students may be exposed to blood-borne pathogens (BBPs) in the course of their clinical, didactic, extracurricular, and/or research duties. Although a number of different pathogens (viruses, bacteria, etc.) may be transmitted from patients to health care workers, three organisms are of particular risk and concern: hepatitis B virus (HBV) and hepatitis C virus (HVC), which can lead to liver disease; and the human immunodeficiency virus (HIV), which causes AIDS. Although a vaccine is available to prevent HBV, there is no vaccine currently available for HVC or HIV. Following an exposure, the risk of contracting HIV may be reduced by taking medications as part of post-exposure prophylaxis; however there is no preventative treatment for hepatitis C.

An exposure is generally defined as a percutaneous injury (a needle or sharp object puncture or cuts on the skin); or contact of mucous membrane(s) or nonintact skin with blood, tissue, or body fluids that are contaminated with visible blood. Current estimates of the average percutaneous exposure are: HIV = 3/1,000 (0.3%), hepatitis C = 1-3%, hepatitis B = 30% (in nonimmune).

## EXPOSURE TO BLOOD-BORNE PATHOGENS

This section outlines the actions to be taken following blood-borne pathogen (BBP) exposure. When such an exposure (or "needlestick") occurs, the following steps must be followed exactly.

1. The exposure site should first be thoroughly washed and irrigated.
2. The student should promptly report the incident to the supervising faculty member or preceptor.
3. An incident report must be completed on site, giving details of what occurred. The contact informa-

tion of all involved parties should be obtained as part of this document.

4. The student should seek immediate evaluation at Loma Linda University Medical Center (LLUMC) Emergency Department and identify him-/herself to the triage nurse as a School of Pharmacy student who has just experienced an exposure to blood-borne pathogens. The student will be referred to a special team of professionals trained to handle this situation. If the exposure occurs in a facility that insists the student follow their procedures and seek treatment on site rather than at LLUMC Emergency Department, then the student should seek guidance from his or her supervising faculty member or preceptor as to what to do.
5. In incidents that involve a specific patient, that patient should be asked to accompany the student, or report on his or her own, to the LLUMC Emergency Department for evaluation as well (at no cost to the patient).
6. Within five days, in all exposure incidents involving another person, the supervising faculty member or preceptor must submit the incident report and the student's report—detailing all subsequent actions taken—to the Office of Student and Professional Affairs.
7. Students should cooperate with the evaluation, treatment, and follow-up recommendations made at the time of their exposure assessment.

Expenses incurred for testing, counseling, and postexposure prophylaxis will be covered by Loma Linda University, provided:

- the BBP exposure was directly related to student activities, and
- the student followed the preceding outlined procedures.

The National Clinicians' Prophylaxis Hot Line, 888/448-4911 (24 hour, toll-free) is available to help health care students exposed to blood-borne diseases on the job. Staffed by trained physicians, the toll-free number provides students and clinicians with advice on how to treat health care workers' accidental occupational exposure to BBP. The hotline operates out of San Francisco General Hospital and is run in collaboration with the San Francisco Department of Public Health.

Questions about the BBP policy or procedures should be directed to school's Office of Student and Professional Affairs or the director of experiential education.

## CPR AND FIRST AID CERTIFICATION

All students must be certified in cardiopulmonary resuscitation (CPR) and in first aid during their enrollment in the School of Pharmacy. The school will provide one training program for students during orientation week. If students fail to obtain the certification at that time, they are responsible for the additional costs required for certification. Participation in

Operation Immunization and enrollment in the introductory or advanced pharmacy-practice experiences will not be allowed until both certifications are current.

## Financial Information

The Office of the Dean is the final authority in all financial matters and is charged with the interpretation of all financial policies. Any exceptions to published policy in regard to reduction or reimbursement of tuition must be approved by the dean. Any statement by individual faculty members, program directors, or department chairs in regard to these matters is not binding on the school or the University unless approved by the dean.

Registration is not complete until tuition and fees on the required installment are paid; therefore, the student should be prepared to make these payments during scheduled registration for each academic year. There may be adjustments in tuition and fees as economic conditions warrant.

### GENERAL FINANCIAL PRACTICES

The student is expected to arrange for financial resources to cover all expenses before the beginning of each school year. Previous accounts with other schools or this University must have been settled.

### DEPOSITS

Upon notification of acceptance, the applicant must make a \$500 deposit to hold a place in the class. This amount is deducted from the tuition and fees due at registration and is nonrefundable should an applicant decide not to register.

### SCHEDULE OF CHARGES 2005-2006

The charges that follow are subject to change without notice.

#### CHARGES

- \$28,500 Annual block tuition
- 9,500 Per quarter

#### FEES

- \$200 Per quarter, School of Pharmacy fees: Membership, laboratories, and student-activity fees
- 393 Per quarter, LLU enrollment fee: Health care insurance, Drayson Center membership, student activities, and publications
- 500 Per quarter, estimated books and supplies

#### MISCELLANEOUS

- \$60 Application fee
- 500 Acceptance deposit: Nonrefundable, applicable to first quarter's tuition
- 25 Returned-check processing fee

- 50 Late fee

#### Tuition charge for repeated courses

- \$465 Credit, per unit

#### Applied music charges

- varies The School of Pharmacy's tuition does not include applied music charges.

#### ON- AND OFF-CAMPUS STUDENT HOUSING

Students may go to <[www.llu.edu/llu/housing](http://www.llu.edu/llu/housing)> for housing information and a housing application form.

#### OTHER CHARGES

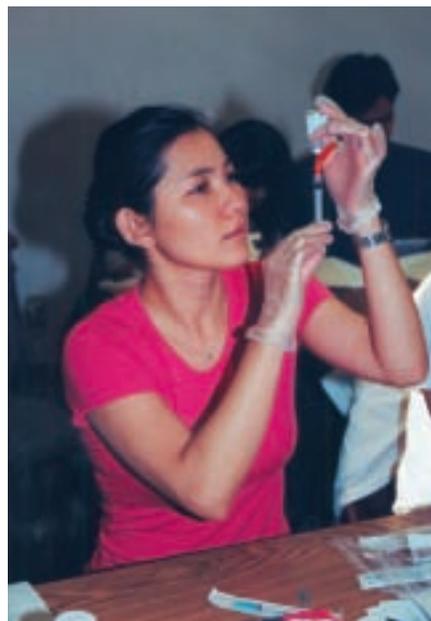
- \$65 California Board of Pharmacy internship license (application, examination, fingerprinting, interim practice permit)

#### AWARDS HONORING EXCELLENCE

Awards for excellence in pharmacy, scholastic attainment, and leadership ability are made available to students whose performance and attitudes reflect well the ideals and purposes of the school. Selection of students is based on the recommendation of the faculty to the dean and the Honors and Awards Committee.

#### ADDITIONAL REQUIREMENTS

For additional policies, governing Loma Linda University students, see Section II of this CATALOG, as well as the University *Student Handbook*. Students are responsible for informing themselves of and satisfactorily meeting all regulations pertinent to registration, matriculation, and graduation.





# School of Public Health

## Programs, Degrees, and Certificates Offered

### Bachelor's Degree Programs

- Biomedical Data Management
- Health Care Administration
- Health Geographics
- Wellness Management

### Master's Degree Programs

- Biostatistics
- Business Administration
- Community Wellness (closed to new admissions in 2005-06)
- Environmental and Occupational Health
- Epidemiology
- Global Health
- Health Administration
- Health Education
- Maternal and Child Health
- Nutrition
- Public Health Practice
- Distance Learning Programs
- Executive Online Program,

### Certificate Programs

- Basic Biostatistics
- Basic Epidemiology
- Advanced Biostatistics
- Advanced Epidemiology
- Epidemiological Research Methods
- Humanitarian Assistance
- Lifestyle Intervention
- Reproductive Health
- Tobacco-Control Methods

### Doctoral Degree Programs

- Epidemiology
- Global Health
- Health Education
- Nutrition
- Preventive Care

### Combined-Degrees Programs

- Master of Public Health *with* Master of Science
- Master of Public Health *with* Master of Science
- Master of Public Health *with* Doctor of Psychology
- Doctor of Public Health *with* Doctor of Psychology

## Dean's Welcome



Let me take this opportunity to welcome you to the Loma Linda University School of Public Health. I am excited that you have demonstrated an interest in academic preparation for one of the world's most exciting careers. Our students and graduates are engaged in a worldwide struggle with problems that shorten life, reduce the quality of life,

and consume valuable resources needed elsewhere. Air and water quality are poor in much of the world, famine still exists, and thousands—many of them children—die each year from rampaging diseases such as cholera, AIDS, dengue fever, and malnutrition. The sting of poverty still crushes three fifths of the world's population, who are forced to live on less than \$2.00/day. Health disparities still plague our nation's minority populations, bringing significant and premature loss of life and burden of illness.

Public health maintains a preventive and population-based approach to these problems. We view our “patients” as whole communities. Loma Linda University's School of Public Health looks to prepare the next generation of Public Health leaders. We are looking for students who embrace critical thinking, who are not content with yesterday's explanations for today's questions, and who seek to make a difference in this world.

We seek to understand the interplay between lifestyle and disease. We seek to make prevention of disease an art and a science. We strive to equip our students with the lifelong tools they will need to combat the insidious forces on this planet that tend to rob men and women of hope, dignity, and purposeful life. Our faculty will continue to refine our curriculum to keep it current with the needs of our profession. We will continue to expect more of every graduate, just as a suffering world expects more from us all. But at the end of your academic journey, you will know that you are more than prepared to meet this global challenge with skill, grace, and understanding.

I invite you to examine our various programs and degree offerings. Find the program that best matches your interest and join us for the adventure of a lifetime. Our campus will offer the advantage of smaller class size, and thereby more opportunity to interact with faculty. We provide many opportunities for our students to work in communities, both locally and internationally. This is your opportunity to equip yourself for a life of service and meaning. We welcome you to our family.

James Kyle, M.D., M.Div.  
Dean

## Mission, Goals, and Values

### OUR MISSION

The mission of the School of Public Health reflects a distinctly Christian orientation and purpose in preparing students as public health professionals for local, national, and international service. The School integrates instruction, research, and service to achieve educational excellence. In keeping with its Seventh-day Adventist heritage, an integration of the physical, mental, social, and spiritual dimensions is encouraged.

### Our goals

- The goals of the School of Public Health are to:
1. Educate public health professionals for service in local, national, and international settings.
  2. Integrate public health practice with teaching and research in the careers of faculty and the education of students.
  3. Expand and disseminate public health knowledge through research and scholarly activities.
  4. Promote the development of positive personal-health habits in faculty, staff, and students as integral to spiritual values and Christian commitment.
  5. Provide public health education through innovative programs to meet the needs of the sponsoring church and populations underserved by public health training and education.
  6. Provide public health leadership within the University and the community.
  7. Encourage responsible management of resources and the environment.
  8. Provide appropriate consultation.
  9. Encourage an educational environment supportive of diverse population groups.

### Our values

The School of Public Health believes that the values held by the School and its faculty and staff—and which it seeks to develop in its students—are a consequence of a loving relationship between God and His created beings. This relationship is reflected in the following values:

- Compassion toward fellow human beings, creatures, and nature
- Acceptance of each individual as a priceless child of God
- Respect for the beliefs, ideas, opinions, and cultures of others
- Equity in interactions with all races, individuals, ethnicities, and cultures
- Integrity by matching belief with action
- Faith in the outworking of God's ultimate purpose
- Wisdom in research, study, and service

## School Foundations

### HISTORY

The School was begun in 1948 with the organization of the School of Tropical and Preventive Medicine, the purpose of which was to provide a base for research and teaching. After its reorganization in 1961, the Division of Public Health and Tropical Medicine began to offer master's degree programs through the Graduate School. Establishment of the School of Public Health was authorized in 1964, and plans were made for faculty and facilities to meet the requirements of the Committee on Professional Education of the American Public Health Association. In 1967 the School of Nutrition and Dietetics (which had been organized in 1922 as the School of Dietetics) became a department of the School of Public Health. The name of the School was changed to School of Health in October 1970. Because the meaning of the term "public health" has gradually broadened to emphasize lifestyle—consistent with the goals of the School—the original name, School of Public Health, was readopted in August 1987. The Center for Health Promotion, the Department of Preventive Medicine, and the Preventive Medicine Practice Group were merged into the School of Public Health in 1990. This resulted in expanded faculty and resources. The School of Public Health also serves as the Department of Preventive Medicine in the School of Medicine.

### ACCREDITATION

The School has maintained continuous accreditation since it was accredited at its inception in 1967 by the American Public Health Association. It is currently accredited by the Council on Education for Public Health, 800 Eye Street NW, Suite 202, Washington, D.C. 20001-1397. The School is also a member of the Association of Schools of Public Health.

## General Regulations

Students of the University are responsible for informing themselves of and satisfactorily meeting all regulations pertinent to registration, matriculation, and graduation. Section III gives the general setting for the programs of each school. The subject and unit requirements for admission to individual professional programs are outlined in Section IV. It is important to review specific program requirements (Section IV) in the context of the general requirements (Section III) applicable to all programs.

## General Information

### INSTRUCTIONAL FACILITIES

Facilities for the School of Public Health—offices, lecture and seminar rooms, teaching and research laboratories, work and storage areas—are located mainly in and adjacent to Francis Nichol Hall. Additional offices and research facilities are located in Evans Hall and the Parkland Building.

### DEPARTMENTS AND CENTERS

The instructional, research, and service programs within the School are organized and administered by six academic departments and three centers. The departments are: environmental and occupational health, epidemiology and biostatistics, health administration, health promotion and education, global health, and nutrition. They are described in the appropriate section of this CATALOG. The three centers are: the Center for Health Promotion, the Center for Health Research, and the Center for Health and Development.

#### Center for Health Promotion (CHP)

The center is a health-promotion-and-maintenance facility within the Adventist Health System/Loma Linda. It offers a wide spectrum of programs dealing with weight management, executive health, stress management, smoking cessation, nutrition, exercise, and alcohol and drug dependency. Group sessions, individual counseling, and health assessment are some of the aspects of the programs as they are conducted in the community or in a corporate setting. The CHP is a major training center for students.

#### Center for Health Research (CHR)

The center encourages involvement in research by identifying research opportunities and providing support in developing grant applications. It provides research and statistical services, monitors financial status of grants and research endowments, and provides focus for the research activities of the School by identifying research priorities.

The research efforts of the School are consistent with its overall philosophy: protection, promotion, and preservation of human health through the harmonious development of one's mental, physical, and spiritual resources. It is the School's policy to encourage those research activities that are especially relevant to its mission and that utilize the natural abilities, special interests, and professional expertise of its faculty members. School of Public Health researchers concentrate on projects that examine the effects on health of various aspects of lifestyle, including personal and cultural habits. Of special importance is research directed toward those aspects of disease prevention in which health may be related to individual choices of life habits and lifestyle. The School makes special efforts to encourage research projects that are most likely to enrich the instructional program. In developing research projects, faculty members carefully consider how to encourage student involvement. The goal is to bring mutual benefit to the students' academic development and to the purposes of research. A wide variety of research methodologies are employed. These provide students with valuable experience through exposure to a broad spectrum of the techniques of scientific investigation. Substantive research findings are incorporated regularly into the teaching program.

#### Center for Health And Development (CHD)

The center facilitates the development of global and cross-cultural consultation and training activities for the School of Public Health, which has been designated a World Health Organization (WHO) Collaborating Center for Primary Health Care and Human Resource Development. It assists the School in adapting its programs to the needs of international students,

visiting scholars, and students who intend to pursue a global health career. Programs in global health draw upon the spectrum of expertise available in the University to produce services especially adapted to the needs of people in resource-scarce areas, including refugees, people in the inner cities, the rural poor, and people in the developing world. The School has been involved with many projects—both service and training—in Africa, Asia (including the People's Republic of China and the Indian subcontinent), Latin America, the Caribbean, eastern and southern Europe, and Oceania; as well as with underserved populations in the United States. Through a network of international schools of public health and medicine and through health care institutions, the School of Public Health also facilitates the exchange of curricular information, program planning, and faculty interaction to further enhance professional public health education globally. The CHD also serves the wider University community and the world as a primary resource center.

#### Computer Center

The School maintains two state-of-the-art computer laboratories. The Computer Center assists students in utilizing a variety of software programs and accessing on-line services relevant to students in all programs. Word processing, spreadsheet, graphics, statistical, nutritional, and other types of software are available for use. Workstations are capable of running Internet software to allow the user direct access to the Internet, including the capability to use File Transfer Protocol, the World Wide Web, newsreaders, Gopher, and Telnet. Training in using computers is available through courses offered by the Department of Epidemiology and Biostatistics.

## Application and Admissions

The program admissions committees of the University intend that an applicant to any of the schools is qualified for the proposed curriculum and is capable of profiting from the educational experience offered by this University. The admissions committees of the School accomplish this by examining evidence of scholastic competence, moral and ethical standards, and significant qualities of character and personality. Applicants are considered for admission only on the recommendation of the program in which study is desired.

#### Computer literacy

Students are strongly encouraged to develop their computer skills and literacy prior to coming to the School. Computer literacy is a prerequisite for some courses.

### ADVANCED STANDING

Graduate students with previous course work in areas of public health may apply for limited units of advanced standing. If approved by the program director or department chair and the director of admissions and academic records in the school, degree requirements—exclusive of elective units—are reduced. Courses taken during the past five years are considered in an evaluation of the student's qualification for advanced standing.

Competency in courses taken more than five years previously may be considered if the content has been used professionally on a regular basis. No advanced standing is granted for life experience that is not in conjunction with previous course work. Advanced standing is not granted for religion courses.

### PROGRAM ENTRANCE REQUIREMENTS FOR BACHELOR OF SCIENCE IN PUBLIC HEALTH

Content and length of programs vary according to an individual applicant's background (see "Advanced standing") and classification on acceptance. Specific admissions requirements for individual degree programs can be found in Section IV of this CATALOG.

#### Subject/diploma requirements

A high school diploma or its equivalent, the GED, is required.

#### Eligibility

Eligibility for consideration by the Admissions Committee is based on a grade point average of at least 2.5 (on a 4.0 scale) for all course work (science and nonscience subjects computed separately) presented in fulfillment of entrance requirements for all undergraduate majors in the School. A limited number of students whose background and experience show potential for success but whose GPA is between 2.0 and 2.49 may be admitted on a provisional basis.

A minimum grade of C (2.0) is required for all college courses transferred into the undergraduate programs.

### ADMISSIONS REQUIREMENTS FOR GRADUATE-DEGREE PROGRAMS

Since specific requirements vary from program to program, these should be determined from the program of interest.

#### Prerequisite courses

A grade of C- or better is required for all prerequisite courses.

#### Entrance tests

Scores from the Graduate Record Examination (GRE), or equivalent, are required with the application. Application forms for the GRE and information regarding examination times and places are furnished by Educational Testing Service, 1947 Center Street, Berkeley, CA 94704 (for the West); Princeton, NJ 08540 (for the East); or locally by the School of Public Health Office of Admissions and Academic Records.

Applicants for the M.B.A.-degree program in health administration are required to submit scores from the Graduate Management Admission Test (GMAT), or equivalent. Application forms for the GMAT and information regarding examination times and places are furnished by Educational Testing Service, 1947 Center Street, Berkeley, CA 94704 (for the West); Princeton, NJ 08540 (for the East); or the applicant may contact a local community college for testing information.

**MASTER OF BUSINESS ADMINISTRATION**  
**MASTER OF PUBLIC HEALTH**  
**MASTER OF HEALTH ADMINISTRATION**  
 (closed to new admissions)  
**MASTER OF SCIENCE IN PUBLIC HEALTH**

Content and length of programs vary according to an individual applicant's background (see "Advanced standing") and classification on acceptance. Specific admissions requirements for individual degree programs can be found in section IV of this CATALOG.

**Eligibility**

To be eligible for admission to a master's degree program, applicants must have at least a baccalaureate degree from an accredited institution, with a G.P.A. of 3.0 or above; and present above-average scores on the Graduate Record Examination (GRE). A limited number of students whose background and experience show potential for success but whose G.P.A. is less than 3.0 are admitted on a provisional basis.

A minimum grade of B (3.0) is required for all college-transfer courses.

**DOCTOR OF PUBLIC HEALTH**

**Eligibility**

To be eligible for admission to the Doctor of Public Health degree program, an applicant must demonstrate high academic performance both in baccalaureate and postbaccalaureate studies; and present above-average scores on the Graduate Record Examination (GRE). For specific admissions requirements, refer to the Doctor of Public Health degree program in section IV of this CATALOG.

A minimum grade of B (3.0) is required for all college-transfer courses.

## Academic Policies and General Regulations

Students are responsible for informing themselves of and satisfactorily complying with the policies and meeting the regulations pertinent to registration, matriculation, and graduation.

**RELIGION COURSES**

Selection of religion courses to fulfill requirements for the various degrees should be made in consultation with the adviser, using the course schedule published each quarter by the Office of University Records.

Undergraduate students may meet the religion requirement by enrolling in 400-level religion courses. Graduate students are required to complete a 3-unit, 500-level religion course per degree sought.

Religion-course credit applicable to a School of Public Health degree program must be graded by the traditional letter grade system. Only courses with REL\_ code prefixes may be used to satisfy the religion course requirement. The religion requirement may not be waived by registering for a religion course at a university other than Loma Linda University.

**SHARED UNITS**

The maximum number of units that may be shared between a doctoral and master's degree program within the University is 18 units. The maximum number of units that may be shared between a bachelor's and master's degree program within the University is 9 units. It is not automatically guaranteed that units will be shared between programs.

**CONVOCATION ATTENDANCE**

Attendance at weekly University and quarterly school convocations is required. Unexcused absences are reported to the dean. Persistent failure to attend may jeopardize a student's regular standing.

**COURSE ATTENDANCE**

Only duly registered students may attend classes. Students are expected to attend all appointments in a course. Absences in excess of 15 percent may be sufficient cause for a failing or unsatisfactory grade to be recorded.

**TIME LIMIT**

The time lapse from first enrollment in courses applied to a master's degree curriculum to the conferring of the degree may not exceed five years. For a doctoral degree, the maximum time allowed for advancement to candidacy is five years and seven years to completion of the degree program. Students who show evidence of appropriate academic progress may be granted up to two one-year extensions. These extensions are not automatic but must be initiated by student request and be approved by the major department.

**ACADEMIC PROBATION**

Students whose cumulative G.P.A. at the end of any quarter is less than 2.5 for undergraduate students and 3.0 for graduate students are placed on academic probation, and the number of units for subsequent registrations is restricted to a maximum of 12 graduate or 16 undergraduate units per quarter. Students with 2 quarters of unsatisfactory performance jeopardize their standing in a degree or certificate program.

**RESIDENCY REQUIREMENTS**

Residency requirements may be met by a student taking, through the School of Public Health, the minimum number of units specified for the appropriate degree.

The minimum didactic unit requirement for a single master's degree is 39 units (plus 9 units of transfer credit, or 48 units, total) and a single doctoral degree is 60 units (plus 12 dissertation units, or 72 units, total).

To be eligible for a bachelor's degree, students must complete a total of at least 192 units—of which at least 32 of the last 48 units, or a minimum of 45 total units of course work, are completed at Loma Linda University.

**GRADUATION REQUIREMENTS**

A candidate for a degree shall have met the following conditions:

1. Completed all requirements for admission.
2. Completed satisfactorily all requirements of the curriculum, including specified attendance; number of credit units; specific course and field instruction; applicable qualifying and comprehensive examinations and culminating activities; and have a cumulative grade-point average of 2.5 for undergraduate students or 3.0 for graduate students, computed separately for the total degree program and courses in the major area.
 

The culminating activity shall consist of:

  - a written comprehensive examination (prior to the field experience),
  - field experience (upon completion of essential major course work),
  - professional portfolio (upon completion of the field experience), and
  - an exit interview with the department chair (at the conclusion of the program).
3. Attended a minimum of ten approved public health seminars for each master's degree sought, and a minimum of twenty approved public health seminars for each bachelor's and doctoral degree sought.
4. Submitted a graduation petition two-to-four quarters before graduation, as specified by the degree program.
5. Given evidence of moral character, of due regard for Christian citizenship, and of consistent responsiveness to the established aims of the University and of the School.
6. Discharged financial obligations to the University and completed the exit interview with the Office of Student Finance.

The candidate completing requirements at the end of the Spring Quarter is encouraged to be present at the conferring of degrees. Students desiring to participate in commencement ceremonies must do so at the spring (June) exercise immediately following completion of their assigned curricula.

The University reserves the right to prohibit participation in commencement exercises by a candidate who has not satisfactorily complied with all requirements.

**Programs and Degrees**

It is the responsibility of students to know and fulfill all academic and graduation requirements and to make every reasonable effort to obtain adequate academic advisement. Frequent adviser contact helps to ensure that students have current academic information and are making adequate progress toward educational goals.

**Degrees offered**

The School of Public Health offers one bachelor's degree—the Bachelor of Science in Public Health; three master's degrees—the Master of Business

Administration, Master of Public Health, and Master of Science in Public Health; and one doctoral degree—the Doctor of Public Health.

**Continuing education and extension programs**

The school offers nondegree short courses and workshops at various locations in the United States and overseas to meet the continuing-education and extension-program needs of School of Public Health alumni, other health professionals, and lay persons in the church and community. In addition, most degree courses are approved for continuing-education credit.

**BACHELOR'S DEGREE PROGRAMS****BACHELOR OF SCIENCE IN PUBLIC HEALTH**

The B.S.P.H degree programs are designed for individuals with professional career objectives in one or more of four areas of major concentration: biomedical data management, health geographics, health care administration, and wellness management.

The programs leading to the Bachelor of Science in Public Health (B.S.P.H.) degree are designed to prepare graduates for employment as professionals in health-related fields and to provide a foundation for personal growth.

These programs also provide a strong base for those who wish to pursue a graduate degree.

The B.S.P.H. programs combine a broad-based education with study in public health. Each emphasizes applied aspects and public health practice. Specific information about these programs may be found in section IV of this CATALOG.

**BACHELOR OF SCIENCE DEGREE PROGRAM REQUIREMENTS**

The first two years are taken at a college or university of the student's choice. Students transfer to Loma Linda University School of Public Health for the final two years. Students taking part-time course work may take longer to complete the program.

A minimum of 96 units must be completed prior to entering the B.S.P.H. degree program. Each student is required to complete 68 units as specified in the general education policy of Loma Linda University. General education requirements (GE) are to be met through lower-division courses as well as through courses taken during the final two years.

A minimum of 192 units is required for the B.S.P.H. degree. (See the General Education section in this CATALOG).

**Public health core requirements**

All undergraduate degree students in the School of Public Health are expected to develop an understanding of the areas of knowledge basic to public health.

All B.S.P.H. degree students are required to take the following public health core courses (or their equivalents) in each degree program:

ENVH 414	Introduction to Environmental Health	(3)
EPDM 414	Introduction to Epidemiology	(3)
HPRO 414	Personal Health and Fitness	(4)

PHCJ 401	Essentials of Public Health	(4)
STAT 414	Introduction to Biostatistics I	(3)
STAT 415	Computer Applications in Biostatistics	(1)

Students are expected to identify a specific area of concentration or a major. They may opt to additional course work leading to a second area of emphasis.

#### Public health seminars

Attendance is required at a minimum of twenty (ten per year) public health seminars for each bachelor's degree sought. This is seen as an enrichment that augments the student's acquaintance with diverse current public health issues and concerns. The seminar requirement must be met during the student's enrollment in the School of Public Health and is separate from course-credit registration. No tuition or fee is charged by the School. Seminar activities that qualify to meet this requirement are those that have been approved by the associate dean. Many seminar presentations in the School of Public Health or in other parts of the University, the University Medical Center, the Jerry L. Pettis Memorial Veterans Medical Center, or the surrounding community qualify to meet this requirement. Prior approval must be obtained for public health seminars offered outside the School of Public Health.

Credit for no more than three public health seminars may be received for attendance at any one workshop or meeting, regardless of how many hours are attended.

#### Senior project

Students are required to complete a senior project demonstrating competence in their field of study.

## MASTER'S DEGREE PROGRAMS

Master of Public Health (M.P.H.), Master of Business Administration (M.B.A.), and Master of Science in Public Health (M.S.P.H.) degree programs are designed for those with appropriate backgrounds who are seeking to acquire graduate-level competencies in public health, business administration, or health administration.

### MASTER OF PUBLIC HEALTH

The program leading to the Master of Public Health (M.P.H.) degree is designed to provide broad preparation in the fundamentals of public health, while at the same time offering opportunity for some specialization in areas of interest.

The degree is offered with major concentrations in the areas of biostatistics, community wellness, environmental and occupational health, epidemiology, health administration, health education, global health, maternal and child health, and nutrition. Combined degrees are available in a variety of programs in other schools. Specific information about these programs may be found in section IV of this CATALOG.

#### Public health core requirements

All graduate degree students in the School of Public Health are expected to develop an understanding of the areas of knowledge basic to public health. This is accomplished by including the following

required courses or their equivalents in each degree program:

ENVH 509	Principles of Environmental Health	(3)
EPDM 509	Principles of Epidemiology I	(3)
HADM 509	Principles of Administration in Public Health	(3)
HPRO 509	Principles of Health Behavior	(3)
PHCJ 605	Philosophy of Public Health	(1)
STAT 509	General Statistics	(4)

Students are expected to identify a specific area of concentration or major. They may opt to add additional course work leading to a second area of emphasis.

#### Public health seminars

Attendance is required at a minimum of ten public health seminars for each master's degree sought. This is seen as an enrichment that augments the student's acquaintance with diverse current public health issues and concerns. The seminar requirement must be met during the student's enrollment in the School of Public Health and is separate from course-credit registration. No tuition or fee is charged by the School. Seminar activities that qualify to meet this requirement are those that have been approved by the associate dean.

Many seminar presentations in the School of Public Health or in other parts of the University, the University Medical Center, the Jerry L. Pettis Memorial Veterans Medical Center, or the surrounding community qualify to meet this requirement. Prior approval must be sought for public health seminars offered outside the School of Public Health.

Credit for no more than three public health seminars may be received for attendance at any one workshop or meeting, regardless of how many hours are attended.

#### Culminating activity

The School requires each graduate to complete a synthesizing activity that demonstrates basic competencies in the five core areas of public health. These areas include biological, physical, and chemical factors that affect the health of a community; concepts and methods of relevant social and behavioral sciences; distribution of diseases or conditions in populations, and factors that influence this distribution; collection, storage, retrieval, analysis, and interpretation of health data; and planning, policy analysis, and administration of health programs.

#### Field practicum

Students are generally required to complete a field practicum in order to gain public health experience.

## MASTER OF BUSINESS ADMINISTRATION

The program leading to the Master of Business Administration (M.B.A.) degree is designed to develop the management and administrative skills of those involved in the public and private health care industries.

The Master of Business Administration (M.B.A.) degree provides a broad understanding of health care management and hands-on experience in applying learned principles. The M.B.A. degree is designed for

those whose professional objective is a career in health care management. The residency period provides experience in a health care organization. Graduates are prepared for careers at upper-administrative levels in health care organizations—including hospitals, public agencies, health care networks, group practices, long-term care, and managed care.

### MASTER OF SCIENCE IN PUBLIC HEALTH

The Master of Science in Public Health degree is designed to provide in-depth specialization in one area of public health while at the same time assuring an orientation to community health and a breadth of understanding of the core areas by a required minimum of core public health courses.

The degree is offered in the area of biostatistics. Specific information about the areas of specialization is found in the biostatistics section of this CATALOG.

#### Public health core requirements

All graduate students in the School of Public Health are expected to develop an understanding of the areas of knowledge basic to public health.

This is accomplished by including the following courses or their equivalents in each degree program.

ENVH 509	Principles of Environmental Health	(3)
EPDM 509	Principles of Epidemiology I	(3)
HADM 509	Principles of Administration in Public Health	(3)
HPRO 509	Principles of Health Behavior	(3)
SHCJ 605	Philosophy of Public Health	(1)
STAT 509	General Statistics	(4)

#### Public health seminars

Attendance is required at a minimum of ten public health seminars for each master's degree sought. For further information, please refer to the public health seminar description listed under the Master of Public Health degree in this section of the CATALOG.

#### Culminating activity

The School of Public Health requires each graduate to complete a synthesizing activity that demonstrates basic competencies in the five core areas of public health.

### PREVENTIVE MEDICINE RESIDENCY

Residency training in preventive medicine is available for qualified physicians through the School of Public Health and the School of Medicine. The residency consists of a three-year program, including

1. a clinical year of primary-care training,
2. an academic year leading to an M.P.H. degree in one of the majors in the School of Public Health, and
3. a practicum year of clinical medicine experience.

A wide variety of intervention programs to reduce health risks and promote healthful living practices are integrated into the second- and third-year rotations. An international health emphasis is available for interested residents, including involvement with international projects in developing countries. The residency is approved

by the Accreditation Council for Graduate Medical Education (ACGME), 515 North State Street, Suite 2000, Chicago, IL 60610; and fulfills the specialty training requirements of the American Board of Preventive Medicine (ABPM), 9950 West Lawrence Avenue, Suite 106, Shiller Park, IL 60176.

### OCCUPATIONAL MEDICINE RESIDENCY

Residency training in occupational medicine is available through the School of Public Health for qualified physicians who have already completed an internship accredited by the Accreditation Council for Graduate Medical Education (ACGME), 515 North State Street, Suite 2000, Chicago, IL 60610; and is approved by the American Board of Preventive Medicine (ABPM), 9950 West Lawrence Avenue, Suite 106, Shiller Park, IL 60176. The Loma Linda University residency training in occupational medicine consists of a two-year program involving an integrated academic and practicum phase. It emphasizes the clinical and applied aspects of occupational and environmental medicine that are considered to fall within primary care; and focuses on the relationship of individuals and groups to their workplaces, work, and environments. The University takes special interest in assessment of individual health hazards and the identification and promotion of practices that help to reduce risk and prevent or postpone disease and injury.

The program is accredited by the ACGME ([www.acgme.org](http://www.acgme.org)) and fulfills the occupational medicine specialty training requirements of the ABPM ([www.abprevmed.org](http://www.abprevmed.org)). Completion of an M.P.H. degree in environmental and occupational health is required. If, however, an accepted applicant has already completed an M.P.H. degree at an accredited institution, with a major emphasis in an area other than environmental and occupational health, s/he will be required to take the following courses during the Loma Linda University residency training: ENVH 589 Environmental Risk Assessment, ENVH 581 Principles of Industrial Hygiene and ENVH 587 Environmental Toxicology. A candidate who has completed an internship year and an M.P.H. degree will be required to complete only a practicum year.

Practical training is offered through the following rotation sites: Jerry L. Pettis Memorial Veterans Affairs Medical Center, Loma Linda University Center for Health Promotion, Concentra Health Services, Inc., Patton State Hospital, and the San Bernardino County Health Department.

Those interested in applying to this training program should contact the program director—Ann L. Dew, DO, M.P.H.—at the residency office, either by telephone at 909/558-4918 or by email at [ifoster@sph.llu.edu](mailto:ifoster@sph.llu.edu).

### MEDICAL/DENTAL LEADERSHIP PROGRAM

The rising complexity of health care in this country and abroad will require increasingly skilled leadership in both the public and private sectors—from sophisticated health care systems to mission hospitals, from research laboratories to primary care. Combining a Master of Public Health degree in an appropriate discipline with an M.D. or D.D.S. degree can provide a sound foundation for young professionals seeking to

influence and manage the future.

The School of Public Health offers combined-degrees programs—M.D./M.P.H. and D.D.S./M.P.H.—for students enrolled in Loma Linda University Schools of Medicine or Dentistry. The didactic course work for the Master of Public Health degree can be taken in any major within a twelve-month period after either the second or third year of the M.D. or D.D.S. program. In some cases, additional time may be required for field work.

Each student is expected to concentrate full time on the Master of Public Health degree during the designated year. Applications will be reviewed competitively, with particular focus on potential for future health care leadership.

## DISTANCE-LEARNING PROGRAMS

The School of Public Health offers master's degree programs in various majors in formats and locations in North America and overseas to meet the needs of qualified individuals who seek to develop graduate-level competencies in public health but who choose not to be full-time, on-campus students at this University. (See Section IV—Combined Degrees.)

The School of Public Health has had much experience in offering Distance Learning Master's Degree Programs. For over thirty years the School of Public Health has adapted its program-delivery style to meet the needs of busy professionals who, for a variety of reasons, do not choose to become full-time, on-campus students. Currently the School of Public Health's Online Executive Master of Public Health Degree Program caters to both local and international students. The School also offers programs in Cambodia, Chile, and Peru; and in the summer of 2005 will begin an M.P.H. program in Russia.

The off-campus programs require the School's faculty to travel to the education site and teach courses in the condensed format. The School of Public Health research shows that this form of instruction is just as effective as the less condensed method, especially with experienced professionals eager to learn. Distance-learning technology (interactive computer hook-ups, live and prerecorded video/TV presentations, etc.) may also be utilized.

## ONLINE EXECUTIVE MASTER OF PUBLIC HEALTH

The Online Executive Master of Public Health Degree Program is offered with a major in Public Health Practice. This is a three-year blended program with on-line courses as well as two, two-week residential sessions. A new cohort of students begins each August when students come on campus for two weeks. During this time they will plan a program of study with their advisor, complete 5 units of course work, become familiar with the technology, and get to know the other students in the group. Students go home ready to study on-line as well as ready to support and mentor each other. It is a very positive way to learn.

At the beginning of the second year students again come to Loma Linda University for two weeks; this is

the last on-campus requirement.

The program closes with a culminating activity, which includes a comprehensive examination, the community practicum report, preparation of a portfolio, and an exit interview.

### Course load

A full-time graduate course load consists of 8 units, and a half-time graduate course load is 4 units. Students in the Distance-Learning Program who need to qualify for financial aid must take a minimum of 4 units per quarter to establish and maintain eligibility.

### Proctors

Many courses require a proctored examination. Each student is required to have on file with the Office of Distance Learning a signed proctor contract with the name of a person who will serve as his/her permanent proctor. A proctored examination is automatically sent to this person. The proctor may not be a relative or someone living in the same house as the student. The registrar of a local college or university, a librarian, or a minister is considered an appropriate proctor.

### Religion course requirement

Registration and completion of a 3-unit, graduate level, religion course is mandatory for completion of degree requirements. Religion courses must have an REL\_ prefix and be offered through Loma Linda University. The purpose of the religion requirement is to provide a spiritual dimension to the professional training of public health students, to provide students with an opportunity to further develop their skills in dealing with life's challenges, and to provide opportunity for personal spiritual growth. Transfer of course units from other universities and institutions is not available; nor is a waiver option available, regardless of educational background. Traditional letter grading is required.

### Student classification

Students enrolled in courses prior to receiving official acceptance into the School of Public Health are classified as PTC (permission to take classes) students by the University. Students may retain this status only by permission of the director of admissions and academic records for a maximum of 12 units of study before official acceptance into the School.

### Grievance procedures

If an off-campus student has exhausted all resources as outlined in the University *Student Handbook*, he/she may approach his/her state licensing agency for further assistance. Addresses for the licensing agencies are available by site in this section of the CATALOG. For additional information on admission and academic requirements, refer to those sections of this CATALOG.

## FINANCIAL INFORMATION

### Financial policies

Tuition for the Online MPH program courses is the same as the on-campus tuition rate. Tuition must be paid in full at the time of registration.

### Refund policy

Tuition for courses dropped is according to the following schedule:

- First day of class, or fraction thereof—100 percent of tuition refunded;
- Second day of class, or fraction thereof—75 percent of tuition refunded;
- Third day of class, or fraction thereof—50 percent of tuition refunded;
- After the on-site class session is completed—no tuition is refunded.

#### Financial clearance

The student is expected to maintain a clear financial status at all times. Financial clearance must be obtained: (a) before registering for any class; (b) before receiving a diploma; or (c) before requesting a transcript, statement of completion, or other certification to be issued to any person, organization, or professional board.

#### Loans

Inquiry about loans should be made to the University Office of Financial Aid. Only students who are accepted into a degree program are eligible to apply. For loan purposes, off-campus students registered for 4 units per quarter are considered to be enrolled half-time.

#### Checks

Checks should be made payable to Loma Linda University and should show the student's name and social security or identification number to ensure that the correct account is credited.

### GENERAL DEGREE REQUIREMENTS FOR DISTANCE LEARNING PROGRAMS

All applicants to the Distance Learning Programs must meet the general admissions requirements found in section II of this CATALOG.

#### Residential requirement

Only the Online Executive MPH program has a residential requirement. Online students must come to Loma Linda University for two weeks in August to start the program and again for two weeks at the beginning of the second year of study. There is no residential requirement in the third year.

#### Grade point average

A grade point average (G.P.A.) of 3.0 (B) must be maintained both in the major and for the overall G.P.A.

#### Graduation petition

A graduation petition must be submitted to the Office of Admissions and Academic Records by December 15 for participation in commencement activities the following June, or at least three quarters before anticipated completion of all degree requirements.

#### Time limit

The time lapse from first enrollment in a master's degree curriculum to the conferring of the degree may not exceed five years.

### INTERNATIONAL PROGRAMS

#### CHILE AND PERU

M.P.H. degree programs are offered in Chile and Peru. These programs are designed around the specific needs of the community. Majors are offered in health education and promotion as well as in maternal and child health. The programs of instruction are offered in both English and Spanish.

#### RUSSIA

In August 2005, an M.P.H. program will begin in Russia. Two Public Health Practice streams will be offered—one with a health education focus; the other, research, epidemiology, and program planning. These programs will build a teams of people who can address the public health needs of the local people and help to build public health infrastructure.

#### CAMBODIA AND LAOS

A Certificate in Tobacco Control Methods is being offered in the Kingdom of Cambodia (Cambodia). The purpose of this program is to build tobacco control leadership capacity and promote tobacco-related research in Cambodia and Lao People's Democratic Republic (Laos), in the context of the World Health Organization Framework Convention on Tobacco Control.

### CERTIFICATE PROGRAMS

The School of Public Health offers certificate programs in various programs to meet the needs of qualified individuals seeking to develop competencies in specialties in public health but who, for a variety of reasons, do not choose to become full-time, degree-seeking students.

Instruction for the certificate program is primarily provided by regular School of Public Health faculty members on campus during regular quarter terms. Students are responsible to follow regular registration procedures during regularly scheduled time periods.

### GENERAL CERTIFICATE INFORMATION

#### Course work

Course sessions are conducted during regular term sessions. Certificate courses offered are regular School of Public Health courses, carrying the same credit units as courses applicable toward degree programs. Certificate courses are taught on a quarter-term system.

#### Religion course requirement

Registration and completion of a 3-unit, graduate-level, religion course is mandatory for completion of each certificate program. Religion courses must have an REL\_ prefix and be offered through Loma Linda University. The purpose of the religion requirement is to provide a spiritual dimension to the professional training of public health students, to provide students with an opportunity to further develop their skills in dealing with life's challenges, and to provide opportunity for personal spiritual growth. Course units will not be transferred from other universities and institutions; nor is a waive option available, regardless of educational background. Traditional letter grading is required.

## GENERAL CERTIFICATE REQUIREMENTS

All applicants to the certificate programs must meet the general admissions requirements found in section II of this CATALOG. Course work is graduate level; therefore, students must demonstrate eligibility for application to a graduate-level program.

### Course format

In general, courses are taught in the same format as regularly scheduled on-campus courses. However, in addition, Web-based courses and/or intensive-format courses may be utilized. These courses are tailored to the adult learner, with clear application and examples from the real world. These courses represent the same course requirements and credit units as those applicable to degree programs.

### Grade point average

A grade-point average (G.P.A.) of 3.0 (B) must be maintained.

### Financial clearance

The student is expected to maintain a clear financial status at all times. Financial clearance must be obtained: (a) before registering for any class; (b) before receiving a certificate; or (c) before requesting a transcript, statement of completion, or other certification to be issued to any person, organization, or professional board.

### Graduation petition

A graduation petition must be submitted to the Office of Admissions and Academic Records by December 15 in order for the student to participate in commencement activities the following June, or at least one quarter before anticipated completion of certificate requirements.

### Application to a degree program

Participants completing an advanced certificate program or a second certificate program must apply to a degree program offered at the School of Public Health. In general, this will require adding the public health core courses (13 units) and any additional requirements of the degree program.

## NINE CERTIFICATE PROGRAMS

The School of Public Health offers eight certificate programs and information on certification as a fitness instructor for the American College of Sports Medicine.

- Certificate in basic biostatistics
- Certificate in basic epidemiology
- Certificate in advanced biostatistics
- Certificate in advanced epidemiology
- Certificate in epidemiological research methods
- Certificate in humanitarian assistance
- Certificate in reproductive health
- Certificate in tobacco-control methods
- Counsel on certification as ACSM fitness instructor

### Biostatistics and epidemiology

Five certificate programs are offered through the Department of Epidemiology and Biostatistics. These programs offer specific skills in the biostatistics and epidemiology areas to professionals and others who desire to add these skills to their practices in public health but who do not necessarily wish to earn degrees.

In addition, these programs may serve as an introduction to graduate study. Students who have the opportunity to complete the basic certificate programs may eventually enter the master's degree programs.

Students who successfully complete the basic certificate programs must apply for regular acceptance into a master's or doctoral degree program in the School of Public Health prior to taking course work toward a second or advanced certificate program.

The purpose of the certificate program in epidemiological research methods is to enable the holder to be more effective in applying for and designing research studies and surveys and to do basic descriptive analyses of collected data.

### Humanitarian assistance

The certificate in Humanitarian Assistance is offered through the Department of Global Health. The purpose of this regular certificate program is to familiarize participants with the complex issues and problems associated with the planning, organization, and management of disaster-relief services nationally and globally.

Upon the completion of this certificate program, participants will be able to:

- Plan the public health aspects of a refugee camp—including triage systems, health care, environmental control, and legal issues.
- Analyze the socioeconomic, political, and public health implications of violence in order to develop appropriate prevention and intervention strategies.
- Discuss the current world health programs, with a focus on ecological, demographic, developmental, and sociocultural determinants of health and delivery of primary health care services.
- Write a competitive proposal for grants and contracts.

### Reproductive health

The certificate in Reproductive Health is offered through the Department of Health Promotion and Education. The purpose of this regular certificate program is to familiarize participants with the complex issues associated with planning, implementing, and evaluating reproductive health programs for men and women.

Upon completion of this certificate program, participants will be able to:

- Describe key public health issues in the field of reproductive health.
- Utilize principles of behavior change in the promotion of reproductive health.
- Plan, implement, and evaluate public health programs addressing multifaceted, integrated programs in reproductive health based upon the current operational models.
- Write competitive proposals for grants and contracts in the field of reproductive health.

**Tobacco-control methods**

Tobacco consumption continues to be a major public health challenge both globally and in the U.S.A. According to the World Health Organization, an estimated 4.2 million deaths are attributable to tobacco use annually. In the U.S.A., more than 400,000 individuals (30 percent of cancer mortality) die from tobacco-related causes every year.

Although a variety of strategies are being used to address the tobacco problem, there is a dearth of academic-based programs to educate health professionals who will function as effective practitioners and researchers in tobacco-use prevention and treatment. The purpose of this interdepartmental collaborative program is to train participants in tobacco research that effectively integrates theory and field-based experience.

Upon completion of this certificate program, participants should be able to:

- Design a needs-assessment survey.
- Employ epidemiological and statistical research methods.
- Apply principles and methods in health education to foster behavior change.
- Plan, implement, and evaluate community-based programs.
- Advocate for policy change.
- Prepare a grant or contract proposal.
- Write publishable papers.
- Conduct strategic planning.

**Fitness instructor certification preparation**

For program details, see fitness instructor program in Section IV.

**DOCTORAL DEGREE PROGRAMS****DOCTOR OF PUBLIC HEALTH**

The Doctor of Public Health (Dr.P.H.) degree program is designed to provide comprehensive academic and research training in the field of public health. Students may enroll on a full- or part-time basis; however, they must advance to candidacy within four years of entering the program. Majors are available in: epidemiology, health education, global health, nutrition, and preventive care. A combined-degrees program is available with psychology. Information on requirements for a specific program may be found in Section IV of this CATALOG.

**Public health seminars**

Attendance is required at a minimum of twenty public health seminars for each doctoral degree sought. For further information, please refer to the public health seminar listed under the Master of Public Health degree in this section of the CATALOG.

**POSTDOCTORAL FELLOWSHIPS**

One-year fellowships may be available in various programs. They are tailored to the applicant's interest (in accordance with training opportunities), expressed needs, and funding. Details can be obtained from the dean.

The Doctor of Public Health (Dr.P.H.) degree program is designed to provide comprehensive academic and research training in the field of public health. Students may enroll on a full- or part-time basis; however, they must advance to candidacy within four years of entering the program. Majors are available in: epidemiology, health education, global health, nutrition, and preventive care. A combined-degrees program is available with psychology.

The faculty and the course descriptions for the doctoral degree programs are listed in the academic departments through which they are offered.

The programs offer training for careers in which advanced analytical and conceptual capabilities are required (e.g., teaching, research, consultation, and top-level administration). Students' research and dissertations are key components in the development of critical thinking related to public health and their major fields.

A minimum of two years is generally required to complete course work; however, the number of units required depends on the specific major chosen. Time to completion of dissertation is variable. Program plans are described under individual majors.

Students whose academic backgrounds include substantial graduate study in public health and/or the major field may be granted advanced standing. The number of units of course work required to complete the program may be reduced accordingly but is not to be less than 60 units plus dissertation units at Loma Linda University.

**LEARNER OUTCOMES**

Upon completion of the Doctor of Public Health degree program, students will be able to:

- Combine creativity with thoughtful application of the theoretical concepts of the major field and the principles of public health practice for advancement of knowledge, problem solving, and policy making.
- Initiate, organize, and pursue investigation of a significant research problem relevant to public health and the major field of study.
- Utilize advanced analytical and planning capabilities for leadership in a variety of settings.
- Develop and execute project and research proposals; design program and evaluation plans.
- Communicate knowledge and ideas to peers and to the public with consideration of ethical issues, lifestyle needs, cultural implications, and belief systems of the people.

**ADMISSION REQUIREMENTS**

Following are the admission requirements for the Doctor of Public Health degree program:

- A strong background and high academic performance in previous education.
- M.P.H. or M.S. degree in the major field or its equivalent; or a doctoral degree in a health-related field.
- Minimum cumulative G.P.A. of 3.2 in graduate study.

- Submission of GRE scores (taken within the past seven years).
- Statement of professional aspirations and goals.
- Experience beyond a master's degree in a health-related field, preferably that of the major, required by some programs.
- Recommendations indicating student's academic performance and leadership potential.
- Interview with the doctoral committee.

Applications must be submitted by January 15 to be considered in the March Admissions Committee. Applications must be submitted by March 15 to be considered in the June Admissions Committee. Foreign applicants should submit applications at least one month earlier.

### COMPREHENSIVE AND QUALIFYING EXAMINATIONS

Students are required to demonstrate ability and readiness to proceed with doctoral study and research by successfully passing appropriate comprehensive and/or qualifying examinations. The specific format and timing are dependent on the major field of study. Organization of the material, professional presentation, and reference to authorities in the field and the literature are expected.

### ADVANCEMENT TO CANDIDACY

Advancement to candidacy is granted by the dean; and a dissertation committee is formally appointed upon recommendation of the associate dean, provided students have:

- Given evidence of superior scholarship and ability.
- Fulfilled all course requirements.
- Satisfactorily passed the appropriate examinations.
- Received approval of the Dr.P.H. subcommittee for the research and dissertation proposal.

#### Time limit

Time lapse from first enrollment in the Dr.P.H. degree program to advancement to candidacy may not exceed four years.

### RESEARCH AND DISSERTATION

The dissertation is a scholarly statement of the results of original research. It should advance knowledge in the major field. It must be an independent investigation and is to include analysis and interpretation of data and discussion of findings. It should be skillfully written and of such scholarship and scientific value as to demonstrate a mastery of research methodology. Students are encouraged to use the publishable paper format (required in some majors) rather than the traditional form. The dissertation is defended orally before the doctoral research committee and presented publicly before invited faculty, peers, and the academic and health community. Additional information is detailed in the *School Handbook for doctoral students*.

### PUBLIC HEALTH SEMINARS

Attendance is required at a minimum of twenty public health seminars for each doctoral degree sought. For further information, please refer to the public health seminar description listed under the Programs and Degrees section of the CATALOG.

### TEACHING AND RESEARCH ASSISTANTSHIPS

A limited number of research and teaching assistantships are available. Students on assistantships make a time commitment for experience and may need to limit their academic load in order to participate in these activities.

### DOCTORAL DEGREE PROGRAMS

For School of Public Health doctoral degree program details SEE SECTION IV—PROGRAMS:  
Epidemiology, Doctor of Public Health (Dr.P.H.)  
Health Education, Doctor of Public Health (Dr.P.H.)  
Global Health, Doctor of Public Health (Dr.P.H.)  
Nutrition, Doctor of Public Health (Dr.P.H.)  
Preventive Care, Doctor of Public Health (Dr.P.H.)

### COMBINED-DEGREES PROGRAMS

The School of Public Health and the School of Science and Technology offer the following programs:

Health Education (M.P.H.) *with*  
Marriage and Family Counseling (M.S.);

Health Education (M.P.H.) *with*  
Nursing (M.S.);

Health Education (M.P.H.) *with*  
Clinical Psychology (Psy.D.); and

Preventive Care (Dr.P.H.) *with*  
Clinical Psychology (Psy.D.).

## Financial Information

The Office of the Dean is the final authority in all financial matters and is charged with the interpretation of all financial policies. Any exceptions to published policy in regard to reduction or reimbursement of tuition must be approved by the dean. Any statement by individual faculty members, program directors, or department chairs in regard to these matters is not binding on the School or the University unless approved by the dean.

Registration is not complete until tuition and fees on the required installment are paid; therefore, the student should be prepared to make these payments during scheduled registration for each academic year. There may be adjustments in tuition and fees as economic conditions warrant.

**GENERAL PRACTICES**

The student is expected to arrange for financial resources to cover all expenses before the beginning of each school year. Previous accounts with other schools or with this University must be settled prior to registration.

**TRAINEESHIPS**

United States Public Health Service Traineeships provide grant money in support of public health training to citizens of the United States or to persons having in their possession a visa granting permanent residence in the United States. Allocation is made by the school to those who demonstrate financial need and who undertake specified programs of study. Further availability is contingent upon congressional funding. Applications must be submitted for consideration by June 15. Applications are available from the School of Public Health Office of Financial Administration.

**ASSISTANTSHIPS**

A limited number of teaching and research assistantships are available through the academic departments and individual researchers. It is understood that the student will perform such duties as may be required by the one to whom the student is responsible, not to exceed half time. Students will be considered after they demonstrate knowledge and proficiency in the area in which they would work.

**APPLICATION FOR FINANCIAL AID**

Before a fellowship, traineeship, or assistantship is awarded, the student must have secured regular admission to the school. The academic record, financial need, and potential productivity are among the factors considered in the awarding of financial aid. Preference is given to complete applications received by May 15. Early application is advised.

**LOANS**

Loan funds may be available to School of Public Health students who show need as determined by a federal formula. Loans are restricted to citizens of the United States and certain eligible noncitizens. Certain funds are interest free while a student is enrolled at least half time. Inquiries about loans should be made to the Office of Financial Aid.

**SCHEDULE OF CHARGES**

Effective Summer Quarter 2003 (subject to change by trustee action):

**TUITION**

	<b>BACHELOR'S DEGREE</b>
\$380	Per unit: credit
190	Per unit: audit

**MASTER'S AND DOCTORAL DEGREES**

\$465	Per unit: credit (on and off campus)
232.50	Per unit: audit (on and off campus)

**SPECIAL TUITION CHARGES**

variable	Field practicum and internship
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**SPECIAL FEE**

\$399.67	"special fee" now charged by each School
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**SPECIAL CHARGES**

\$ 60	Application (nonrefundable)
100	Acceptance deposit for bachelor's degree
100	Acceptance deposit for master's degree students (applied on tuition, nonrefundable; not required for off-campus students)
250	Acceptance deposit for doctoral degree students (applied on tuition, nonrefundable)
50	Late-payment fee
10	Returned-check fee
50	Late-registration fee
2	Transcript of credit
25	Examination, other than regularly scheduled
50	Equivalency examination

**ON- AND OFF-CAMPUS STUDENT HOUSING**

Students may go to <[www.llu.edu/llu/housing](http://www.llu.edu/llu/housing)> for housing information and a housing application form.

**MISCELLANEOUS EXPENSES**

cost	Health care items not covered by health fee or insurance
cost	Breakage, damage, loss of University equipment

**AWARDS AND HONORS**

Students demonstrating superior scholarship, professionalism, and promise of future contribution to the field of public health may be nominated for recognition in several ways. Faculty members and staff are also eligible for certain awards.

**Chancellor's Award**

Given annually to the student who has demonstrated superior or excellent scholarship; actively participated in the affairs of the student and church communities; actively participated in general community service; and shown evidence of commitment to the highest ideals of the University.

**Dean's Award**

Given annually to the student who has demonstrated superior or excellent scholarship; actively participated in the affairs of the student and church communities; actively participated in general community service; and shown evidence of commitment to the highest ideals of the School of Public Health.

**Hulda Crooks Award**

Tuition assistance award made quarterly to students who personify a personal and professional commitment to health and fitness.

**P. William Dysinger Excellence in Teaching Award**

Awarded annually to a faculty member who exemplifies excellence in teaching, Christian commitment, and support for cultural diversity.

**Charlie Liu Award**

Awarded to an outstanding student, faculty, or staff member who reflects the life of Christ through a caring spirit, a listening heart, and a commitment to peace.

**Ruth White Award**

Awarded to an outstanding student at commencement each year who exemplifies a spirit of cooperation and leadership, helpfulness in scholastic efforts, and sensitivity to students from diverse cultures.

**Halverson Award**

Presented to a graduating student who exemplifies excellence and promise of leadership in health administration.

**Callicott-Register Award**

Tuition assistance awarded to qualified nutrition students.

**Glen Blix Award for Excellence in Preventive Care**

Given annually to the graduating doctoral student in preventive care who best exemplifies excellence and leadership in preventive care.

**Jeanne Weisseman Research Award**

Granted annually Spring Quarter to the Doctor of Public Health in preventive care student whose applied research project shows not only potential for practical application to the field of preventive care but also originality in the research design; and who shows financial need.

**Delta Omega**

Nomination is made annually for membership in Delta Omega, the national honor society for public health. Nominees must be from the top 10 percent of their class and demonstrate promise of significant contribution to the field of public health.

**National Deans' List**

Students graduating in the upper 10 percent of their class are listed in the National Deans' List, published by the American Association for Higher Education, 721 North McKinley Road, Lake Forest, IL 60045.

**Graduation with honors**

Superior academic performance is recognized for undergraduate students who at the end of the quarter preceding their final term have acquired a cumulative grade-point average for all college work, as follows:

Cum laude	3.5
Magna cum laude	3.8
Summa cum laude	3.9

**ADDITIONAL REQUIREMENTS**

For additional policies, governing Loma Linda University students, see Section II of this CATALOG, as well as the University *Student Handbook*. Students are responsible for informing themselves of and satisfactorily meeting all regulations pertinent to registration, matriculation, and graduation.





# The School of Science and Technology

## Programs, Degrees, and Certificates Offered

### UNDERGRADUATE CERTIFICATES

Chinese Studies for Health Care Professionals  
Spanish Studies for Health Care Professionals

### BACHELOR OF SCIENCE

Geology

### POSTBACCALAUREATE CERTIFICATES

Case Management  
Child Life Specialist  
Drug and Alcohol Counseling  
Family Counseling  
Family Life Education (family studies)  
Forensic Science

### CONCURRENT WITH MASTER'S OR POST-MASTER'S CERTIFICATE

Clinical Mediation  
Group Counseling  
School Counseling

### MASTER OF SOCIAL WORK

### MASTER OF SCIENCE

Biology  
Child Life Specialist  
Counseling  
Criminal Justice  
Geology  
Gerontology  
Marital and Family Therapy, LLU  
Marital and Family Therapy, CaUC  
Natural Sciences

### MASTER OF ARTS

Family Studies  
Psychology

### DOCTOR OF MARITAL AND FAMILY THERAPY (D.M.F.T.)

### DOCTOR OF PUBLIC ADMINISTRATION

### DOCTOR OF PSYCHOLOGY

### DOCTOR OF PHILOSOPHY

Biology  
Earth Science  
Family Studies  
Marital and Family Therapy  
Psychology  
Social Policy and Social Research  
Social Work, Clinical

### COMBINED-DEGREES PROGRAMS

Biology or Geology *with* Medicine or Dentistry  
Clinical Psychology *with* Health Education  
Clinical Psychology *with* Preventive Care  
Marital and Family Therapy *with* Clinical Ministry  
Marital and Family Therapy *with* Health Education  
Psychology *with* Biomedical and Clinical Ethics  
Psychology *with* Public Health  
Social Policy and Social Research *with* Biomedical and Clinical Ethics  
Social Work *with* Maternal and Child Health *or* Global Health

## Dean's Welcome

Picture yourself as an alumnus of Loma Linda University, serving anywhere in the world as a professional health care provider, educator, counselor, or scientist. Picture being highly successful and living a fulfilled life. That's the way we picture you! We see you joining the ranks of our many graduates who are in careers that transform lives. By attending Loma Linda University School of Science and Technology, you change the lives of your faculty and staff, the lives of those you serve professionally—and by doing so, you change your life positively.



The School of Science and Technology offers programs in the behavioral and natural sciences, blending the highest levels of scholarship with ethical, faith-based commitment in service to mankind. Our school creates an atmosphere of academic openness, a spirit of lifelong inquiry, and critical and analytical thinking. Diversity of thought and background is respected and celebrated at Loma Linda University.

If you picture yourself as a social worker, family counselor, psychologist, educator, policymaker, biologist, or geologist who wishes to make a positive difference in the lives of others, the environment, and society, then join us at Loma Linda University for one or more of the many academic programs offered in the School of Science and Technology.

Picture yourself as part of our academic family and be an integral part of our vision.

Sincerely,

Ronald L. Carter  
Dean, School of Science and Technology

## SCHOOL FOUNDATIONS

The School of Science and Technology (SST)—one of Loma Linda University's newest schools—includes the Departments of Earth and Biological Sciences, Counseling and Family Sciences, Psychology, and Social Work and Social Ecology. Many of the programs offered have matured on campus for a decade or more; one program was established half a century ago. The school offers degree programs through the doctoral level, postdegree certificates, and certificate programs in Chinese Studies and Spanish; as well as courses that meet the University's General Education requirements. Technology programs, such as instructional technology, are currently being developed by the school.

## PHILOSOPHY

The School of Science and Technology is mission-driven and academically incorporates the University's commitment to the teaching and healing ministry of Jesus Christ, which produces wholeness within transformed lives. Transformation is a lifelong faith and learning process—a process committed to pursuit of the highest levels of scholarship, professionalism, and spiritual well-being. This pursuit seeks to understand and promote healthy minds, communities, social systems, families, and the environment.

Wholeness for self and for others is central to a balance between mind, body and spirit. Such wholeness manifests itself in a life of service to humanity, to the environment, and to God.

The School of Science and Technology values the time-honored and separate traditions in higher education for academic and professional programs and advocates the integration of knowledge bases and research focus between and among the "pure" and "applied" sciences.

### Philosophy

In the School of Science and Technology of Loma Linda University, the essential concern of both faculty and students is the quest for meaning. Because this quest is served by knowledge, graduate students are obliged to achieve both broad and detailed mastery of their field of study. They also participate with the faculty in the process by which knowledge is augmented.

### Objectives

The School of Science and Technology attempts to create an environment favorable to the pursuit of knowledge and meaning by:

1. Making available to graduate students who wish to study in a Seventh-day Adventist Christian setting the education necessary for scholarly careers in the sciences and the health professions.
2. Encouraging development of independent judgment, mastery of research techniques, and contribution to scholarly communication.
3. Relating intellectual achievement to the service of mankind.

## Application and Admissions

### APPLICATION AND ACCEPTANCE

#### Application procedure

1. The application should be filled out and mailed, together with the application fee, to the School of Science and Technology Office of Admissions. (See Section II.) Applications and all supporting information, transcripts, test results, and references should be submitted before the beginning of the term for which admission is sought. Some programs require applications to be completed by a much earlier date.
2. Complete official transcripts of all academic records from all colleges, universities, and professional or technical schools should be provided. It is the applicant's responsibility to arrange to have the transcripts—including official English translations, if applicable—sent directly

by the registrar of each school attended to the School of Science and Technology Office of Admissions. Transcripts that come via an intermediary are unacceptable.

3. A personal interview is often desirable and should be arranged with the coordinator of the program in which the student wishes to study.

#### Acceptance procedure

1. When the program that the student wishes to enter has evaluated the applications and made its recommendation, the dean of the School of Science and Technology takes official action and notifies the applicant. The formal notice of admission should be presented at registration as evidence of eligibility to enter the School of Science and Technology.
2. As part of registration, accepted students will be asked to file with student health service a medical history with evidence of certain immunizations.
3. Transcripts of records and all other application documents are retained by the University and may not be withdrawn and used for any purpose. Records of students who do not enroll or who withdraw prior to completion are retained for two years from the date of original acceptance to the School of Science and Technology program.

### ADMISSION REQUIREMENTS

A four-year baccalaureate degree (or its equivalent) from an accredited college or university is a prerequisite for admission to the School of Science and Technology. Transcripts of the applicant's scholastic record should show appropriate preparation, in grades and content, for the curriculum chosen. Since there is some variation in the pattern of undergraduate courses prescribed by different programs, the student should note the specific requirements of the chosen program. Deficiencies may be fulfilled while enrolled; prerequisites must be completed prior to matriculation.

#### Scholarship

Applicants are expected to present an undergraduate record with a grade-point average of B (3.0) or better in the overall program and in the field of the major. Some students with an overall grade-point average between 2.5 and 3.0 may be admitted provisionally to graduate standing, provided the grades of the junior and senior years are superior or there is other evidence of capability.

#### Graduate Record Examinations

Scores on the general test of the Graduate Record Examination (GRE) are required with applications for admission to many degree programs. New test scores are needed if it has been over five years since the last test was taken. Applicants are advised to request information specific to their proposed program of study. Students may address inquiries about these examinations to Graduate School's Office of Admissions, which can provide application forms and information about special administration of the examination on days other than Saturday.

Application forms for the GRE and information regarding examination times and places are furnished

by Educational Testing Service, 1947 Center Street, Berkeley, CA 94701 (for the West); and P.O. Box 6000, Princeton, NJ 08541 (for the East). For GRE publications (including study materials) call 800/537-3160. Also visit the GRE Web site at <http://www.gre.org> for more information on online registration, sample test questions, frequently asked questions, etc.

When pressure of time makes it impossible to secure the results of the GRE or its alternatives, students seeking admission who have otherwise above-average achievement may be admitted provisionally, subject to review when the required test results are received. In such cases, test results are to be submitted within the first quarter of attendance. Certain programs with limited admissions may require the GRE results prior to acceptance, while some programs require the subject test. Please check student guides from individual programs for further information.

Programs that do not require the GRE must submit one additional measure of a candidate's preparation for graduate study. This may be either an evaluation of critical essay writing skills, the Miller analogy test, or the results of a structured interview.

#### Re-entrance

Students who are currently enrolled in the School of Science and Technology may request transfer to a different program or a more advanced degree level by completing an application form and submitting two letters of reference along with the appropriate fee. Transcripts on file with the University are acceptable.

#### English competence

All international students are encouraged (particularly those who do not have an adequate score on TOEFL or MTELP or other evidence of English proficiency) to attend an intensive American Language Institute prior to entering their program. Further information about opportunities for such programs can be obtained from the Office of Admissions. Further study of English may be required to assure academic progress.

### FROM MASTER'S TO PH.D. DEGREE

#### Bypassing master's degree

A graduate student at this University may proceed first to a master's degree. If at the time of application the student wishes to qualify for the Doctor of Philosophy degree, this intention should be declared even if the first objective is a master's degree.

If after admission to the master's degree program a student wishes to go on to the doctoral degree, an application form should be submitted, along with letters of reference, to the dean of the School of Science and Technology. If the award of the master's degree is sought, the student will be expected to complete that degree before embarking on doctoral activity for credit. A student who bypasses the master's degree may be permitted, on the recommendation of the guidance committee and with the consent of the dean, to transfer courses and research that have been completed in the appropriate field and are of equivalent quality and scope to his/her doctoral program.

#### Second master's degree

A student who wishes to qualify for an additional master's degree in a different discipline may apply.

The dean of the School of Science and Technology and the faculty of the program the student wishes to enter will consider such a request on its individual merits.

#### **Concurrent admission**

Students may not be admitted to a School of Science and Technology program while admitted to another program at this University or elsewhere. The exceptions to this are the combined-degrees programs, discussed in the following paragraph.

#### **Combined degrees**

The School of Science and Technology provides for concurrent registration for two degrees only in its combined science/professional degrees programs—M.D./M.S., M.S.W./M.P.H., D.D.S./M.S., Psy.D./Dr.P.H., Psy.D./M.P.H., M.A./Ph.D., Ph.D./M.P.H., M.S./M.A. (marital and family therapy/clinical ministry), and M.S./M.P.H. Concurrent application is required in some but not all of these: See Programs and Degrees in Section IV of this CATALOG. See Combined-Degrees Programs in Section IV.

### **CERTIFICATE PROGRAMS**

The School of Science and Technology offers several postbaccalaureate certificate programs. Students accepted into such programs will be assigned to an adviser who will work with them as they fulfill the program requirements. Students will be required to maintain a B- (2.7) grade-point average, with no course grade below C (2.0). All certificate students are required to take at least one 3-unit religion course (numbered between 500 and 600).

#### **MASTER OF ARTS**

#### **MASTER OF SCIENCE**

#### **MASTER OF SOCIAL WORK**

#### **Adviser and guidance committee**

Each student accepted into a degree program is assigned an adviser who helps to arrange the program of study to meet University requirements; subsequently (no later than when applying for candidacy), the student is put under the supervision of a guidance committee. This committee is responsible to and works with the coordinator of the student's program in arranging courses, screening thesis topics (where applicable), guiding research, administering final written and/or oral examinations, evaluating the thesis and other evidence of the candidate's fitness to receive the degree, and ultimately recommending the student for graduation.

#### **Subject prerequisites and deficiencies**

Gaps in an applicant's academic achievement will be identified by subject and classified either as prerequisites or as subject deficiencies. Applicants lacking certain subject or program prerequisites are not admitted to the master's degree program until the prerequisites are completed (at Loma Linda University or elsewhere) and acceptable grades are reported. However, subject deficiencies do not exclude an applicant from admission or enrollment; but they must be removed as

specified by the adviser or dean, usually during the first full quarter of study at this University.

#### **Study plan**

The student's adviser should develop with the student a written outline of the complete graduate experience, with time and activity specified as fully as possible. This will serve as a guide to both the student and the adviser as well as to members of the guidance committee when it is selected.

The study plan is changed only after careful consultation. The student is ultimately responsible for ensuring both timely registration and completion of all required courses.

#### **Time limit**

The time allowed from admission to the School of Science and Technology to conferring of the master's degree may not exceed five years. Some consideration may be given to a short extension of time if in the dean's opinion such is merited.

Course credit allowed toward the master's degree is nullified seven years from the date of course completion. Nullified courses may be revalidated, upon successful petition, through reading, conferences, written reports, or examination to assure currency in the content.

#### **Residence**

Students must meet the residence requirements indicated for their particular program (never less than one academic quarter). The master's degree candidate must complete one quarter of full-time study at the University or perform the thesis research at the University. Although students may register for up to 12 units each quarter, a student is considered in full-time residence if registered for at least 8 units.

#### **Minimum required grade-point average**

The required minimum grade average is B (3.0) with no course grade below C (2.0) on all work for the master's degree. This average must be maintained in formal courses and in research, computed separately. A student submitting transfer credits must earn a B grade average on all work accepted for transfer and on all work taken at this University, computed separately.

#### **Research competence**

Student skills required in languages, investigation, and computation are specified in each program description in this CATALOG.

#### **Comprehensive and final examinations**

The student must take the written, oral, and final examinations prescribed by the program on or before the published dates. If a candidate fails to pass the final oral or written examination for a graduate degree, the examining committee files with the dean a written analysis of the candidate's status, with recommendations regarding the student's future relation to the School. The student receives a copy of the committee's recommendation.

#### **Thesis**

Students writing a thesis must register for at least one unit of thesis credit. The research and thesis preparation are under the direction of the student's guidance committee. The student is urged to secure the commit-

tee's approval of the topic and research design as early as possible. Such approval must be secured before petition is made for candidacy.

The student must register and pay tuition for thesis credit whether the work is done in residence or in absentia. If the student has been advanced to candidacy, has completed all course requirements, and has registered for but not completed the research and thesis, continuous registration is to be maintained until the manuscript has been accepted. This involves a quarterly fee of \$65 (2005-2006) paid at the beginning of each quarter. A similar continuing registration fee is assessed for each quarter the student fails to register for new units.

### Candidacy

Admission to the School of Science and Technology or designation of regular graduate standing does not constitute admission of the student to candidacy for a graduate degree. After achieving regular status, admission to candidacy is initiated by a written petition (School of Science and Technology Form A) from the student to the dean, on recommendation of the student's adviser and the program coordinator or department chair.

Students petitioning the School of Science and Technology for candidacy for the master's degree must present a satisfactory grade record, include a statement of the proposed thesis or dissertation topic (where applicable) that has been approved by the student's guidance committee, and note any other qualification prescribed by the program. Students are usually advanced to candidacy during the third quarter after entering their course of study toward a degree in the School of Science and Technology.

### Specific program requirements

In addition to the foregoing, the student is subject to the requirements stated in the section of the CATALOG governing the specific program chosen.

### Religion requirement

All master's degree students are required to take at least one 3-unit religion course. Courses (numbered between 500 and 600) in social ethics, bioethics, psychology of religion, and philosophy of religion meet this requirement.

### Combined-master's degrees programs

A number of combined-degrees programs are offered, each intended to provide more comprehensive preparation in clinical applications and the biomedical sciences. Both require concurrent admission to two programs in the School of Science and Technology and/or a professional school in the University. These curricula are described in greater detail under the heading "Combined-Degrees Programs" in Section IV of the CATALOG.

## THESIS AND DISSERTATION

The student's research and thesis or dissertation preparation are under the direction of the student's guidance committee. The student is urged to secure the committee's approval of the topic and research design as early as is feasible. Such approval must be secured before petition is made for advancement to candidacy.

### Format guide

Instructions for the preparation and format of the publishable paper, thesis, or dissertation are in the "Thesis and Dissertation Format Guide," available at the School of Science and Technology Office of Admissions. Consultation with the Office of Admissions can help the student avoid formatting errors that would require him/her to retype large sections of manuscript. The last day for submitting copies to the school office in final approved form is published in the Events Calendar (available from the academic dean's office).

### Binding

A fee will be assessed to cover the cost of binding copies of thesis or dissertation to be deposited in the University library and the appropriate department or school collection. This same fee will also apply to personal copies bound at the student's request.

## DOCTOR OF PHILOSOPHY

The Doctor of Philosophy degree is awarded for evidence of mature scholarship; productive promise; and active awareness of the history, resources, and demands of a specialized field.

### Adviser and guidance committee

Each student, upon acceptance into a degree program, is assigned an adviser who helps arrange the study program. Subsequently (no later than when applying for candidacy), the student is put under the supervision of a guidance committee. The School of Science and Technology requires advisers for Doctor of Philosophy degree candidates to have demonstrated consistent research productivity in their chosen disciplines. Each program maintains a list of qualified doctoral degree mentors. The guidance committee, usually chaired by the adviser, is responsible to and works with the coordinator of the student's program in arranging course sequences, screening dissertation topics, recommending candidacy, guiding research, administering written and oral examinations, evaluating the dissertation/project and other evidence of the candidate's fitness to receive the degree, and recommending the student for graduation.

### Subject prerequisites and deficiencies

Gaps in an applicant's academic achievement will be identified by subjects and classified as either prerequisites or as subject deficiencies.

Applicants lacking subject or program prerequisites are not admitted to the Ph.D. degree program until the prerequisites are completed (at Loma Linda University or elsewhere) with acceptable grades.

Subject deficiencies do not exclude an applicant from admission or enrollment; but they must be removed as specified by the adviser or dean, usually at the beginning of the graduate experience at this University.

### Study plan

The student's adviser should develop with the student a written outline of the complete graduate experience, with time and activity specified as fully as possible. This serves as a guide to both the student and the adviser as well as to members of the guidance committee when it is selected. The study plan is changed only after careful consultation. The student is ultimately

responsible for ensuring both timely registration and completion of required courses.

#### **Time limit**

Completion of the graduate experience signals currency and competence in the discipline. The dynamic nature of the biological sciences makes dilatory or even leisurely pursuit of the degree unacceptable. Seven years are allowed for completion after admission to the Ph.D. degree program. Extension of time may be granted on petition if recommended by the guidance committee to the dean of the School of Science and Technology.

Course credit allowed toward the doctorate is nullified eight years from the date of course completion. Nullified courses may be revalidated, upon successful petition, through reading, conference, written reports, or examination to assure currency in the content.

#### **Residence**

The School of Science and Technology requires two years of residency for the doctoral degrees—D.M.F.T., Psy.D., Ph.D.—spent on the campus of the University after enrollment in a doctoral degree program. During residence, students devote full time to graduate activity in courses, research, or a combination of these. A full load of courses is 8 or more units each quarter; 36 or more clock hours per week is full time in research.

Students may be advised to pursue studies for limited periods at special facilities not available at Loma Linda University. Such time may be considered residence if the arrangement is approved in advance by the dean of the School of Science and Technology.

The spirit and demands of doctoral degree study require full-time devotion to courses, research, reading, and reflection. But neither the passage of time nor preoccupation with study assures success. Evidence of high scholarship and original contribution to the field or professional competence form the basis for determining the awarding of the degree.

#### **Minimum required grade-point average**

Students must maintain a grade-point average of at least a B (3.0) to continue in regular standing toward the doctorate. This average is to be computed separately for courses and research. Courses in which a student earns a grade between C (2.0) and B (3.0) may or may not apply toward the degree, at the discretion of the guidance committee. A student submitting transfer credits must earn a B average on all work accepted for transfer credit and on all work taken at this University, computed separately.

#### **Clinical probation**

Programs with a clinical component may recommend that the student be placed on clinical probation. Details are contained in the program guides for the programs concerned.

#### **Research competence**

Doctoral degree students demonstrate research competence by their investigative activities. Expectations and standards of achievement with the tools of investigation, natural and synthetic languages, and computers are specified for each program in Section IV of this CATALOG .

#### **Comprehensive examinations**

The doctoral degree candidate is required to take comprehensive written and oral examinations over the principal areas of study to ascertain capacity for independent, productive, scientific work; and to determine whether further courses are required before the final year of preparation for the doctorate is undertaken. The program coordinator is responsible for arranging preparation and administration of the examination, as well as its evaluation and subsequent reports of results. Success in the comprehensive examination is a prerequisite to candidacy (see below).

Students cannot be admitted to the examination until the following requirements have been met:

- demonstrated reading knowledge of one foreign language, if applicable;
- completed the majority of units required beyond the master's degree or its equivalent.

#### **The final oral examination**

After completion of the dissertation and not later than a month before the date of graduation, the doctoral degree candidate is required to appear before an examining committee for the final oral examination.

If a candidate fails to pass this final examination for a graduate degree, the examining committee files with the dean a written analysis of the candidate's status, with recommendations about the student's future relation to the School. The student receives a copy of the committee's recommendation.

#### **Project**

##### **(required for the Doctor of Psychology degree)**

All Doctor of Psychology degree students must register for at least 1 unit of project credit. This should be done in the last quarter of registration prior to completion.

The research and project preparation are under the direction of the student's guidance committee. The student is urged to secure the committee's approval of the topic and research design as early as possible. Such approval must be secured before petition is made for advancement to candidacy.

If the student has been advanced to candidacy, has completed all course requirements, and has registered for but not completed the research and project, continuous registration is maintained until the manuscript is accepted. This involves a quarterly fee of \$65 (2005-2006) paid during registration each quarter. A similar continuing registration fee is assessed for each quarter the student fails to register for new units.

#### **Dissertation**

##### **(required for the Doctor of Philosophy degree)**

All doctoral students must register for at least 1 unit of dissertation credit. This should be done in the last quarter of registration prior to completion.

The research and dissertation preparation are under the direction of the student's guidance committee. The student is urged to secure the committee's approval of the topic and research design as early as possible. Such approval must be secured before petition is made for advancement to candidacy.

Consultation with School of Science and Technology Office of Admissions can prevent the student from committing formatting errors that would require retyping large sections of the manuscript.

Students register and pay tuition for the dissertation whether the work is done in residence or in absentia. If the student has been advanced to candidacy, has completed all course requirements, and has registered for but not completed the research and dissertation, continuous registration is maintained until the manuscript is accepted. This involves a quarterly fee of \$65 (2005-2006), paid during registration each quarter. A similar continuing registration fee is assessed for each quarter the student fails to register for new units.

Doctoral dissertations are reported to University Microfilms International and to the National Opinion Research Center. The School of Science and Technology office provides appropriate information and forms.

#### **Candidacy**

Admission to the School of Science and Technology does not constitute candidacy for a graduate degree. Admission to candidacy is initiated by a written petition (School of Science and Technology Form A) from the student to the dean, with support from the student's adviser and the program chair.

The student's petition for candidacy for the Doctor of Philosophy degree will include, in addition, confirmation that comprehensive written and oral examinations have been passed.

Students expecting the award of the doctorate at a June graduation should have achieved candidacy no later than the previous November 15. One full quarter must be allowed between the achievement of candidacy and the quarter of completion.

#### **Specific program requirements**

Doctoral programs differ from each other. The unique program requirements appear in the programs section of this CATALOG (Section IV) and in the program guides available from specific departments.

#### **Religion requirement**

All doctoral students take at least one 3-unit religion course. Courses (numbered between 500 and 600) in social ethics, bioethics, psychology of religion, and philosophy of religion meet this requirement.

#### **Combined-degrees programs**

A number of combined-degrees programs are offered, each intended to provide additional preparation in clinical, professional, or basic areas related to the student's field of interest. All require concurrent admission to the School of Science and Technology and a professional school in the University. These curricula are described in greater detail below under the heading Combined-Degrees Programs, Section IV.

The combined-degrees programs provide opportunity for especially well-qualified and motivated students to pursue professional and graduate education; and to prepare for careers in clinical specialization, teaching, or investigation of problems of health and disease in man.

For admission to a combined-degrees program, the student must have a baccalaureate degree; must qualify for admission to the School of Science and Technology; and must already be admitted to the School of Medicine, the School of Dentistry, Faculty of Religion, or the School of Public Health. Application may be made at any point in the student's progress in the professional school, though it is usually made during the sophomore year. Students in this curriculum

study toward the M.A., M.S., M.S.W., Psy.D. or Ph.D. degree.

Students may be required to interrupt their professional study for two or more years (as needed) for courses and research for the graduate degree sought. Elective time in the professional school may be spent in meeting School of Science and Technology requirements.

The student's concurrent status is regarded as continuous until the program is completed or until discontinuance is recommended by the School of Science and Technology or the professional school. The usual degree requirements apply.

#### **Master of Science in marital and family therapy with**

#### **Master of Public Health**

#### **Master of Science in marital and family therapy with**

#### **Master of Arts in clinical ministry**

These two combined-degrees programs allow the M.P.H. or M.A. degree student in clinical ministry to dual-count units with the master's degree in marital and family therapy. This enables the student to be awarded the combined-degrees in less time than would be required by the separate programs.

#### **Master of Social Work with**

#### **Master of Public Health**

This combined-degrees program earns the student an M.S.W. in social work with an M.P.H. in maternal, and child health or global health. See Section IV.

#### **Master of Arts in biomedical and clinical ethics with**

#### **Doctor of Psychology**

This combined-degrees program gives the psychology student the opportunity to be enriched through the study and understanding of ethical issues, as is recommended by the American Psychological Association. It also adds the psychological component often missing in the field of biomedical ethics.

#### **Doctor of Public Health with**

#### **Doctor of Psychology**

The program enables a Dr.P.H. degree student to meet his/her elective and religion requirements with appropriate courses from the Psy.D. degree program, and allows work on the dissertation in an area that is acceptable for the Psy.D. project—thus obtaining the combined-degrees in less time than is required by the separate programs. See Combined-Degrees Programs, Section IV.

## **Student Life**

The information on student life contained in this CATALOG is brief. The *Student Handbook* more comprehensively addresses University and School expectations, regulations, and policies and is available to each registered student. Students need to familiarize themselves with the contents of the *Student Handbook*. Additional information regarding policies specific to a particular school or program within the University is available from the respective School.

## Academic Information

### CONDITIONS OF REGISTRATION, RESIDENCE, ATTENDANCE

#### Academic residence

A student must meet the residence requirements indicated for a particular degree, never less than one academic quarter. A year of residence is defined as three quarters of academic work. The master's degree candidate must complete one quarter of full-time study or perform the thesis research work at the University or an approved off-campus location. A student is in full-time residence if registered for at least 8 units. A maximum of 12 units may be taken without special petition unless the student is enrolled in an approved block-registration program.

#### Transfer credits

Transfer credits will not be used to offset work at this University that is less than a B average. This transfer is limited to credits that have not already been applied to a degree and for which a grade of B (3.0) or better has been recorded. A maximum of 9 quarter units that have been previously applied to another degree may be accepted as transfer credits upon petition. A candidate who holds a master's degree or presents its equivalent by transcript may receive credit up to 54 quarter units subject to the consent of the dean and the department chair involved. In such instances the transfer student is not relieved of residence requirements at this University.

#### Graduate Record Examinations

Degree students whose overall grade-point average falls below a 3.0 will be placed on academic probation. Students who are on academic probation and fail to make a 3.0 for the next quarter or who fail to have a 3.0 G.P.A. overall after 2 quarters may be dismissed from school.

## Financial Information

### SCHEDULE OF CHARGES (2005-2006)

#### TUITION

- \$465 Per unit, credit.
- \$233 Per unit, audit.

#### SPECIAL CHARGES

- \$60 Application fee.
- \$100 Application fee for combined degrees.
- \$65 Continuous-registration fee each quarter for which no tuition is paid.
- \$60 Fee for credit by examination.
- \$30 Per unit fee to have credit earned by examination appear on transcript.
- \$40 Application to change program or degree.





# The Faculty of Graduate Studies

The Faculty of Graduate Studies oversees doctoral and master's degrees, as well as combined-degrees programs.

## Dean's Welcome

We are very pleased that you have chosen to continue your education at Loma Linda University in a graduate program supervised by the Faculty of Graduate Studies. The Faculty is a organization of scholars, scientists and educators whose mission is to enhance the quality of research, scholarship and discovery throughout the University. It cooperates with the seven schools in providing graduate programs that meet the highest academic and intellectual standards.



Loma Linda University is a religious, nonprofit health science campus dedicated to creating learning environments that enable students to develop personal wholeness, to train for careers that serve local, national and international communities and to accept every person as having equal worth in the sight of God. Its mission is embodied in the Good Samaritan tableau that occupies a central position on the campus.

The Faculty of Graduate Studies encourages students to engage in original research and creative study that will expand the opportunities for wholeness, service and mutual respect. You will find vigorous academic programs among the degrees sponsored by the Faculty, studies that will stretch your mind, encourage you to expand the boundaries of knowledge, understand your world, and apply Christian principles to your life and profession.

Our faculty and staff are here to assist you as you prepare for a career of creative service. Feel free to contact us by e-mail at <graduatestudies@llu.edu> or by calling toll free 1-800-422-4LLU.

Anthony J. Zuccarelli  
Interim Dean

### FOUNDATIONS OF GRADUATE STUDY

Recognizing the need to provide advanced education, the College of Medical Evangelists (CME) organized its School of Graduate Studies in 1954. The new school conferred a Ph.D. degree in 1958, the first Ph.D. to be awarded by a Seventh-day institution of higher education.

In 1961 when CME became Loma Linda University, the University assumed oversight of the graduate education conducted by La Sierra College in Riverside, California. By 1963 the School of Graduate Studies had been renamed the Graduate School, with a home in a new building, named Frederick Griggs Hall, in honor of a former department chair. The two cam-

pus comprising Loma Linda University—La Sierra and Loma Linda—were separated in 1990.

In 2005 the Graduate School was restructured as the Faculty of Graduate Studies. It continues to provide oversight of graduate programs, supported by other schools of the University; promotes and encourages independent judgment, mastery of research techniques, and contribution to scholarly communication; and relates intellectual achievements to the service of mankind.

### PHILOSOPHY

In the Faculty of Graduate Studies of Loma Linda University, the essential concern of both faculty and students is the quest for meaning. Because this quest is served by knowledge, graduate students are obliged to achieve both broad and detailed mastery of their field of study. They also participate with the faculty in the process by which knowledge is augmented.

### OBJECTIVES

The Faculty of Graduate Studies attempts to create an environment favorable to the pursuit of knowledge and meaning by:

1. Making available to graduate students who wish to study in a Seventh-day Adventist Christian setting the education necessary for scholarly careers in the sciences and the health professions.
2. Encouraging development of independent judgment, mastery of research techniques, and contribution to scholarly communication.
3. Relating intellectual achievement to the service of mankind.

## General Regulations

Students of the University are responsible for informing themselves of and satisfactorily meeting all regulations pertinent to registration, matriculation, and graduation. Section III gives the general setting for the programs of each school. The subject and unit requirements for admission to individual professional programs are outlined in Section IV. It is important to review specific program requirements (Section IV) in the context of the general requirements (Section III) applicable to all programs.

## Application and Admissions

The program admissions committees of the University intend that an applicant to any of the schools is qualified for the proposed curriculum and is capable of profiting from the educational experience offered by this University. The admissions committees of the schools accomplish this by examining evidence of scholastic competence, moral and ethical standards, and significant qualities of character and personality. Applicants are considered for admission only on the recommendation of the program in which study is desired.

### Scholarship

Applicants are expected to present an undergraduate record with a grade-point average of B (3.0) or better in the overall program and in the field of the major. Some students with an overall grade-point average between 2.5 and 3.0 may be admitted provisionally to graduate standing, provided the grades of the junior and senior years are superior or there is other evidence of capability.

### FROM MASTER'S TO PH.D. DEGREE

#### Bypassing master's degree

A graduate student at this University may proceed first to a master's degree. If at the time of application the student wishes to qualify for the Doctor of Philosophy degree, this intention should be declared even if the first objective is a master's degree.

If after admission to the master's degree program a student wishes to go on to the doctoral degree, an application form should be submitted, along with letters of reference, to the dean of the respective school(s). If the award of the master's degree is sought, the student will be expected to complete that degree before embarking on doctoral activity for credit. A student who bypasses the master's degree may be permitted, on the recommendation of the guidance committee and with the consent of the dean, to transfer courses and research that have been completed in the appropriate field and are of equivalent quality and scope to his/her doctoral program.

## Student Life

The information on student life contained in this CATALOG is brief. The *Student Handbook* more comprehensively addresses University and school expectations, regulations, and policies and is available to each registered student. Students need to familiarize themselves with the contents of the *Student Handbook*. Additional information regarding policies specific to a particular school or program within the University is available from the respective school.



## Academic Information

Students are responsible for informing themselves of the policies and regulations pertinent to registration, matriculation, and graduation; and for satisfactorily meeting these requirements.

## Financial Information

Registration is not complete until tuition and fees on the required installment are paid; therefore, the student should be prepared to make these payments during scheduled registration for each academic year. There may be adjustments in tuition and fees as economic conditions warrant.

### GENERAL FINANCIAL PRACTICES

The student is expected to arrange for financial resources to cover all expenses before the beginning of each school year. Previous accounts with other schools or this University must have been settled.

### ON- AND OFF-CAMPUS STUDENT HOUSING

Students may go to [www.llu.edu/llu/housing](http://www.llu.edu/llu/housing) for housing information and a housing application form.

### ADDITIONAL REQUIREMENTS

For additional policies, governing Loma Linda University students, see Section II of this CATALOG, as well as the University *Student Handbook*. Students are responsible for informing themselves of and satisfactorily meeting all regulations pertinent to registration, matriculation, and graduation.



# Faculty of Religion

## Degrees Offered

### MASTER'S DEGREE PROGRAMS

Biomedical and Clinical Ethics  
Clinical Ministry  
Religion and the Sciences

### CERTIFICATE PROGRAMS

Biomedical and Clinical Ethics  
Clinical Ministry

### COMBINED-DEGREES PROGRAMS

Biomedical and Clinical Ethics *with* Psychology  
Biomedical and Clinical Ethics *with* Medicine  
Biomedical and Clinical Ethics *with* Advanced Practice Nursing  
Biomedical and Clinical Ethics *with* Social Policy and Social Research  
Biomedical and Clinical Ethics *with* Dentistry  
Clinical Ministry *with* Marital and Family Therapy

## Dean's Welcome



The Faculty of Religion is pleased to serve the seven schools of Loma Linda University by offering a variety of courses in religious studies. It is our desire that this CATALOG will provide interested students additional insight about the University's offerings in the areas of ethical, relational, and theological courses and the

professors who instruct them. It is our objective that matriculating students and their advisers will discover the information needed to make practical choices in planning their programs.

This CATALOG also contains insights for current and prospective students about the three graduate programs designed and directed by the Faculty of Religion: (1) the M.A. degree in biomedical and clinical ethics, (2) the M.A. degree in clinical ministry, and (3) the M.A. degree in religion and the sciences. These specialized academic/clinical programs are attracting a growing number of national and international students. It is our goal that readers searching this CATALOG will share our enthusiasm and enroll in the program of their choice. Information and application materials are available if you call 1/866/558-6270 or contact us by e-mail at religionma@llu.edu

On behalf of each professor and staff member in the Faculty of Religion, let me personally invite you to consider the courses and programs described for a rich and challenging Loma Linda University experience that will strengthen and enrich your faith, broaden your spiritual and academic horizons, and enhance your ability for Christian service.

Yours in service,

*David L. Taylor*

David L. Taylor, D.Min.  
Interim Dean  
Associate Dean

To communicate with the Faculty of Religion—  
E-mail: [dltaylor@llu.edu](mailto:dltaylor@llu.edu)  
Web site: <http://www.llu.edu/llu/fr/>

## HISTORY

In the configuration of Loma Linda University as a health-sciences university, the role of religion as integrative in each of the programs of the University is mandated and continuously affirmed by the University administration and the Board of Trustees.

In July of 1990, the Faculty of Religion (originally the School of Religion) was established to assist in this integration.

## PHILOSOPHY

As implied by its motto, "TO MAKE MAN WHOLE," the University affirms these tenets as central to its view of education:

- God is the creator and sustainer of the universe.
- Mankind's fullest development entails a growing understanding of the individual in relation to both God and society.
- The quest for truth and professional expertise, in an environment permeated by religious values, benefits the individual and society and advances the ministry of the Seventh-day Adventist Church.

## MISSION STATEMENT

The Faculty of Religion is committed to the following four tasks as informed by the teachings and practice of the Seventh-day Adventist heritage and mission:

1. To promote Christian wholeness for faculty and students in their personal and professional lives and witness.
2. To provide a religion curriculum with the following emphases:
  - Theological studies (biblical, historical, doctrinal, mission, and philosophical).
  - Ethical studies.
  - Relational studies (applied theology, clinical ministry, and psychology of religion).
3. To foster and support research in theological, ethical, and relational disciplines.
4. To serve the University, the church, and the larger world community by personal involvement in fostering deeper spirituality, theological integrity, and social justice.

## General Regulations

Students of the University are responsible for informing themselves of and satisfactorily meeting all regulations pertinent to registration, matriculation, and graduation. Section III gives the general setting for the programs of each school. The subject and unit requirements for admission to individual professional programs are outlined in Section IV. It is important to review specific program requirements (Section IV) in the context of the general requirements (Section III) applicable to all programs.

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The program admissions committees of the University intend that an applicant to any of the schools is qualified for the proposed curriculum and is capable of profiting from the educational experience offered by this University. The admissions committees of the schools accomplish this by examining evidence of scholastic competence, moral and ethical standards, and significant qualities of character and personality. Applicants are considered for admission only on the recommendation of the program in which study is desired.

### APPLICATION AND ACCEPTANCE

#### Where to write

Inquiries regarding application and admission should be addressed to:

Office of Admissions  
Faculty of Religion  
Loma Linda University  
Loma Linda, CA 92350

#### Application procedure

1. Two copies of the graduate application should be filled out and mailed, together with the application fee, to the above address. Applications and all supporting information, transcripts, test results, and references should be submitted at least two months before the beginning of the term for which admission is sought. Some programs require applications to be completed by a much earlier date.
2. Two complete official transcripts of all academic records from all colleges, universities, and professional or technical schools should be provided. It is the applicant's responsibility to arrange to have the transcripts, including official English translations if applicable, sent directly by the registrar of each school attended to the Faculty of Religion Office of Admissions. Transcripts that come via an intermediary are unacceptable.
3. A personal interview is often desirable and should be arranged with the coordinator of the program in which the student wishes to study.

### ADMISSION REQUIREMENTS

A four-year baccalaureate degree (or its equivalent) from an accredited college or university is a prerequisite for admission to the Faculty of Religion. Transcripts of the applicant's scholastic record should show appropriate preparation, in grades and content, for the curriculum chosen. Since there is some variation in the pattern of undergraduate courses prescribed by different programs, the student should note the specific requirements of the chosen program. Deficiencies may be removed while enrolled; prerequisites must be completed prior to acceptance into the program.

#### Scholarship

Applicants are expected to present an undergraduate record with a grade point average of B (3.00) or better in the overall program and in the field of the major. Some students with an overall grade point average

between 2.50 and 3.00 may be admitted provisionally to graduate standing, provided the grades of the junior and senior years are superior, or there is other evidence of capability.

#### Academic probation

Degree students whose cumulative G.P.A. at the end of any quarter is less than 3.0 will be placed on academic probation. The number of units for subsequent registrations is restricted to a maximum of 12 per quarter. Students who are on academic probation and fail to make a 3.0 for the next quarter, or who fail to have a 3.0 G.P.A. overall after two quarters, jeopardize their standing in a degree or certificate program and may be dismissed from school.

#### Concurrent admission

Students may not be admitted to a Faculty of Religion program while admitted to another program at this University or elsewhere. The exception to this is the combined-degrees programs, discussed in Section IV of this CATALOG under Combined-Degrees Programs.

## Financial Information

The Office of the Dean is the final authority in all financial matters and is charged with the interpretation of all financial policies. Any exceptions to published policy in regard to reduction or reimbursement of tuition must be approved by the dean. Any statement by individual faculty members, program directors, or department chairs in regard to these matters is not binding on the school or the University unless approved by the dean.

Registration is not complete until tuition and fees on the required installment are paid; therefore, the student should be prepared to make these payments during scheduled registration for each academic year. There may be adjustments in tuition and fees as economic conditions warrant.

### ON- AND OFF-CAMPUS STUDENT HOUSING

Students may go to <[www.llu.edu/llu/housing](http://www.llu.edu/llu/housing)> for housing information and a housing application form.

### ADDITIONAL REQUIREMENTS

For additional policies, governing Loma Linda University students, see Section II of this CATALOG, as well as the University *Student Handbook*. Students are responsible for informing themselves of and satisfactorily meeting all regulations pertinent to registration, matriculation, and graduation.



# IV

## THE UNIVERSITY PROGRAMS

The Programs

The Combined-Degrees Programs

### PROGRAMS, DEGREES, AND CERTIFICATES

**I**n the programs, degrees offered will be given in the following order: associate, bachelor's, master's, and doctoral.

Certificate information is presented after degree information—regardless of whether the certificate was earned before, concurrent with, or after a specific degree; is taken to fulfill degree prerequisites; is not related to a degree program; or is a postdegree area of advanced specialization.

The school offering the program is listed by a two-letter code at the end of each program title (e.g., PH = School of Public Health).

All course descriptions are found in Section V of this CATALOG.

## KEY TO CODES

AH	School of Allied Health Professions
PH	School of Public Health
SD	School of Dentistry
SM	School of Medicine
SN	School of Nursing
SP	School of Pharmacy
ST	School of Science and Technology
FR	Faculty of Religion
IS	Interdisciplinary Studies (LLU diploma, across schools/faculties)

UG = Undergraduate

PB = Postbaccalaureate

PD = Post-D.D.S. or Post-D.D.M.

PM = Post-master's

PMD= Post-M.D.

PP = Postprofessional

\* off-campus, Canada

+ off-campus, Cambodia

++ off-campus, Chile

+++ off-campus, Peru

++++ off-campus, Russia

Anatomy SM	M.S., Ph.D.
Biochemistry SM	M.S., Ph.D.
Biology ST	M.S., Ph.D.
Biomedical and Clinical Ethics FR	M.A., PB certificate
Biomedical Data Management PH	B.S.P.H.
Biomedical Sciences IS	PB certificate
Biostatistics PH	PB certificate, M.P.H., M.S.P.H.
Case Management ST	PB certificate
Child Life Specialist ST	M.S., PB certificate
Chinese Studies for Health Care Professionals	STUG certificate
Clinical Mediation ST	PB certificate
Clinical Ministry FR	M.A., PB certificate
Clinical Laboratory Science AH (formerly Medical Technology)	B.S.
Coding Specialist AH	Certificate
Criminal Justice ST	M.S.
Counseling ST	M.S.
Counseling, Family ST	PB certificate (See: Family Counseling)
Counseling, Group ST	PB certificate (See: Group Counseling)
Counseling, School ST	PB certificate (See: School Counseling)
Cytotechnology AH	Certificate, B.S.

Dental Anesthesiology, Advanced	SD	PD certificate
Dental Hygiene	SD	B.S.
Dentistry, General	SD	D.D.S.
Dentist Program, International	SD	D.D.S.
Diagnostic Medical Sonography	AH	Certificate
Dietetic Technology	AH	A.S., PB certificate
Drug and Alcohol Counseling	ST	PB certificate
Earth Science	ST	Ph.D.
Emergency Medical Care	AH	B.S.
Endodontics, Advanced	SD	M.S., PD certificate
Environmental and Occupational Health	PH	M.P.H.
Epidemiological Research Methods	PH	PB certificate
Epidemiology	PH	PB certificate, M.P.H., Dr.P.H.
Executive Online M.P.H	PH	(See: Online Executive)
Family Counseling	ST	PB certificate
Family Studies	ST	M.A., Ph.D., PB certificate
Forensic Science	ST	PB certificate
Geology	ST	B.S., M.S., Ph.D. (See: Earth Science)
Gerontology	ST	M.S.
Global Health	PH	M.P.H., Dr.P.H.
Group Counseling	ST	PB certificate
Health Administration	PH	M.B.A., M.P.H.
Health Care Administration	PH	B.S.P.H.
Health Care Practice	SM	PMD certificate
Health Education	PH	M.P.H., Dr.P.H.
Health Geographics	PH	B.S.P.H.
Health Information Administration	AH	B.S., PB certificate
Health Information Systems	PH	M.H.I.S., PM certificate
Health Professions Education	IS	PB certificate
Health Promotion and Education	PH	(See: Health Education)
Health Services Research	PH	See: Health Administration)
Health Science	IS	B.S.
Humanitarian Assistance	PH	PB certificate
Implant Dentistry, Advanced	SD	M.S., PD certificate
International Dentist Program	SD	(See: Dentistry, International Program)
Lifestyle Intervention	PH	PB certificate
Marital and Family Therapy	ST	M.A., M.S., D.M.F.T., Ph.D.
Marital and Family Therapy	ST	M.S.
Maternal and Child Health	PH ++/+++	M.P.H.
Medical Dosimetry	AH	Certificate
Medical Radiography	AH	A.S.
Medical Scientist	SM	M.D./Ph.D.
Medical Sonography	AH	(See: Diagnostic Medical Sonography)

Medicine SM	M.D.
Microbiology and Molecular Genetics SM	M.S., Ph.D.
Natural Sciences ST	M.S.
Nursing SN	A.S., B.S., M.S., certificate, *Ph.D.
*Adult nurse practitioner	
Clinical nurse specialist: Growing Family	
Clinical nurse specialist: Adult and Aging Family	
*Family nurse practitioner	
*Neonatal critical care nurse practitioner	
*Pediatric nurse practitioner	
School nursing	
Nursing Administration	M.S.
Nutrition PH	
Nutrition	M.P.H., Dr.P.H.
Nutrition Care Management	M.S.
Clinical Nutrition	M.S.
Nutritional Sciences	M.S.
Nutrition and Dietetics AH	B.S., PB certificate
Occupational Therapy AH	M.O.T.
Occupational Therapy Assistant AH	A.A.
Online Executive M.P.H PH	M.P.H.
Oral and Maxillofacial Surgery, Advanced SD	M.S., PD certificate
Orthodontics and Dentofacial Orthopedics, Advanced SD	M.S. , PD certificate
Pediatric Dentistry, Advanced SD	M.S. , PD certificate
Periodontics, Advanced SD	M.S. , PD certificate
Pharmacology SM	M.S., Ph.D.
Pharmacy SP	Pharm.D.
Phlebotomy AH	certificate
Physical Therapist Assistant AH	A.S.
Physical Therapy AH	M.P.T., D.P.T., D.P.T.Sc.
Physician Assistant Sciences AH	M.P.A.
Physiology SM	M.S., Ph.D.
Preventive Care PH	Dr.P.H.
Program Evaluation ST	PB certificate
Prosthodontics, Advanced SD	M.S., PD certificate
Psychology ST	
Clinical psychology	Psy.D., Ph.D.
Experimental psychology	M.A., Ph.D.
Public Administration ST	D.P.A.
Public Health Practice PH ++/+++/++++	M.P.H.

Radiation Sciences	AH	B.S.
Radiation Therapy Technology	AH	B.S., certificate
Radiologist Assistant	AH	B.S., PB certificate
Rehabilitation Science	AH	Ph.D.
Religion and the Sciences	FR	M.A.
Reproductive Health	PH	PB certificate
Respiratory Care	AH	B.S., PP B.S., certificate
Social Work	ST	M.S.W., Ph.D.
Social Policy and Social Research	ST	Ph.D.
School Counseling	ST	PM certificate
Spanish Studies for Health Care Professionals	ST	UG certificate
Special Imaging Technology (CT/MRI)	AH	Certificate
Speech-Language Pathology	AH	Certificate, M.S.
Speech-Language Pathology Assistant	AH	A.S.
Speech-Language Pathology and Audiology	AH	B.S.
Tobacco-Control Methods	PH +	PB certificate
Wellness Management	PH	B.S.P.H.

## Combined-Degrees Programs

For convenience in locating a combined-degrees program, the program is listed twice—*the second time in italics with its two programs reversed.*

Anatomy (Ph.D.) *with* Dentistry (D.D.S.)—SM/SD  
 Anatomy (M.S. or Ph.D.) *with* Medicine (M.D.)—SM

Biochemistry (M.S. or Ph.D.) *with* Medicine (M.D.)—SM  
 Biology (M.S.) *with* Dentistry (D.D.S.)—ST/SD  
 Biology (M.S.) *with* Medicine (M.D.)—ST/SM  
 Biomedical and Clinical Ethics (M.A.) *with* Dentistry (D.D.S.)—FR/SD  
 Biomedical and Clinical Ethics (M.A.) *with* Nursing, Advanced-Practice (M.S.)—FR/SN  
 Biomedical and Clinical Ethics (M.A.) *with* Medicine (M.D.)—FR/SM  
 Biomedical and Clinical Ethics (M.A.) *with* Psychology (Ph.D. or Psy.D.)—FR/ST  
 Biomedical and Clinical Ethics (M.A.) *with* Social Policy and Social Research (Ph.D.)—FR/ST  
 Biomedical Sciences (Ph.D.) *with* Dentistry (D.D.S.)—ST/SD

Clinical Ministry (M.A.) *with* Marital and Family Therapy (M.S.)—FR/ST

*Dentistry (D.D.S.) with Anatomy (Ph.D.)—SD/SM*  
*Dentistry (D.D.S.) with Biology (M.S.)—SD/ST*  
*Dentistry (D.D.S.) with Biomedical and Clinical Ethics (M.A.)—SD/FR*  
*Dentistry (D.D.S.) with Biomedical Sciences (Ph.D.)—SD/ST*  
 Dentistry (D.D.S.) *with* Geology (M.S.)—SD/ST  
 Dentistry (D.D.S.) *with* Health Education (M.P.H.)—SD/PH  
 Dentistry (D.D.S.) *with* Medicine (M.D.)—SD/SM  
 Dentistry (D.D.S.) *with* Public Health (M.P.H.)—SD/PH

*Geology (M.S.) with Dentistry (D.D.S.)—ST/SD*  
 Geology (M.S.) *with* Medicine (M.D.)—ST/SM

*Health Education (M.P.H.) with Dentistry (D.D.S.)—PH/SD*  
 Health Education (M.P.H.) *with* Marriage and Family Counseling (M.S.)—PH/ST  
 Health Education (M.P.H.) *with* Medicine (M.D.)—PH/SM  
 Health Education (M.P.H.) *with* Nursing (M.S.)—PH/SN  
 Health Education (M.P.H.) *with* Psychology, Clinical (Psy.D.)—PH/ST

*Marital and Family Therapy (M.S.) with Clinical Ministry (M.A.)—ST/FR*  
*Marriage and Family Counseling (M.S.) with Health Education (M.P.H.)—ST/PH*  
 Maternal and Child Health (M.P.H.) *with* Social Work (M.S.W.)—PH/ST  
 Medical Scientist (M.D./Ph.D.)—SM  
 Medicine (M.D.) with *Anatomy (M.S. or Ph.D.)—SM*  
 Medicine (M.D.) with *Biochemistry (M.S. or Ph.D.)—SM*  
 Medicine (M.D.) with *Biology (M.S.)—SM/ST*  
 Medicine (M.D.) with *Biomedical and Clinical Ethics (M.A.)—SM/FR*  
 Medicine (M.D.) with *Dentistry (D.D.S.)—SM/SD*

*Medicine (M.D.) with Geology (M.S.)—SM/ST*

*Medicine (M.D.) with Health Education (M.P.H.)—SM/PH*

*Medicine (M.D.) with Microbiology (M.S. or Ph.D.)—SM*

*Medicine (M.D.) with Pharmacology (Ph.D.)—SM*

*Medicine (M.D.) with Physiology (M.S. or Ph.D.)—SM*

*Microbiology (M.S. or Ph.D.) with Medicine (M.D.)—SM*

*Nursing, Advanced-Practice (M.S.) with Biomedical and Clinical Ethics (M.A.)—SN/FR*

*Nursing (M.S.) with Health Education (M.P.H.)—SN/PH*

*Nursing, Advanced-Practice (M.S.) with Public Health (M.P.H.)—SN/PH*

*Pharmacology (Ph.D.) with Medicine (M.D.)—SM*

*Physiology (M.S. or Ph.D.) with Medicine (M.D.)—SM*

*Preventive Care (Dr.P.H.) with Psychology, Clinical (Psy.D.)—PH/ST*

*Psychology (Ph.D. or Psy.D.) with Biomedical and Clinical Ethics (M.A.)—ST/FR*

*Psychology (Psy.D.) with Public Health (Dr.P.H.)—ST/PH*

*Psychology, Clinical (Psy.D.) with Health Education (M.P.H.)—ST/PH*

*Psychology, Clinical (Psy.D.) with Preventive Care (M.P.H.)—ST/PH*

*Public Health (M.P.H.) with Nursing, Advanced-Practice (M.S.)—PH/SN*

*Public Health (M.P.H.) with Dentistry (D.D.S.)—PH/SD*

*Public Health (Dr.P.H.) with Psychology (Psy.D.)—PH/ST*

*Social Policy and Social Research (Ph.D.) with Biomedical and Clinical Ethics (M.A.)—ST/FR*

*Social Work (M.S.W.) with Public Health (M.P.H.)—ST/PH*

*Social Work (M.S.W.) with Maternal and Child Health (M.P.H.)—ST/PH*

## Anatomy—SM (M.S., Ph.D.)

KENNETH WRIGHT, Program Coordinator

### FACULTY

Denise L. Bellinger  
Brad A. Cole  
Marino De Leon  
Bertha C. Escobar-Poni  
William H. Fletcher  
David Henderson  
William M. Hooker  
Michael A. Kirby  
Kerby Oberg  
Paul J. McMillan,  
Walter H. B. Roberts  
Robert L. Schultz  
Srinivasan Thyagarajan  
William Wagner  
Steven M. Yellon

The School of Medicine through its Division of Human Anatomy in the Department of Pathology and Human Anatomy, along with other departments of the University, offers programs leading to the Master of Science and the Doctor of Philosophy degrees in the field of anatomy. These departments are active participants in the systems biology curricula, which consist of interdisciplinary courses and seminars coordinated by the faculties of the Departments of Anatomy, Physiology and Pharmacology, and Biochemistry and Microbiology in the School of Medicine. The degree programs provide opportunities for qualified students to prepare for careers in teaching and research.

Prerequisites for acceptance include results of the GRE General Test. Scores on the Test of English as a Foreign Language (TOEFL) are required from students whose native language is not English. Applicants should have a bachelor's degree or equivalent from a foreign university, with a strong undergraduate preparation in the biological and physical sciences—including a full year each of general biology, general chemistry, organic chemistry, and physics. Other upper-division sciences and calculus are strongly recommended. Exceptions are considered by the faculty on an individual basis. The program reserves the right to decide on the equivalence of courses presented by the applicant.

Graduate programs in anatomy provide opportunities for qualified students to study all aspects of human morphology from both didactic and investigative points of view. Study and research on other species and in other biomedical disciplines may be included in the student's curriculum. Students are introduced to research methods, both literature and laboratory, while working on a significant problem. Students acquire experience in scientific communication by participating in seminars, writing critical reviews, and reporting results of research experience either in thesis/dissertation form or as publishable/published papers. Details of these programs are available in the *Anatomy Program Guide*.

The Anatomy Program encourages the student to build a career in biomedicine on a solid foundation of basic medical sciences. Four specialty areas are avail-

able for the M.S. degree thesis or Ph.D. degree dissertation research:

1. CELL BIOLOGY includes advanced study in cellular and molecular biology, electron microscopy, histochemistry, tissue culture, and quantitative image analysis. Research emphases are cell-cell communication, regulation and modeling of bone-cell activities, receptor biology in development, in vitro fertilization, and elucidation of the molecular and cellular bases of developmental anomalies.

2. DEVELOPMENTAL BIOLOGY approaches human anatomy from a developmental perspective, emphasizing the genetic basis of morphogenesis and final structure. Comparative developmental approaches are used to understand the mechanisms employed that regulate structure and function.

3. NEUROBIOLOGY is an integrated program with advanced courses in neuroanatomy and neurophysiology. Research emphases include neural systems in the regulation of biorhythms; neurocytology; and electron microscopy and sensory systems in development, aging, and diabetes.

4. RADIATION BIOLOGY builds on advanced courses in quantitative morphology and cell, molecular, and radiation biology. The proton accelerator at Loma Linda University Medical Center provides a unique opportunity to study functional responses of normal and cancerous tissue to proton and other radiations.

### Anatomy program guide

Further details of the Anatomy Program are found in the *Anatomy Program Guide*.

## ANATOMY—M.S.

Students must complete at least 46 units (including a required religion course) with an overall G.P.A. of at least 3.0. Required courses include: ANAT 537, 541, 542, and 544—for which no grade less than 3.0 is accepted. For each year in residence, the student will complete 1 unit of IBGS 605 Integrative Biology Seminar. The remaining units for this degree must include at least 5 units in other basic science courses. When the student writes a thesis, up to 10 units in ANAT 697 Anatomy Research and 3 units in ANAT 698 Thesis may be included in the 46 units. In lieu of a thesis, 13 units of additional courses (approved by the faculty and not to include more than 3 units of research) may be presented to meet the requirements for this degree. Students must also demonstrate satisfactory performance on a comprehensive examination over the required core courses.

## ANATOMY—PH.D.

The purpose of the Anatomy Program leading to the Doctor of Philosophy degree is to give individuals the preparation needed and the opportunity to pursue an in-depth, independent investigation under conditions favorable for the maturation of scholarly attitudes and habits. Admission to this program is based on a demonstration of superior qualifications, either in undergraduate or graduate studies.

### Courses

Students earning the Ph.D. degree will have a B (3.0) grade or better in each of the core anatomy courses: ANAT 537, 541, 542 and 544. In addition, they will take the integrated biomedical graduate course IBGS 511, 512, 513 Cellular Mechanisms and Integrated Systems; and the cognate course IBGS 501, 502, 503. They will take 1 unit of IBGS 605 Integrative Biology Presentation Seminar for each year in residence. Additionally, they will enroll in IBGS 607 Biomedical Graduate Seminar each quarter, but these units will not be counted toward the fulfillment of the total unit requirement. Students must also satisfy the religion requirement (500 level or higher) as listed in the General Regulations (Section II) in this CATALOG. Final approval of the student's total program will be made by the student's committee in consultation with the anatomy faculty. A minimum of 90 units beyond the bachelor's degree is required for the Ph.D. degree in anatomy. Teaching experience is required.

### Language requirement

Although there is no specific language requirement, students with competencies in natural languages, in addition to English and/or computer languages, have a definite advantage. Depending on their research, some students may be expected to have one or more of these competencies.

### Comprehensive examinations

The written and oral comprehensive examinations are designed to establish that the student has a broad understanding of structure and function. The student's ability to use that knowledge to identify and design experiments to resolve problems is also tested. Familiarity with the scientific literature and the ability to use that literature to defend the dissertation research proposal are important components of the oral examination.

### Advancement to candidacy

The student may apply for admission to doctoral candidacy after:

- passing the comprehensive examinations;
- passing any other examinations, such as demonstrated proficiency in the use of computers and statistics required by the department; and
- securing the support of his/her advisory committee by presentation of a dissertation proposal that must be defended orally.

### Dissertation

The candidate's capacity for independent investigation and scholarly achievement must be demonstrated by the completion and oral defense of an acceptable dissertation, usually resulting in one to three publications.

### General requirements

For information about requirements and practices to which all graduate students are subject, the student should consult the Policies and General Regulations, Section II; and the School of Medicine (Section III) in this CATALOG.

### Combined-degrees programs

Combined-degrees programs allow qualified students to work on combined M.D./Ph.D. (medicine/anatomy) or D.D.S./Ph.D. (dentistry/anatomy) degrees.

Details are provided in the Combined-Degrees Programs discussed at the end of this Section (IV).

## Biochemistry—SM (M.S., Ph.D.)

PENELOPE DUERKSEN-HUGHES, Program  
Adviser

### FACULTY

Danilo Boskovic  
Carlos Casiano  
Shin-Tai Chen  
John R. Farley  
Hansel Fletcher  
Ilene Gonzalez  
Richard W. Hubbard  
David A. Hessinger  
Wolff M. Kirsch  
George T. Javor  
Mark S. Johnson  
William H. R. Langridge  
Kin-Hing William Lau  
Thomas A. Linkhart  
Subburaman Mohan  
Jonathan Neidigh  
William J. Pearce  
John J. Rossi  
Lawrence B. Sandberg  
Charles W. Slattery  
Satish M. Sood  
Donna D. Strong  
Barry L. Taylor  
Jon E. Wergedal  
R. Bruce Wilcox

The goals and specific objectives of the Department of Biochemistry and Microbiology in the School of Medicine are to:

1. Provide course work in biochemistry at levels appropriate for the various professional curricula.
2. Supply students with applications of biochemistry to problems in medicine, dentistry, nutrition, etc., so that an understanding of the place of this discipline in each field may be attained.
3. Interface with other educators at Loma Linda University, providing them with biochemical expertise where needed in their research projects or classroom instruction.
4. Offer the Biochemistry Program leading to a master's degree or Doctor of Philosophy degree in biochemistry to medical and dental professionals who have appropriately mastered biochemistry and demonstrated the necessary skills of independent judgment and biomedical research. This course work can provide the foundation for further education of some of the Seventh-day Adventist biomedical educators of the future.
5. Provide a high-quality graduate biochemistry program on a Seventh-day Adventist Christian campus for any committed Christian who would feel more comfortable in such an environment.

6. Conduct scholarly research in biochemistry, contributing to knowledge in biomedical areas.
7. Provide an expertise in microbiology and infectious diseases for medical, dental, and graduate students.
8. Conduct and publish research in the field of microbiology.
9. Provide professional consultation and participation with all departments—basic science and clinical.

### M.S. and Ph.D. degrees

The School of Medicine's Division of Biochemistry in the Department of Biochemistry and Microbiology offers study in the Biochemistry Program, leading to the Master of Science and the Doctor of Philosophy degrees. These degree programs provide a broad biochemical background, yet allow the student to develop fully a special area of interest. The Master of Science degree provides content appropriate for persons preparing to teach at the secondary level or in related professional school areas, or for persons intending to pursue careers as research technicians. The Doctor of Philosophy degree is designed to prepare the graduate for a career in teaching and in independent research.

### Combined degrees

Combined-degrees options—D.D.S./M.S., D.D.S./Ph.D., M.D./M.S., M.D./Ph.D., and Medical Scientist Program (M.D./Ph.D)—are offered. The combination of an M.S. degree with a professional degree provides additional content and research experience as a background for postgraduate medical or dental education. The combination of a Ph.D. degree with a professional degree prepares the student for a future in academic medicine or dentistry—combining research, teaching, and clinical practice.

The combined-degrees are described at the end of Section IV.

### PREREQUISITE COURSES

Prerequisites for acceptance include results of the GRE General Test. Scores on the Test of English as a Foreign Language (TOEFL) are required from students whose native language is not English. Applicants should have a bachelor's degree or equivalent from a foreign university, with a strong undergraduate preparation in the biological and physical sciences—including a full year each of general biology, general chemistry, organic chemistry, and physics. Other upper-division sciences and calculus are strongly recommended. Exceptions are considered by the faculty on an individual basis. The program reserves the right to decide on the equivalence of courses presented by the applicant.

### Core requirements

Students will maintain a B (3.0) grade average. Core courses include the integrated biomedical graduate course IBGS 511, 512, 513 Cellular Mechanisms and Integrated Systems; and the cognate course IBGS 501, 502. Students will take 1 unit of IBGS 605 Integrative Biology Presentation Seminar for each year in residence. Additionally, they will enroll in IBGS 607 Biomedical Graduate Seminar each quarter; but these units will not be counted toward the fulfillment of the total unit requirement.

### BIOCHEMISTRY—M.S.

A minimum of 52 units is required for the M.S. degree, including core requirements, according to one of the two options described below.

#### Research-emphasis track

Under this plan, a student takes 2 units of cognate courses, in addition to the core requirement; and carries out research (10 units of BCHM 697)—which culminates in a thesis or a publishable paper (3 units of BCHM 698). The student must pass an oral examination given by his/her graduate guidance committee after the thesis or publishable paper has been completed.

#### Course work-emphasis track

Under this plan, the student fulfills the total unit requirement by taking an additional 13 units of biochemistry electives. The student takes a comprehensive written examination over the graduate course work in lieu of preparing a thesis or publishable paper.

### BIOCHEMISTRY—PH.D.

For the Ph.D. degree, students must complete a minimum of 80 units, including those listed in the core requirements above. Additionally, they must take IBGS 503 Biomedical Grant Writing. At least 12 units of advanced courses in biochemistry must be included. These can be divided between techniques and didactic literature-based courses, but must include at least 2 units of each type. The student will carry out research (20 units of BCHM 697) that culminates in a dissertation or several publishable papers (5 units of BCHM 699). Doctoral students are required to pass both written and oral comprehensive examinations in order to advance to candidacy. They must successfully defend the dissertation to their guidance committee before being awarded the Ph.D. degree.

IBGS	511, 512, 513	Cellular Mechanisms and Integrated Systems I, II, III	(30)
IBGS	501	Biomedical Communication and Integrity	(2)
IBGS	502	Biomedical Information and Statistics	(2)
IBGS	503	Biomedical Grant Writing	(2)
IBGS	605	Integrative Biology Presentation Seminar	(4)

### Combined degrees

The student may pursue two degrees simultaneously. The academic/professional degrees of combined-degrees programs are described in this CATALOG.

The first-year curriculum includes a course sequence, taught by interdisciplinary faculty, that integrates all the disciplines of the biomedical basic science areas—moving from molecules, through cellular mechanisms to integrated systems. In addition, a supplemental course covers research-related topics—such as scientific communication and integrity, information handling, and statistics; as well as successful grant writing. Students learn of new developments in the biomedical sciences through weekly seminars. Students gain presentation skills of their own in a weekly student presentation-seminar series. During the subse-

quent years, formal courses continue to broaden and integrate into a meaningful whole an understanding of the clinical consequences of cellular events.

## Biology—ST (M.S., Ph.D.)—ST

ROBERT A. CUSHMAN, JR., Program Coordinator

### FACULTY

Gordon J. Atkins  
Leonard R. Brand  
H. Paul Buchheim  
Ronald L. Carter  
Robert A. Cushman  
Stephen G. Dunbar  
Raul Esperante  
Hansel M. Fletcher  
Robert Ford  
H. Thomas Goodwin  
William K. Hayes  
David A. Hessinger  
Michael A. Kirby  
Kevin E. Nick  
Junichi Ryu  
John F. Stout

The Biology Program leading to the Master of Science and Doctor of Philosophy degrees, is offered by the Department of Earth and Biological Sciences in the School of Science and Technology. These curricula provide a broad and unified approach to the life sciences, and also specialization—as evidenced by the conduct of significant, original research and in the selection of courses related to the area of research interest. Study in various areas, from molecular biology to natural history, is available to the student seeking preparation for teaching or for research in modern biology. Some areas of specialization are: animal behavior, animal physiology, molecular systematics, ecological physiology, behavioral ecology, conservation biology, marine biology, and paleontology.

### Objectives

The Biology Program strives to:

1. Instill in students the values of honesty, scientific integrity, careful research, and critical, independent thinking.
2. Provide the tools and intellectual environment in which biologists can attain their highest potential in scholarship, research, and teaching.
3. Challenge graduate students to consider the relationships among science, faith, and societal responsibility.

### Student aid

Research and teaching assistantships are available from the Department of Earth and Biological Sciences on a competitive basis. Further information can be obtained from the chair of the department. Qualified students are also encouraged to seek fellowships from federal and private agencies, such as the National Science Foundation and the National Institute of Health.

### General requirements

For information about requirements and practices to which all graduate students are subject, the student should consult Section II, and the School of Science and Technology (Section III) in this CATALOG.

### Combined degrees

M.D./M.S. and D.D.S./M.S.—For students selecting a combined-degree program with a Master of Science degree in biology or geology, up to 12 units of credit for basic science courses and up to 6 units of research and/or graduate courses completed as part of the electives of the professional curriculum may be applied to the master's degree program.

For students selecting a combined-degrees program with a Doctor of Philosophy degree in biology, up to 30 units of credit for basic science courses and up to 30 units of research and/or graduate courses, but not more than 36 units completed as part of the electives of the professional curriculum, may be applied to the Doctor of Philosophy degree program.

The animal physiology and the statistics requirements would be met by the professional curriculum.

### Varied course offerings

In addition to the primary offerings of the program, the student may take courses in other programs as part of the graduate work, according to special interests and needs. See the Microbiology, Physiology, Anatomy, and Biochemistry programs for additional courses.

## BIOLOGY—M.S.

### Admission

Applicants must meet the general admission requirements of the School of Science and Technology. Expected undergraduate preparation includes a bachelor's degree from an accredited college or university, with a biology major or equivalent; statistics, two quarters of college mathematics (calculus recommended), and one year of general chemistry; at least 20 quarter units from two or more of the following: organic chemistry, biochemistry, general physics, and geology. Students pursuing the M.S. degree are urged to select a research project with a primary faculty member from the department.

### CURRICULUM

The following constitutes the curriculum for the Master of Science degree in biology.

A minimum of 48 quarter units of academic credit is required. Of the 48 units, 30 must be in biology and cognate science subjects (as approved by the guidance committee), with 20 at or above the 500 level (exclusive of research), including:

BIOL 545	Genetics and Speciation	(4)
#BIOL 558	Philosophy of Science and Origins	(4)
#BIOL 605	Seminar Presentation in Biology	(1)
#BIOL 607	Seminar in Biology (4 units required)	(1)
BIOL 616	Research and Experimental Design	(2)
BIOL 617	Proposal Writing and Grantsmanship	(2)

During the graduate program, two of the following three:

Organismal biology or paleontology  
Ecology or environmental science  
Cell or molecular biology

**Remaining units to complete a total of 48 quarter units must include:**

Additional courses required by the student's guidance committee

Research, 4-12 units

Thesis, 2 units, including final oral examination and defense

Religion, 3 units

#### **Seminar attendance requirements**

Attendance at all departmental seminars is required of the student while in residence at Loma Linda University.

#### **Research proposal**

A written research proposal and an oral defense of the student's proposed research should be completed by the end of the third quarter of study. Questions will typically focus on the student's research area, but may expand to other areas as appropriate.

#### **Advancement to candidacy**

Students may apply for advancement to candidacy after:

1. completing all deficiencies and prerequisites,
2. selecting a research committee,
3. having an approved written research proposal,
4. passing the oral defense of the research proposal, and
5. being recommended by the program faculty (should be completed by the end of the third quarter of study).

#### **Thesis**

The written thesis must demonstrate the completion of significant, original research.

#### **Defense of thesis**

An oral presentation and defense of the thesis is required.

## **BIOLOGY—PH.D.**

#### **Admission**

The successful applicant must meet the general admission requirements of the School of Science and Technology. Undergraduate preparation should include general biology (or the equivalent) and at least one course each in animal physiology, cell and molecular biology (or one year of biochemistry), and genetics. Required cognate courses are two quarters of college mathematics (calculus recommended); one year each of general physics, general chemistry, and organic chemistry.

## **CURRICULUM**

The following constitutes the curriculum for the Doctor of Philosophy degree in biology.

**A minimum of 72 quarter units of academic credit for courses, seminars, and research beyond the master's degree is required, i.e., a minimum of 120 units beyond the baccalaureate degree, including the following required courses:**

BIOL 545	Genetics and Speciation	(4)
#BIOL 558	Philosophy of Science and Origins	(4)
BIOL 605	Seminar Presentation Biology (2 units required)	(1)
#BIOL 607	Seminar in Biology (6 units required)	(1)
BIOL 616	Research and Experimental Design	(2)
BIOL 617	Proposal Writing and Grantsmanship	(2)

A course in paleontology or biogeography at Loma Linda University

At least two additional courses in the Department of Earth and Biological Sciences.

#### **Sometime during the undergraduate or graduate program:**

Biology of at least one animal taxon  
(at least at the class level)

Botany

Developmental biology

Ecology or environmental science

Advanced genetics

Biochemistry

Statistics

#### **The required 72+ units must also include selections from the following:**

Additional courses required by the student's committee:

Research, 10-25 units

Dissertation, 2 units

Religion, 3-unit course beyond master's degree level

#### **Seminar attendance requirements**

Attendance at all departmental seminars is required of students in residence at Loma Linda University.

#### **Recommended**

Teaching is recommended during at least one quarter. This experience may be obtained in the laboratory or it may include presenting several lectures for a course.

#### **Research proposal**

A written research proposal and an oral defense of the proposed research should be completed by the end of the third quarter of study. Questions will typically focus on the student's research area, but may expand to other areas as appropriate.

#### **Comprehensive examinations**

An oral and a written comprehensive examination are given near completion of the formal course work. The purpose is to measure the student's knowledge of the various fields of biology, philosophy of science, and preparation for research. These examinations should be completed by the beginning of the third year of study.

**Advancement to candidacy**

The student may apply for advancement to doctoral candidacy after:

1. completing all deficiencies and prerequisites,
2. passing the comprehensive examinations,
3. selecting a research committee,
4. having an approved written research proposal,
5. passing the oral defense of the research proposal, and
6. being recommended by the department faculty.

**Dissertation**

The written dissertation must demonstrate the completion of significant, original research.

**Defense of dissertation**

An oral dissertation presentation and defense are required.

**ROSARIO BEACH SUMMER COURSES**

In cooperation with the Walla Walla College Marine Station in Anacortes, Washington, facilities are available for marine courses and research by students of this program. Some of the available courses are listed below.

BIOL 455	Comparative Physiology	(5)
BIOL 458	Marine Biology	(5)
BIOL 459	Marine Invertebrates	(5)
BIOL 460	Marine Ecology	(5)
BIOL 462	Ichthyology	(5)
BIOL 463	Marine Botany	(5)
BIOL 508	Physiology of Algae	(5)
BIOL 516	Behavior of Marine Organisms	(5)

## Biomedical and Clinical Ethics—FR

(M.A., PB certificate)

MARK F. CARR, Program Coordinator

**FACULTY**

Ivan T. Blazen  
 Mark F. Carr  
 Debra Craig  
 Robert Gardner  
 Steven B. Hardin  
 Robert Kiger  
 David R. Larson  
 Robert D. Orr  
 Richard Rice  
 Charles W. Teel  
 Lois Van Cleve  
 James W. Walters  
 Kristi Wilkins  
 Gerald R. Winslow

The purpose of the Biomedical and Clinical Ethics Program—an interdisciplinary course of graduate study leading to a Master of Arts degree—is to prepare qualified persons to engage in education, research, and

service pertinent to the ethical issues in health care and human biology.

This degree is designed primarily for two types of students: those who are planning to pursue a career in biomedical ethics and who desire the Master of Arts degree as a step toward graduate work at the doctoral level, and those who wish to acquire the degree in order to complement their career in health care or another profession.

The Biomedical and Clinical Ethics Program is administered by the Faculty of Religion. It draws upon resources from across the entire Loma Linda University campus. Additionally, two academic centers—the Center for Christian Bioethics and the Center for Spiritual Life and Wholeness—along with the many health care clinics associated with the medical and dental schools, provide a rich context in which to study bioethics. The M.A. degree program cooperates with the Center for Christian Bioethics in a variety of ways. The center's Thompson Library, a constantly growing collection with more than 4,500 volumes, is one of the most comprehensive libraries of materials in biomedical and clinical ethics in the United States. These materials, which are an especially valuable resource for graduate students, supplement the related holdings in the primary libraries of Loma Linda University and nearby institutions.

**Objectives**

The primary objectives of the Biomedical and Clinical Ethics Program are to:

1. Promote interdisciplinary study of ethical issues in health care and human biology.
2. Offer course work in the theological, biblical, and philosophical resources for ethics.
3. Provide practical experience as well as opportunities for observation and for participation in clinical ethics consultation.
4. Prepare students for subsequent doctoral work in ethics.
5. Provide members of the health care and other professions with an enhanced understanding of biomedical ethics.

Inquiries regarding application, admission, tuition, student life, and other information should be addressed to:

Office of Admissions  
 Faculty of Religion  
 Loma Linda University  
 Loma Linda, CA 92350

**Web site address**

The program coordinator for the Master of Arts degree in biomedical and clinical ethics may be contacted at: <http://ethics.llu.edu/>

## BIOMEDICAL AND CLINICAL ETHICS—M.A.

**Admission**

In addition to meeting admission requirements for the Faculty of Religion, the applicant to the Biomedical and Clinical Ethics Program must:

1. Propose clear personal and professional goals and ways in which the Biomedical and Clinical Ethics Program can facilitate their realization.

- Persuade the Admissions Committee, by previous accomplishments, that s/he is able and willing to reach these goals and to make a distinguished contribution to the field.

#### Course requirements

In order to receive the Master of Arts degree in biomedical and clinical ethics from Loma Linda University, the student will complete a minimum of 48 units of course work as herein specified, with an overall grade point average of B or better, with no grade lower than a C and with no grade in a required course lower than a B-. At least 36 units must be in approved courses numbered 500-699 or their equivalent. The required curriculum is as follows:

#### CURRICULUM

RELG 504	Research Methods	(4)
RELE 524	Christian Bioethics	(4)
RELE 548	Christian Social Ethics	(4)
RELE 554	Clinical Ethics Practicum I	(4)
RELE 555	Clinical Ethics Practicum II	(4)
RELE 577	Theological Ethics	(4)
RELE 588	Philosophical Ethics	(4)
RELE 589	Biblical Ethics	(4)
— —	Approved electives	(16)
TOTAL UNITS REQUIRED		(48)

#### Transfer credits

Students are permitted to transfer up to 8 units of approved graduate-level courses from other accredited institutions into the Biomedical and Clinical Ethics Program. In addition, prior or current students in Loma Linda University's other postbaccalaureate degree programs are permitted to petition to receive credit for a maximum of 12 units for courses completed in their professional studies that are directly related to biomedical and clinical ethics.

#### Comprehensive examinations

Each student must pass three comprehensive examinations within a period of two weeks. These written examinations will test the student's ability to integrate and apply knowledge from the following areas:

- philosophical and social ethics
- theological and biblical ethics
- biomedical and clinical ethics

These comprehensive examinations must be successfully completed before the student defends a thesis or its approved substitutes. Review questions and bibliography for each area will be supplied to the student.

#### Research requirements

In addition to passing the comprehensive examinations, each student must complete significant and original research in the field. Two options are available:

- Publishable paper: Most students pursue the publishable paper track and write one research paper of publishable quality aimed at a journal of stature in the field of biomedical and clinical ethics. The student must register for RELG 697 Independent Research (1-4 units) while preparing for this paper. An oral defense of this article is required.

- Thesis: The student who chooses to write a thesis must obtain permission from his or her adviser after having completed 24 units in the program. The student must register for both RELG 697 Independent Research (1-4 units) and RELG 698 Thesis (1-4 units) while preparing the thesis. An oral defense of the thesis is required.

#### BIOMEDICAL AND CLINICAL ETHICS—

#### CERTIFICATE

The Biomedical and Clinical Ethics Program Certificate option is available for students who are not interested in completing the full M.A. degree program at this time. Students must complete 24 units of course work. There are no additional requirements.

#### Required courses

RELE 524	Christian Bioethics	(4)
RELE 554	Clinical Ethics Practicum I	(4)
RELE 555	Clinical Ethics Practicum II	(4)
SUBTOTAL		12

#### Any three of the following four:

RELE 548	Christian Social Ethics	(4)
RELE 577	Theological Ethics	(4)
RELE 588	Philosophical Ethics	(4)
RELE 589	Biblical Ethics	(4)
TOTAL UNITS REQUIRED		24

## Biomedical Data Management—PH (B.S.P.H.)

The Biomedical Data Management Program B.S.P.H. degree prepares individuals to assist researchers in the management of biomedical data. Students will acquire skills in data collection, entry, analysis, and presentation using state-of-the-art computer software. The competencies acquired in this program prepare graduates to work in varied settings and contribute to the data management of many disciplines. Functioning as part of a biomedical research team is emphasized.

#### Learner outcomes

Upon completion of this degree, the graduate should be able to:

- Design data-collection protocols, data bases, and data-entry applications in a variety of formats—including SPSS, Excel, Access, and SAS.
- Independently supervise all phases of data entry, management, and archiving.
- Use appropriate statistical techniques to carry out univariate and bivariate data analysis of biomedical data.
- Verbally and through written reports, tables, graphs, and charts communicate results of biomedical data analysis.

**DEGREE REQUIREMENTS****REQUIRED LOWER-DIVISION COURSES**  
(may meet some GE requirements)

College algebra  
 Biological sciences (one course beyond GE requirements;  
 anatomy and physiology preferred)  
 Programming  
 File processing  
 Introduction to computer science

**REQUIRED UPPER-DIVISION COURSES**

AHCJ 311	Medical Terminology	(2)
STAT 416	Introduction to Biostatistics II	(4)
STAT 417	Biomedical Data Management I	(4)
STAT 418	Biomedical Data Management II	(4)
STAT 419	Biomedical Data Management III	(4)
STAT 421	Data Presentation	(3)
STAT 448	Analytical Applications of SAS	(3)
STAT 449	Analytical Applications of SPSS	(3)
STAT 464	Survey and Advanced Research Methods	(4)
STAT 468	Data Analysis	(4)
STAT 498	Senior Project	(5, 5)

## Biomedical Sciences—IS

(PB certificate)

RAMON R. GONZALEZ, JR., Program Coordinator

**FACULTY**

Faculty for the Medical Sciences Program are drawn from the graduate faculty associated with the basic science departments of the School of Medicine and with the Department of Natural Sciences in the School of Science and Technology.

The Biomedical Sciences Program provides an opportunity for qualified students to register for selected graduate-level courses in the biomedical sciences. These courses are identical to those taken by students in the master's and doctoral degree programs; however, the certificate program enables students to complete their studies with one academic year of full-time commitment. The program is intended to provide postbaccalaureate experience in the rapidly changing area of biomedical sciences. As such, it will either augment other career choices—such as high school teaching, patent law, and biotechnology management; or improve the preparation for professional training in medicine or dentistry.

**Admission**

Students entering the program will have completed a baccalaureate degree (or its equivalent) meeting the criteria outlined in the School of Medicine and School of Science and Technology Admission Information Section III of this CATALOG. Students who have not taken the Graduate Record Examination may be considered if they have a Medical College Acceptance Test with no score less than 6 and an aggregate score greater than

20. A Dental Aptitude Test score greater than 15 is also acceptable.

**Course of study**

Students will be required to complete 28 units selected from courses indicated by the program coordinator. These courses will include 3 units of religion, with the remaining 25 units selected, in consultation with the program coordinator, from offerings in the biological sciences.

The program may include 1 unit of appropriate seminar and up to 6 units of research. Since many of the courses offered in the basic medical sciences are sequenced or anticipate specific undergraduate experiences, students will be required to meet all course prerequisites.

Students may choose to select course sequences that could be applied to one of the Master of Science degree programs that the School of Science and Technology offers in the biological sciences. Course work at the level of B (3.0) or above would be transferred to such a Master of Science degree program upon presentation of a petition for academic variance to the dean of the School of Science and Technology.

Although several of the courses may share lecture experience and tests with the School of Medicine doctoral degree program, such courses will not be transferred to the School of Medicine; and a student subsequently admitted to the M.D. degree program should expect to take, and pay for, the normal medical school curriculum.

## Biostatistics—PH

(M.P.H., M.S.P.H., certificates)

SYNNOVE M. F. KNUTSEN, Program Director

**FACULTY**

David E. Abbey  
 W. Lawrence Beeson  
 Mark M. Ghamsary  
 Jayakaran S. Job  
 Floyd F. Petersen  
 David J. Shavlik  
 Gerald W. Shavlik  
 Grenith J. Zimmerman

**BIostatistics—M.P.H.****Learner outcomes**

Upon completion of this degree, the graduate should be able to:

1. Apply basic statistical theory to the solution of applied statistical problems.
2. Formulate research questions and select appropriate study designs, sample size, sampling scheme, and data-collection methods for a scientific study.
3. Apply data-collection strategies and data-processing and statistical techniques.
4. Design and implement studies for collection of data from original sources, such as field surveys.

5. Critically review literature relevant to statistical methods and interpretation of statistical findings and identify strengths and weaknesses of design.
6. Communicate the results of analyses and write the statistical methods and results sections of a research project.
7. Select appropriate statistical methods and analyze data using current computer statistical packages (e.g., SAS, SPLUS, and SPSS).
8. Use computer software to establish and manage databases.
9. Serve as statistical consultant to health professionals who conduct research.

The Master of Public Health degree program in biostatistics includes courses in biostatistics, computer programming, epidemiology, and a special project. No thesis is required. Completion of degree requirements usually takes four quarters. The program prepares an individual for positions involving the collection, management, and interpretation of health-related data.

#### PREREQUISITE

Calculus (one year)

Linear algebra (one quarter)

Computer literacy (knowledge and experience in computer operating systems, especially the Windows environment; and some programming experience recommended)

or  
STAT 439

#### DEGREE REQUIREMENTS

<b>Public health core courses</b>		<b>(20 units)</b>
ENVH 509	Principles of Environmental Health	(3)
EPDM 509	Principles of Epidemiology I	(3)
HADM 509	Principles of Administration in Public Health	(3)
HPRO 509	Principles of Health Behavior	(3)
REL_ 5__	Religion	(3)
PHCJ 605	Philosophy of Public Health	(1)
STAT 521	Biostatistics I	(4)
<b>Biostatistics core courses</b>		<b>(35 units)</b>
*EPDM 510	Principles of Epidemiology II	(3)
EPDM 512	Multivariate Modeling in Epidemiology	(3)
*EPDM 515	Clinical Trials	(3)
STAT 522	Biostatistics II	(4)
STAT 523	Biostatistics III	(4)
STAT 525	Applied Multivariate Analysis	(3)
STAT 535	Introduction to Nonparametric Statistics	(3)
STAT 548	Analytical Applications of SAS	(2)
STAT 557	Research-Data Management	(3)
STAT 564	Survey and Advanced Research Methods	(3)
STAT 568	Data Analysis	(3)
STAT 594	Statistical Consulting	(2)
STAT 694	Research	(2)

#### Electives (3 units)

Electives must be chosen in consultation with the academic adviser.

MINIMUM UNITS REQUIRED

58

\*recommended electives

#### Research and forums

Students are required to attend a minimum of ten forums in the School of Public Health's Department of Epidemiology and Biostatistics and/or Center for Health Research during their program. Attendance at these forums will be in addition to attendance at the public health seminars.

#### Culminating activity

In order to obtain a degree, the student is required to successfully complete a written comprehensive examination, as required by the School of Public Health's Department of Epidemiology and Biostatistics.

The culminating activity shall include a written comprehensive examination (prior to the field experience), field experience (upon completion of essential major course work), professional portfolio (upon completion of the field experience), and an exit interview with the department chair (at the conclusion of the program).

#### BIOSTATISTICS—M.S.P.H.

The Master of Science in Public Health degree program in biostatistics is a two-year program that emphasizes statistical methods, data processing and computing, and epidemiology. It is intended to train persons for collaborative work with scientists in nearly every area related to public health and medicine. A thesis is required. Students work with faculty as research associates during their training.

#### Learner outcomes

Upon completion of this degree, the graduate should be able to:

1. Apply basic statistical theory to the solution of applied statistical problems.
2. Formulate research questions and select appropriate study designs, sample size, sampling scheme, and data-collection methods for a scientific study.
3. Apply data-collection strategies and data-processing and statistical techniques.
4. Design and implement studies for collection of data from original sources, such as field surveys.
5. Critically review literature relevant to statistical methods and interpretation of statistical findings, and identify strengths and weaknesses of design.
6. Communicate the results of analyses and write the statistical methods and results sections of a research project.
7. Select appropriate statistical methods and analyze data using current computer statistical packages (e.g., SAS, SPLUS, and SPSS).
8. Use computer software to establish and manage databases.
9. Serve as statistical consultant to health professionals who conduct research.

10. Apply advanced statistical theory and methods for translating biomedical research findings.
11. Advance the biomedical sciences by developing new methods and applications.
12. Implement theoretical modeling, statistical techniques and quantitative as well as computational methods.
13. Apply for Ph.D. degree programs in statistics or biostatistics.

### BASIC BIOSTATISTICS—CERTIFICATE

There is a growing need to be able to interpret scientific literature, establish databases, and do simple descriptive and analytical statistical analyses. There is also a need for professionals in other disciplines to have a minimal knowledge of analytical strategies and biostatistical reasoning and thinking. This certificate gives the holder the ability to read scientific literature more knowledgeably, collaborate with statisticians, and interpret and evaluate data that is presented.

#### Learner outcomes

Upon completion of this certificate program, participants will be able to:

1. Critically read the literature with respect to design and basic statistical analysis.
2. Interpret findings in the scientific literature that have used basic statistical techniques.
3. Assemble data and create a database ready for analysis.
4. Select appropriate statistical analysis using basic statistical tests and current statistical software (e.g., SAS or SPSS).
5. Communicate results of analyses and write the statistical methods section when using basic statistical techniques.

#### PREREQUISITE

U.S. baccalaureate degree or its equivalent  
College algebra  
Computer literacy or STAT 439

#### CERTIFICATE REQUIREMENTS

EPDM 509	Principles of Epidemiology I	(3)
REL_ ___	Religion	(3)
STAT 521	Biostatistics I	(4)
STAT 522	Biostatistics II	(4)
STAT 548	Analytical Applications of SAS	(2)
or		
STAT 549	Analytical Applications of SPSS	(2)
STAT 568	Data Analysis	(3)
<b>TOTAL UNITS</b>		<b>19</b>

### Research and forums

Participants are required to attend a minimum of five forums in the School of Public Health's Department of Epidemiology and Biostatistics and/or Center for Health Research during their certificate program.

### ADVANCED BIOSTATISTICS—CERTIFICATE

In most public health disciplines, the role of statistics is becoming more and more important. Professionals are expected to be able to critically read the literature and evaluate analytical methods used. Many are also expected to establish databases and do statistical analysis. This certificate gives the holder the skills to be able to establish complex databases independently, to do more advanced statistical analyses, and to critically evaluate scientific papers with respect to appropriateness of analyses.

#### Learner outcomes

Upon completion of this certificate program, participants will be able to:

1. Function as a statistical consultant on research projects.
2. Function as a statistical consultant on research projects.
3. Give advice on study-design issues, including questionnaire design.
4. Assemble data and create and manage databases.
5. Select appropriate statistical tests for data analyses.
6. Perform appropriate statistical analyses using current statistical software (e.g., SAS or SPSS).
7. Communicate results of analyses and write the statistical methods section.

#### PREREQUISITE

Successful completion of a basic certificate program  
Completed application for a graduate degree program in the School of Public Health  
GRE scores  
Two recommendation letters  
Interview with departmental faculty member

HPRO 573 Exercise Physiology I (3)

#### CERTIFICATE REQUIREMENTS

EPDM 512	Multivariate Modeling in Epidemiology	(3)
REL_ ___	Religion	(3)
STAT 523	Biostatistics III	(4)
STAT 557	Research-Data Management	(3)
STAT 564	Survey and Advanced Research Methods	(3)
STAT 694	Research	(2)

#### Elective (choose one from the following courses)(3)

EPDM 510	Principles of Epidemiology II	(3)
EPDM 515	Clinical Trials	(3)
STAT 525	Applied Multivariate Analysis	(3)

**TOTAL UNITS** 20

**Research and forums**

Students are required to attend a minimum of five forums in the School of Public Health's Department of Epidemiology and Biostatistics and/or Center for Health Research during the certificate.

## Business Administration— PH (M.B.A.)

The Master of Business Administration (M.B.A.) degree provides a broad understanding of health care management and hands-on experience in applying learned principles. The M.B.A. degree is designed for those whose professional objective is a career in health care management. The residency period provides experience in a health care organization. Graduates are prepared for careers at upper-administrative levels in health care organizations—including hospitals, public agencies, health care networks, group practices, long-term care, and managed care.

**Learner outcomes**

Upon completion of this degree, the graduate should be able to:

1. Analyze the structure, environment, and function of health care organizations.
2. Apply administrative skills to lead health care organizations.
3. Analyze complex organizational situations and develop viable alternatives.
4. Provide direction to the management of health services agencies through use of principles of finance, operations, information systems, and economics.

**COREQUISITE**

(may be taken during first two quarters of program, in addition to units required for degree)

HADM 444 Financial Accounting for Health Care Organizations (3)  
or  
One course in accounting

**DEGREE REQUIREMENTS**

HADM 510 Public Health Policy (3)  
HADM 514 Health Care Economic Policy (3)  
HAD 516 International Economic Policy (3)  
HADM 528 Organizational Behavior in Health Care (3)  
HADM 534 Legal and Regulatory Issues in Health Care (3)  
HADM 542 Managerial Accounting for Health Care Organizations (3)  
HADM 549 Investment and Portfolio Issues in Health Administration (3)  
or  
HADM 560 Asset Protection Planning for Health Professionals (3)

HADM 555 Health Care Policy (3)  
HADM 559 Health Care Marketing (3)  
HADM 564 Health Care Finance (3)  
HADM 574 Managing Human Resources in Health Care Organizations (3)  
HADM 575 Management Information Systems in Health Care (3)  
HADM 601 Health Systems Operations Management (3)  
HADM 604 Health Systems Strategic Planning (3)  
HADM 605 Health Care-Quality Management (3)  
RELE 534 Ethical Issues in Public Health (3)  
HADM 695 Health Administration Field Practicum (3)

**Culminating activity**

The culminating activity shall include a written comprehensive examination (prior to the field experience), field experience (upon completion of essential major course work), professional portfolio (upon completion of the field experience), and an exit interview with the chair of the School of Public Health's Department of Health Administration (at the conclusion of the program).

**Professional membership**

Students are required to secure and maintain membership in an approved professional society, such as the American College of Healthcare Executives.

**Health administration colloquia**

Participation is required in a minimum of ten non-credit colloquia designed to acquaint students with various aspects of the health care industry. Attendance at these colloquia will be in addition to attendance at the public health seminars.

## Case Management—ST (PB certificate)

BEVERLY J. BUCKLES, Program Coordinator

Offered by the School of Science and Technology's Department of Social Work and Social Ecology, the 27-unit curriculum of the Case Management Program provides a unique opportunity for individuals working in health, mental health, and social services settings to acquire the specific knowledge and skills needed for working with populations for whom case management is a part of the service-delivery system.

**Admission requirements**

To be accepted into the Case Management Program:

1. Students must have a bachelor's degree from an accredited university or college. (Official transcripts are evidence of degrees and courses completed.)
2. Students must have a cumulative grade point average of 2.7 or above (on a 4.0 scale). (Special consideration may be given to students with grade point averages as low as 2.5 if the last part of their college work shows significant improvement. The additional admissions criteria of documented work

- experience will be required of applicants with a G.P.A. less than 2.7.)
3. Students must also show evidence of personal qualifications and motivation to complete the Case Management Program through:
    - Submission of a completed application—including a personal statement, application fee (application fee waived for applicants from county-partnership program), submission of all college and/or university transcripts, and submission of three letters of recommendation (including one from an academic source and one from a work supervisor).
    - Completion of an admissions interview with the School of Science and Technology's Department of Social Work and Social Ecology admissions committee. Evaluation criteria for the interview include:
      - ~ verbal communication skills;
      - ~ critical thinking ability;
      - ~ values congruent with the social work profession;
      - ~ appreciation of human diversity;
      - ~ evidence of reflective learning; and
      - ~ comportment.

These criteria provide evidence that the applicant can complete the certificate and meet program and professional standards. They also provide assurance that students from diverse backgrounds begin the program with equivalent preparation. Final decisions are based on a composite score of all of the above items.

Because courses taken in the Case Management Program are eligible for transfer into the M.S.W. degree program, related prerequisite requirements expected of M.S.W. degree candidates also apply (see M.S.W. degree prerequisite preparation).

**NOTE:** Prerequisites may be met through individual courses or combinations of courses. Applicants have the opportunity to participate in the review of prerequisites to assure that unique features of their education are appreciated. Applicants are notified in the acceptance letter from the dean of the School of Science and Technology if prerequisite requirements have not been met.

**DEGREE REQUIREMENTS**

SOWK 511	Human Behavior in a Cross-cultural Environment I	(3)
SOWK 512	Human Behavior in a Cross-cultural Environment II	(3)
SOWK 517	Foundation Practice I: Individuals	(3)
SOWK 518	Foundation Practice II: Groups	(3)
RELE 522	Bioethical Issues in Social Work	(4)
GSCJ 515	Graduate Research Writing	(2)

**Selective courses**

(9 units chosen from the following)

SOWK 515	Social Policy I	(3)
SOWK 615	Social Policy II	(3)
SOWK 519	Foundation Practice III: Organizations and Communities	(3)
SOWK 520	Foundation Practice IV: Families	(3)

SOWK 660	Advanced Practice with Ethnically Diverse Clients	(3)
SOWK 661	Time-Limited Services and Interventions	(3)
SOWK 671	Foundation Practice V: Social Work Administration	(3)
SOWK 682	Legal and Ethical Aspects of Health and Mental Health Services	(3)
<b>TOTAL UNITS</b>		<b>27</b>

**Child Life Specialist—ST (M.S., PB certificate)**

MICHELLE MINYARD, Program Coordinator

**FACULTY**

See Marital and Family Therapy Program.

The Child Life Specialist Program prepares individuals to provide child life services in health care settings. Child life services strive to promote optimum development of children and their families, to maintain normal living patterns, and to minimize emotional trauma. As integral members of the health care team in both the ambulatory care and inpatient settings, child life staff provides children opportunities for gaining a sense of mastery, for play, for learning, for self-expression, for family involvement, and for peer interaction.\*

**Mission\***

The mission of a child life specialist is to meet the needs of infants, children, youth, and families in times of stressful or traumatic life events and situations. The philosophy and practice of child life will be applicable to any health care setting and transferable to other environments or situations in which the potential for infants, children, and youth to cope, learn and master is placed at risk. The services provided by the child life profession will be wholistic and preventive and will utilize applied child-development and family-systems theory. The objectives of such services will be to minimize the negative impact of situational disruptions while maintaining normalcy in growth, development, and family systems relationships.

The child life profession has developed since the 1920s to improve health care experiences for children by providing play, preparation, and educational programs. These child life services are necessary for promoting the emotional stability and healthy development of hospitalized children while mitigating the fear and pain associated with treatment. The child life specialist is an early and ardent advocate of frequent family visits and parental participation in the care of the child.

Individuals who receive child life specialist certification are qualified to apply for professional level certification from the Child Life Certifying Committee. The national child life certification fosters uniform and improved standards of practice and ethical conduct while it enhances the status and credibility of the profession.

\*Adapted from the Child Life Council Web site (CLCC)

**The programs**

The Child Life Specialist Program leading to an M.S. degree or certificate is offered by the School of Science and Technology's Department of Counseling and Family Sciences through the Marital and Family Therapy Program.

**CHILD LIFE SPECIALIST—  
CERTIFICATE**

**CORE REQUIREMENTS (27 units)**

CHLS 504	Child Life Administration and Program Development	(3)
CHLS 506	Child Life Specialist: Educational and Therapeutic Intervention	(3)
CHLS 507	Child Life Program: Medical Family Issues I	(3)
CHLS 508	Child Life Program: Medical Family Issues II	(3)
CHLS 604	Child Life Internship and Supervision I	(3)
CHLS 605	Child Life Internship and Supervision II	(3)
COUN 576	Exceptional and Medically Challenged Children	(3)
MFAM 584	Advanced Child and Adolescent Development	(3)
RELR 564	Religion, Marriage and the Family/or one religion course of choice	(3)

**Admission**

Applicants must meet the School of Science and Technology admission requirements and give evidence of academic ability, emotional stability, and maturity. The child life specialist can be a track in the M.S. D.M.F.T., or Ph.D. degree programs in marital and family therapy; or an independent certificate. The applicant must meet the requirements for admission for the chosen degrees, or be in good standing in a current M.A. or M.S. degree program, or have graduated in good standing with an M.S. or M.A. degree/area in an equivalent to the family studies or marital and family therapy at this University; to pursue the track in child life specialist

**CHILD LIFE SPECIALIST—M.S.**

**Admission**

Applicants must meet the admission requirements of the School of Science and Technology and give evidence of academic ability, emotional stability, and maturity. For admission, a group interview and two faculty interviews are required. Students wishing to apply master's degree-level course work completed at a regionally accredited school prior to application must provide applicable transcripts and/or syllabi.

**General admission information**

Students are admitted in Autumn and Winter quarters. With special permission, a student may be permitted to enter Spring or Summer Quarter. Program requirements for admission are as follows:

1. Applicants must have a bachelor's degree from a regionally accredited institution in any field. A degree with an emphasis in child development/human development or treatment is preferred. Candidates must have a minimum 3.00 G.P.A. in major requirements.
2. Applicants must submit three letters of recommendation:  
At least two from persons professionally qualified to recommend for a field of this nature, and  
At least one from a person qualified to evaluate according to ability. Letters will not be accepted from friends or relatives.
3. As a prerequisite, applicants to the M.S. degree program must have taken statistics from an accredited university.
4. Those for whom English is not their first language must present a minimum score of 213 for the computer test and 550 for the pencil test on the Test of English as a Foreign Language (TOEFL).
5. Those who are not citizens or permanent residents of the U.S. must provide a valid student visa.

**CORE COURSES (58 units)**

CHLS 504	Child Life Administration and Program Development	(3)
CHLS 506	Child Life Specialist: Educational and Therapeutic intervention	(3)
CHLS 507	Child Life Program: Medical Family Issues I	(3)
CHLS 508	Child Life Program: Medical Family Issues II	(3)
CHLS 604	Child Life Internship and Supervision I	(3)
CHLS 605	Child Life Internship and Supervision II	(3)
COUN 576	Exceptional and Medically Challenged Children	(3)
COUN 577	Assessment in Counseling	(3)
COUN 678	Consultation and Leadership	(3)
FMST 514	Cross-cultural Counseling Family Values	(2)
MFAM 501	Research Tools and Methodology I: Quantitative	(3)
MFAM 515	Crisis Intervention Counseling	(3)
MFAM 516	Play Therapy	(2)
MFAM 547	Social Ecology of the Individual and Family Development	(3)
MFAM 553	Family Systems Theory and Practice	(3)
MFAM 568	Groups: Process and Practice	(3)
MFAM 584	Advanced Child and Adolescent Development	(3)
MFAM 644	Child Abuse and Family Violence	(3)
RELR 564	Religion, Marriage, and the Family/or one religion course of choice	(3)
MFAM ___	Elective	(3)

## Chinese Studies—ST (UG certificate)

JOHN B. WONG, Program Director

The Chinese Studies Program is designed to equip students, faculty, staff, and employees with a knowledge of Chinese language, culture, history, literature, geography, contemporary politics and economics, medicine, philosophies, and religions. This certificate program is intended to prepare students, especially health care professionals, with the background, understanding, and practical, first-hand "China" experience and professional skills to work in a Chinese community, and to interact with and serve Chinese patients in a clinical setting here and abroad.

This program is consonant with the traditional spiritual and educational emphasis on community service and global outreach by Loma Linda University Adventist Health Sciences Center including the University and medical and research centers. With the emerging geopolitico-economic importance of China and its relationship with the United States, such health care professional preparation is recommended for cross-cultural and international scientific-technological exchange.

### The program

The Chinese Studies Program is administered by the Division of General Studies of the School of Science and Technology.

### Admission

Applicants to the Chinese Studies Program must meet all the requirements outlined in this CATALOG; and give evidence of academic ability, maturity, and a passion to learn another language and culture in pursuit of academic and cultural enrichment.

### Certificate requirements

The Chinese Studies Program requires completion of 20 units from the courses listed below, including two units of religion with no grade lower than a B. Certain prerequisites may be waived by the director of the program.

### COURSE REQUIREMENTS

CHIN 105	Chinese Civilization	(4)
CHIN 106	China Today: Its Language and Culture	(4)
CHIN 111	Mandarin I	(4)
CHIN 112	Mandarin II	(4)
CHIN 205	Immersion Language and Culture Program	(4)
CHIN 206	Health Care Service Learning in a Chinese Context	(4)
CHIN 305	Mandarin for Health Care Professionals	(2 or 4)
CHIN 399	Directed Study	(2-4)
RELT 404	Christian Service	(2)

CHIN 205 and 206 are integrated with a domestic or overseas international service project within a Chinese community, with service learning and practical hands-on experience and patient contacts.

## Clinical Laboratory Science—AH (B.S.)

MONIQUE K. GILBERT, Program Director for Phlebotomy

MARLENE M. OTA, Program Director for Cytotechnology

DARRYL G. HEUSTIS, Medical Director for Cytotechnology

PAMELA J. WAT, Medical Co-director for Cytotechnology

RODNEY ROATH, Program Director for Clinical Laboratory Science

KATHERINE G. DAVIS, Clinical Coordinator for Clinical Laboratory Science

JAMES M. PAPPAS, Medical Director for Clinical Laboratory Science

### FACULTY

Craig E. Austin  
James A. Brandt  
Linda S. Buckert  
Kenneth A. Cantos  
Elizabeth Cea  
Jeffery G. Chambers  
Louis J. Cota  
Katherine G. Davis  
Betty M. Fitzsimmons  
Barbara J. Ganchingco  
Monique K. Gilbert  
Joel C. Gillmore  
Sally P. Greenbeck  
Darryl G. Heustis  
Ronald H. Hillock  
J. Kapua Hollands  
Ronald S. Johnson  
James D. Kettering  
Sonia D. Laing  
Dorothy Lajom  
Tuyhoa T. Le  
John E. Lewis  
Phillip Liang  
Jon A. Loriezo  
Kelly C. Liu  
Claro Y. Masangcay  
Wagih E. Mikhail  
Donald W. Miller  
Deborah K. Nelson  
Thuan H. Nguyen  
Linda K. O'Connor  
Marlene M. Ota  
James M. Pappas  
Shashank Patel  
Gaile T. Rittenbach

Rodney M. Roath  
 Teri J. Ross  
 Delfin Santos-Kho  
 Daisy Santa Maria  
 Linda J. Shain  
 Benjamin J. Siapco  
 Valerie T. Stevenson  
 Terence Tay  
 Evelyn T. Torres  
 Pamela J. Wat  
 Patricia A. Williams  
 Jane N. Zappia  
 Grenith J. Zimmerman

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A student who has an interest in science, an investigative mind that enjoys the challenge of solving problems quickly and accurately, and a desire to help others should consider a career as a clinical laboratory scientist.

Clinical laboratory scientists examine and analyze body fluids, tissues, and cells. They look for bacteria, parasites, or other microorganisms; analyze the chemical content of fluids; match blood for transfusions; and test for drug levels in the blood to show how a patient is responding to treatment.

Clinical laboratory scientists perform complex chemical, biological, hematological, immunologic, microscopic, and bacteriologic tests. They use, maintain, and troubleshoot sophisticated laboratory equipment that is used to perform diagnostic tests. The clinical laboratory scientist possesses the scientific and diagnostic skills required for DNA and biomolecular technology and genetic engineering applications, analyzes these test results, and discusses them with the medical staff.

### Opportunities

Employment of clinical laboratory workers is expected to parallel the growth of other health care occupations through the year 2010, particularly as the volume of laboratory tests increases with population growth and with the development of new technology. Employment opportunities are excellent, with current vacancy rates of 12 percent. The twenty-first century is offering clinical laboratory scientists new avenues for test development, experimental design, administration, and education.

Clinical laboratory scientists work in hospitals or similar medical facilities, clinical and reference laboratories, home-health diagnostics, transfusion services, physicians' offices, and private medical clinics. Employment is also available in pharmaceutical and biotechnology companies, health information systems, DNA-technology and genetic engineering corporations, research laboratories, federal government agencies, forensics and crime investigation, veterinary hospitals, U.S. Public Health Service facilities, areas of medical-product development, in customer and patient education.

### The program

The Clinical Laboratory Science Program is a two-year professional program that culminates in a Bachelor of Science degree. Prerequisite courses may be taken at any accredited college or university, and are completed during the freshman and sophomore years. Accepted students transfer into the program at the junior-year level, which begins in August during the post-

summer session. After satisfactory completion of the program, the student is awarded a Bachelor of Science degree and is eligible to take the state and national board examinations and to become a registered clinical laboratory scientist.

The junior year is a ten-month program of lecture and laboratory. Emphasis is on the basic clinical science courses, including theory and correlations.

The senior year is a ten-month clinical practicum that provides professional clinical experience in the hospital laboratory environment. Emphasis is on technical proficiency, application of theory to patient care, laboratory organization, and managerial skills. Senior students must coordinate their time with the operation of Loma Linda University Medical Center's clinical laboratory and with supplemental affiliate training laboratories in the community.

### Clinical affiliations

Multiple clinical affiliations enrich the student's clinical training by providing exposure to procedures in different types of medical facilities. During the forty-week clinical practicum, supplemental training may be scheduled at any of the following clinical sites:

#### Primary Affiliation:

Loma Linda University Medical Center  
 Loma Linda, California

#### Supplemental Affiliations:

Blood Bank of San Bernardino and Riverside  
 Counties  
 San Bernardino, California

Community Hospital of San Bernardino  
 San Bernardino, California

Hoag Memorial Hospital  
 Newport Beach, California

Jerry L. Pettis Memorial Veterans  
 Medical Center  
 Loma Linda, California

Kaiser Permanente Medical Center  
 Fontana, California

Redlands Community Hospital  
 Redlands, California

Riverside Community Hospital  
 Riverside, California

Arrowhead Regional Medical Center  
 (formerly:  
 San Bernardino County Medical Center)  
 San Bernardino, California

Transportation to training laboratories is the responsibility of the student. Depending on the clinical assignment, commuting times may be up to two hours one way. Senior students must coordinate their time with the operational schedules of the Loma Linda University Medical Center Clinical Laboratory and affiliate laboratories in the community. The senior schedule is a full-time week (forty clock hours) arranged on a Monday through Friday, day-shift schedule. On occasion, days or times outside of this typical schedule may be necessary to allow students exposure to unique proce-

dures. A special calendar schedule, different from the University academic calendar, is followed.

### Accreditation

The program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), 8410 West Bryn Mawr Avenue, Suite 670, Chicago, IL 60631-3415; telephone: 773/714-8800; FAX: 773/714-8886; email: naacinfo@naacls.org; website: <www.naacls.org>.

It also satisfies the requirements in medical technology of the American Society of Clinical Pathologists' Board of Registry for Medical Technology, P. O. Box 12277, Chicago, IL 60612-0277. The program is approved by the State of California Department of Health Laboratory Field Services, 2151 Berkeley Way Annex 12, Berkeley, CA 94707-1011; telephone: 510/873-6348.

### Professional registration

Completion of the required sequence of academic course work and directed professional experience prepares the graduate to take the certifying examinations of the ASCP Board of Registry of Medical Technologists and the National Certification Agency for Medical Laboratory Personnel, P. O. Box 15945-289, Lenexa, KS 66152-85; telephone: 913/438-5110; and the licensure examination of the state of California. Information regarding examinations can be obtained from the program director.

In 1999 the program name was changed from Medical Technology to Clinical Laboratory Science; the graduates are qualified as clinical laboratory scientists.

### The program goals

The goals of the Clinical Laboratory Science Program are to help the student:

1. Demonstrate the basic and advanced knowledge essential to the practice of clinical laboratory science.
2. Demonstrate technical and clinical proficiency in the skills essential to the practice of clinical laboratory science.
3. Obtain certification and licensure as a practitioner in clinical laboratory science.
4. Demonstrate self-confidence in technical, professional and interpersonal skills.
5. Become a cooperative, effective, and efficient health care worker.
6. Communicate effectively—both orally and in writing—with peers, supervisors, patients, the public, and members of the health care team.
7. Read and interpret professional literature.
8. Share his/her knowledge and skills by providing instruction to peers and support personnel.
9. Recognize that lifelong learning is essential to maintain technical and professional skills.
10. Become a contributor to the profession.
11. Prepare to be a leader in the profession.
12. Cultivate initiative, creativity, and involvement in the profession.
13. Recognize the ethical standards that are required in the health care profession.
14. Explore his/her relationship with God within the context of the Seventh-day Adventist Church.

### The program objectives

Graduates of the Clinical Laboratory Science Program will demonstrate the following career-entry competencies, perspectives, and experience:

1. Comprehension of the basic and advanced knowledge essential to the practice of clinical laboratory science.
2. Technical and clinical proficiency in the skills essential to the practice of clinical laboratory science.
3. Ability to become certified and licensed practitioners in clinical laboratory science.
4. Use of computer applications for communication, recordkeeping, analysis, and access of information.
5. Application of principles related to quality control, quality assurance, and total quality management.
6. Ability to work independently.
7. Cooperative participation in group/team environments.
8. Awareness of the influence that social or cultural perspectives may have on the interactions and relationships among co-workers, patients, and the community.
9. Professional demeanor.
10. Recognition of the value of lifelong continuing education.
11. Participation in professional organizations and activities.
12. Current knowledge of the laws, regulations, policies, and agencies that affect the clinical laboratory environment.
13. Acceptance of responsibility and accountability for behavior.
14. Awareness of the benefits that a relationship with God can bring to the community and the individual.

### How to apply

Applications (paper and online) to the Clinical Laboratory Science Program are accepted beginning January 1. Early submission of application is recommended.

Applications continue to be reviewed and accepted until the program is filled. Preference will be given to applicants whose completed applications and transcripts are received by March 1. To receive an application, call 1/800/422-4558, ext. 4; or complete an online application at <www.llu.edu>. The University CATALOG may also be viewed at <www.llu.edu>. Printed CATALOGS may be purchased.

A high school diploma or the GED is required for acceptance. Applicants must complete prerequisite course work at any accredited college before being admitted to the School of Allied Health Professions; projected course work that will be completed before beginning the program will be considered in the application process.

Regardless of nationality or citizenship, an applicant whose native language is not English is required to pass the Michigan Test of Language Proficiency (MTELP), or the Test of English as a Foreign Language (TOEFL), the Test of Written Language (TWE), and the Test of Spoken English-A; or their equivalents. The requirements are: MTELP 90th percentile; TOEFL 550

(paper based) or 213 (computer based); TWE minimum score of 5; TSE-A minimum score of 5.

#### Test requirement

Upon acceptance, a self-study syllabus will be sent to the student in preparation for a mathematics screening examination, which will be scheduled during the first week of class. Those achieving scores below the acceptable minimum will be required to take CLSM 301 Laboratory Mathematics Review.

#### Academic progression

A minimum grade of C (2.0) is required for all courses in the program; C- grades are not acceptable. A grade of less than C in any course, or unsatisfactory clinical or professional performance, will be cause for dismissal from the program for the remaining academic year. Readmission to the program will require reapplication.

#### CPR certification

Students are required to have current health care provider cardiopulmonary resuscitation (CPR) certification (adult, child, and infant) for all scheduled clinical experiences. American Heart Association certification is recommended. Classes are available on campus at:

Life Support Education  
University Arts Building  
24887 Taylor Street, Suite 102.

#### Admission

To be eligible for admission, applicants must have completed a minimum of 96 quarter units or 64 semester units at an accredited college or university. A minimum grade of C (2.0) is required for all transfer courses; C- (C minus) grades are not acceptable for transfer. A minimum G.P.A. of 2.75 for science is recommended. Prerequisites and transfer patterns may be viewed at <[www.llu.edu/llu/sahp/transfer/](http://www.llu.edu/llu/sahp/transfer/).

#### PREREQUISITE

20 quarter or 14 semester units total, selected from at least two of the humanities and religion areas:

Art/Music (performing arts limited to 2 quarter units)

Civilization/History, foreign language, literature, philosophy, religion—

a maximum of 8 quarter units of religion may be applied to the above 20 quarter/14 semester units; for students who attended or are enrolled in an Adventist college, 4 quarter units of religion are required per year attended

College mathematics (algebra or higher level)

General chemistry with laboratory, complete sequence

Organic chemistry with laboratory, complete sequence

\*General physics with laboratory, complete sequence (must include principles of light and electricity)

\*General biology with laboratory, one courses.

Cultural diversity or cultural anthropology (one course); (select remainder of social sciences units to total of 10 quarter units from at least two of these areas: anthropology, economics, geography, political science, psychology, sociology)

Freshman English, complete sequence; select remainder of communication units to total 9 quarter units from these courses: computers, public speaking, critical thinking

Health education, personal health, or nutrition (one course)

Two physical education courses

Electives, as necessary, to meet the minimum total requirement of 96 quarter units; recommended: anatomy and physiology, biochemistry, cellular or molecular biology, genetics, speech, computer applications, critical thinking

For total unit requirements for graduation, see Division of General Studies, (Section II).

\*Premedical and pre dental students should verify current admission requirements.

## PROGRAM OF INSTRUCTION

### JUNIOR YEAR

#### Post-Summer Session

CLSM 309	Quantitative Analysis (Chemical)	(4)
AHCJ 105	Procedures in Phlebotomy	(5)

#### Autumn Quarter

CLSM 321	Hematology I	(3)
CLSM 327	Clinical and Pathogenic Microbiology I	(5)
CLSM 331	Biochemistry	(5)
AHCJ 328	Portfolio Practicum I	(1)
AHCJ 418	Physiology I	(4)

#### Winter Quarter

CLSM 322	Hematology II	(3)
CLSM 324	Immunology I	(4)
CLSM 328	Clinical and Pathogenic Microbiology II	(5)
CLSM 332	Clinical Chemistry I	(4)
CLSM 341	Immunohematology I	(3)
AHCJ 328	Portfolio Practicum I	(continued)

#### Spring Quarter

CLSM 303	Urine and Body-Fluid Analysis I	(1)
CLSM 307	Medical Parasitology	(3)
CLSM 333	Clinical Chemistry II	(4)
CLSM 342	Immunohematology II	(3)
RELE 457	Christian Ethics and Health Care	(2)
RELF 423	Loma Linda Perspectives	(2)
AHCJ 328	Portfolio Practicum I	(continued)

### SENIOR YEAR DIDACTICS

#### Post-Summer Session\*

CLSM 431	Immunoassay	(2)
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#### Autumn Quarter

CLSM 451	Clinical Laboratory Management I	(2)
CLSM 496	Clinical Laboratory Science Seminar I	(1)
AHCJ 498	Portfolio Practicum II	(1)

#### Winter Quarter

CLSM 452	Clinical Laboratory Management II	(2)
CLSM 497	Clinical Laboratory Science Seminar II	(1)

AHCJ 498	Portfolio Practicum II	(continued)
REL_ ____	Religion elective	(2)

**Spring Quarter**

CLSM 453	Clinical Laboratory Management III	(2)
CLSM 498	Clinical Laboratory Science Seminar III	(2)
AHCJ 498	Portfolio Practicum II	(continued)
REL_ ____	Religion elective	(2)

\*Clinical practicum begins concurrently; see section below.

**SENIOR YEAR CLINICAL PRACTICUM\***

CLSM 471	Clinical Practicum I*	(6)
	<b>Corequisite:</b>	(7 units)
	CLSM 411 Urine and Body-Fluid Analysis II	(1)
	CLSM 422 Hematology III	(6)
CLSM 472	Clinical Practicum II**	(6)
	<b>Corequisite:</b>	(11 units)
	CLSM 413 Diagnostic Microbiology	(8)
	CLSM 442 Immunohematology III	(3)
CLSM 473	Clinical Practicum III ***	(6)
	<b>Corequisite:</b>	(9 units)
	CLSM 434 Clinical Chemistry III	(5)
	CLSM 455 Special Procedures	(4)

\* Clinical Practicum I is a thirteen-week clinical rotation in the areas of hematology, urinalysis, and parasitology.

\*\*Clinical Practicum II is a thirteen-week clinical rotation in the areas of microbiology and immunohematology.

\*\*\*Clinical Practicum III is a thirteen-week clinical rotation in the areas of chemistry, immunology, and special procedures.

Clinical Practicum I, II, and III require block registration and are taken successively, beginning with the postsummer session.

**Clinical Mediation—ST  
(PB certificate)**

IAN P. CHAND, Program Coordinator

**FACULTY**

See Marital and Family Therapy Program.

The Clinical Mediation Program is designed to provide professional training in the mediation process involving courts, families, and work environments. This training leads toward becoming a practitioner member in the Academy of Family Mediators. This program is especially designed for marital and family therapists, psychologists, social workers, attorneys, human resource administrators, pastors, and others whose professional responsibilities include the mediation process. Family systems theory is central to the training in clinical mediation. The academic and clinical requirements for the certificate include 19 quarter

units and 150 clock hours of supervised clinical experience.

The Clinical Mediation Program is administered by the School of Science and Technology's Department of Counseling and Family Sciences through the Marital and Family Therapy Program.

**Admission**

Applicants must meet the School of Science and Technology admission requirements outlined in this CATALOG and give evidence of academic ability, emotional stability, and maturity. The clinical mediation certificate can be a track in the M.S., D.M.F.T., or Ph.D. degrees programs in marital and family therapy or an independent certificate. For admission, two faculty interviews are required. Students with a B.A. degree from an accredited university, a G.P.A. of at least 3.0, and good recommendations may be accepted for the certificate program. In the degree programs, the applicant must meet the requirements for admission for their respective degrees in order to pursue the track in clinical mediation.

**Certificate requirements**

To earn the certificate, participants must successfully complete 19 quarter units. It is possible to complete the academic and clinical requirements for the certificate program in one year.

**COURSE REQUIREMENTS (19 units)**

MFAM 538	Theory and Practice of Conflict Resolution	(2)
MFAM 644	Child Abuse and Family Violence	(3)
MFAM 614	Law and Ethics	(3)
or		
MFTH 527	Advanced Legal and Ethical Issues (doctoral-level ethics)	(3)
MFAM 544	Family and Divorce Mediation	(4)
MFAM 585	Internship in Family Mediation (150 hours)	(4)
RELR 564	Religion, Marriage and the Family	(3)
or	Religion course, doctoral level	
REL ____	(for certificate only)	(3)

TOTAL UNITS 19

**Clinical Ministry—FR  
(M.A., PB certificate)**

SIROJ SORAJJAKOOL, Program Coordinator

**FACULTY**

- Wil Alexander
- D. Leigh Aveling
- Ivan T. Blazen
- Art Earll
- Carla G. Gober
- James Greek
- Fred C. Kasischke
- Henry H. Lamberton
- David R. Larson

Johnny Ramirez-Johnson  
 Richard Rice  
 Randall L. Roberts  
 Siroj Sorajjakool  
 Bernard A. Taylor  
 David L. Taylor  
 Louis Venden  
 James W. Walters  
 Hyveth B. Williams  
 Gerald R. Winslow

**FACULTY**

The faculty represents a balance between academic expertise and clinical experience, as well as a variety of disciplines, including: biblical studies, theology, theology and ministry, marriage and family therapy, cultural psychology, American church history, health education, nursing, and ethics.

**CLINICAL MINISTRY—M.A.**

The Clinical Ministry Program leading to a Master of Arts degree encourages students to explore the theological, biblical, and historical roots of ministry within the institutional setting; and to prepare for the practice of such ministry. The program is especially valuable as preparation for careers in chaplaincy and other fields of ministry. It is specifically designed for three types of students:

1. Those at the beginning of their professional lives;
2. Those pursuing this degree in order to enhance or shift their existing careers; and
3. Those pursuing this degree as a steppingstone to further study. This degree furthers education in caring for the whole person. The student will develop clinical skills applicable to contemporary ministry.

The program includes education in two areas: academic and clinical. Academic preparation is provided by the Faculty of Religion and other cooperating departments within the University.

Settings providing clinical opportunities for training in institutional ministry include: Loma Linda University Medical Center (LLUMC), Loma Linda University Behavioral Medicine Center (BMC), and the Jerry L. Pettis Memorial Veterans Medical Center.

Loma Linda University Medical Center, under the auspices of the Department of Chaplain Services, is an accredited Clinical Pastoral Education (CPE) Center. Students admitted to the Clinical Ministry Program may apply for this clinical placement. (Separate application procedures are required.)

**Program objectives**

The objectives of the Clinical Ministry Program are to:

1. Develop persons skilled in the practice of ministry in both routine and critical settings.
2. Expose students to a wide range of biblical, theological, and practical material pertinent to the field.
3. Provide a broadly based education in ministry, with specific focus on the practice of ministry.
4. Prepare students for membership in various professional organizations, such as the American

Association of Pastoral Counselors (AAPC), the Association for Clinical Pastoral Education (ACPE), the Association of Professional Chaplains (APC), etc.

5. Contribute positively to the formation of the student's pastoral skills.

**Admission**

In addition to meeting admission requirements for the Faculty of Religion, the applicant to the Clinical Ministry Program must:

1. Propose clear personal and professional goals and ways in which the program in clinical ministry may facilitate their realization;
2. Persuade the Admissions Committee, by previous accomplishments, that s/he is able and willing to reach these goals and to make a distinguished contribution to the field.

**Course requirements**

In order to receive the Master of Arts degree in clinical ministry from Loma Linda University, the student will complete a minimum of 48 units of course work as herein specified, with an overall grade-point average of B or better, with no grade lower than a C and with no grade in a required course lower than a B-. The required curriculum is as follows:

**CORE COURSE WORK (36-48 units)**

RELG 504	Research Methods	(3-4)
RELR 565	Introduction to Pastoral Theology and Methodology	(3-4)
RELR 567	Introduction to Pastoral Counseling	(3-4)
RELR 568	Care of the Dying and Bereaved	(3-4)
RELR 574	Introduction to Preaching	(3-4)
RELR 584	Culture, Psychology, and Religion	(3-4)
RELR 694	Seminar in Clinical Ministry	(3-4)
RELT 557	Theology of Human Suffering	(3-4)
RELT 558	Old Testament Thought	(3-4)
RELT 559	New Testament Thought	(3-4)
RELE 524	Christian Bioethics	(3-4)
MFAM 515	Crisis-Intervention Counseling	(3)
GSCJ 515	Graduate Research Writing	(2)

**As needed to complete degree:**

RELG 695	Clinical Internship	(0)
RELG 696	Project	(1-4)
RELG 697	Independent Research	(1-8)
RELG 698	Thesis	(1-4)
_____	Approved electives	(0-12)

**TOTAL UNITS REQUIRED 48**

**Transfer credits**

Students are able to transfer up to 8 units of approved graduate-level courses from other institutions into the program in clinical ministry.

**Clinical internship**

Students must also satisfactorily complete an approved, 400-hour clinical internship (RELG 695). The program recommends that this requirement be met by the satisfactory completion of one quarter of clinical pastoral education (CPE) at an accredited CPE center. (Note: Acceptance into a quarter of CPE is at the discretion of the CPE supervisor and must be arranged individually and in advance.) The expectation of the program is that all students will complete all course work before entering the clinical internship. In certain cases, however, a student may petition the coordinator of the program to take the clinical internship out of sequence. Even in such cases, the recommendation is that RELR 565, RELR 567, and RELR 568 be completed before entering the clinical internship.

Students who wish to receive academic credits for their clinical internship may register for RELR 524 Clinical Pastoral Education. If taken as a selective, this course may account for a maximum of 6 academic units.

After the 400-hour segment, a clinical evaluation form must be submitted to the program coordinator.

**Comprehensive examination**

Each student must pass a comprehensive examination. This examination will test the student's ability to integrate and apply knowledge from the overall program. This examination must be successfully completed before the student defends a thesis, project, or papers.

**Thesis, project, or publishable papers**

Each student must either prepare a thesis while registered for RELR 698, prepare a project while registered for RELR 696, or prepare two major papers of publishable quality. Independent research for either the thesis or the project is done while registered for RELR 697. The project option must be designed and implemented within the confines of the program and under the auspices and direction of the program coordinator. The student must provide an oral defense of the thesis, a project, or two major papers. By the time students complete 12 quarter units in the program, they must declare whether they intend to complete a thesis, a project, or two major papers.

**CLINICAL MINISTRY—CERTIFICATE**

The Clinical Ministry Program certificate option is available for those students who prefer not to complete the full M.A. degree program at this time.

**REQUIRED COURSES (22 units)**

RELR 565	Introduction to Pastoral Theology and Methodology	(3-4)
RELR 567	Introduction to Pastoral Counseling	(3-4)
RELR 568	Care of the Dying and the Bereaved	(3-4)
RELR 584	Culture, Psychology, and Religion	(3-4)
RELT 557	Theology of Human Suffering	(3-4)
RELE 524	Christian Bioethics	(3-4)
MFAM 515	Crisis-Intervention Counseling	(3)

**Fulfilling required units**

The 22 required units are to be satisfactorily completed by taking all of the above courses. One of the above courses must be taken for 4 units.

**Clinical internship—CPE**

The program recommends that the clinical internship requirement of 400 hours (RELG 695)—be satisfied through one quarter of clinical pastoral education (CPE).

**Coding Specialist—AH (certificate)**

DIANA S. MEDAL, Program Coordinator

PAULINE CALLA, Clinical Coordinator

**FACULTY**

Diana S. Medal  
Terri L. Rouse

**ADVISORY COMMITTEE**

Rita M. Stiffler, Chair  
Darlene Downs  
Carel Hanson  
Melissa Hingula

Health care facilities need coders who accurately select ICD-9-CM codes, CPT codes, and DRG and APC assignments for diagnostic and surgical information recorded in health records. In most instances, financial reimbursement is directly tied to these numeric codes. The statistical information generated from these codes is also used in research, quality improvement in patient care, education, and administrative decision making.

**Opportunities**

Coding specialists are in demand in acute-care and ambulatory-care facilities, physician's office practices, and long-term care facilities. A variety of government agencies require coding expertise as well. The need for accurate, skilled coders is acute in California and throughout the nation. Information about job opportunities is made available to alumni as it becomes available.

**The program**

The Coding Specialist Certificate is a nine-quarter certificate program. Classes meet once a week on Tuesday evenings. The last two quarters of the program consist of an internship-like laboratory experience, HLCS 261, 262 Coding Practicum I, II. These practicums meet twice a week in the evenings. Prior to beginning coding courses, the student is introduced to health care records, confidentiality, ethics, and pharmacology.

**Professional certification**

Upon successful completion of the program, the student is eligible to take the national certification examination of the American Health Information Management Association; however, three years of coding experience is recommended before taking this certificate examination.

**The program objectives**

Upon completion of the program, the graduate should be qualified to:

1. Use with understanding the instructions in format, organization, and mechanics of the ICD-9-CM, CPT, and E & M coding systems.
2. Code with accuracy and consistency.
3. Analyze medical records to identify significant medical conditions and surgical procedures; correctly select the principal diagnosis and procedure; and appropriately sequence other diagnoses, complications, and procedures.
4. Supervise health-data collection and processing through coding, indexing, and maintaining disease and operation statistics.
5. Develop policies and procedures for coding, including a plan for coding quality.
6. Follow federal, state, and professional association guidelines for coding in the health care environment.
7. Understand the concepts of the prospective payment system and perform diagnostic-related group and ambulatory-patient classification assignments using decision trees and computerized patient-data groupers.
8. Delineate the difference between optimization of coding in compliance with governmental regulations and fraudulent coding.

**Accreditation**

The Coding Specialist Program is approved by the Commission on Accreditation for the Health Informatics and Information Management Education (CAHIIM).

**PREREQUISITE**

The following courses must be completed at an accredited college or university:

High school graduation/GED  
 Human anatomy and physiology  
 Medical terminology  
 Essentials of human diseases  
 Introduction to computer applications  
 Special course work/credit

Credit for life experience may be offered through waiver or equivalency examination

**PROGRAM OF INSTRUCTION**

HLCS 236	Pharmacology	(3)
HLCS 239	Introduction to Medical Records	(3)
HLCS 242	Coding I	(4)
HLCS 243	Coding II	(4)
HLCS 245	Coding III	(4)
HLCS 254	Evaluation and Management Coding for Billing and Reimbursement	(3)
HLCS 257	Coding Special Topics	(3)
HLCS 261	Coding Practicum I	(3)
HLCS 262	Coding Practicum II	(3)

A minimum grade of C (2.0) is required for all courses in the program.

## Counseling—ST

(M.S.; See Faculty Counseling, Group Counseling, and School Counseling)

CHERYL SIMPSON, Program Coordinator for Counseling, M.S. and certificate

**FACULTY**

Jennifer Andrews  
 Karen Carlson  
 Gerald Corey  
 Lolita Domingue  
 Curtis Fox  
 Suzanne Hanna  
 Lynne Hattendorf  
 Gayle Helenski  
 Douglas Huenergardt  
 Craig Lambdin  
 Carmen Knudson-Martin  
 Sandra May-Leggitt  
 Randall Lee Roberts  
 Claudia Ronaldson  
 Cheryl Simpson  
 Lorraine Thompson  
 Randall Walker  
 Colwick Wilson

The Master of Science degree in counseling is a 72-unit program designed to give graduate students a broad background in mental health counseling and to prepare them for the school counseling credential. This degree will become an integral part of Loma Linda University's mission, as illustrated by the Good Samaritan sculpture on the mall of the campus. The sculpture depicts the biblical parable told by Jesus in Luke 10:30-37, which contrasts indifference and ethnic pride with attitudes of empathy and compassion.

**School counseling credential**

School counseling began as a profession in the early 1900s when vocational guidance emerged as a response to America's industrial revolution and to the advisement needs of veterans with educational benefits. Over the next century, school counselors became vital members of the mental-health community as more responsibility for at-risk children, adolescents, and young adults was shifted to education.

The California Pupil Personnel Services (PPS) Credential in school counseling can be obtained by students pursuing the M.S. degree in counseling (72 units) or those wishing to add a 25-unit certificate to their 78-unit M.S. in marital and family therapy (total of 103 units).

**Mission and curriculum**

Guided by the University's mission of whole-person health care, California's new standards for school counseling, and the expanding nature of professional collaboration in mental health, the counseling curriculum is organized into the following three domains.

- I Educational foundations and beliefs
- II Theoretical and cognitive competence
- III Counseling competence and commitment to service

Each candidate is expected to combine the knowledge and skills learned throughout these domains with an understanding of the University's mission to formulate a well-thought-out, clearly articulated personal belief system which is demonstrated in ethical values and behaviors. Development of this personal epistemology requires each candidate to examine lifelong-learning related to meaning, purpose, hope, and service. These issues include:

- Beliefs about the nature, origin, and future of humans
- Equality and inclusion
- Honoring personal and cultural values with sensitivity toward diversity
- Influence of religious traditions and communities of faith
- Integrity toward self and others
- Sources of strength and renewal
- Spirit of generosity
- Competence and conscientiousness

#### ADMISSION REQUIREMENTS

- Entrance: Fall, Winter, Spring, Summer quarters
- Minimum G.P.A. 3.0 (on 4.0 scale) in bachelor's degree or final 45 units of program
- Official transcripts of college work
- Prerequisite courses: statistics and abnormal psychology
- Three letters of reference
- Statement of purpose
- Interview with faculty

#### PROGRAM REQUIREMENTS (72 units)

##### DOMAIN I

PREREQUISITE: General statistics (3)

##### Educational foundations and beliefs

Foundational courses in learning theory, educational psychology, sociocultural competence, research, and statistics are considered foundational to building competence as a school counselor. These courses include the following:

- |          |  |     |
|----------|--|-----|
| COUN 501 | Research: Quantitative                     | (3) |
| COUN 502 | Research: Qualitative                      | (3) |
| COUN 545 | Gender Perspectives                        | (2) |
| COUN 547 | Social Ecology in Dev                      | (3) |
| COUN 574 | Psychological Foundations of Education     | (4) |
| MFAM 535 | Case Presentation and Professional Studies | (4) |
| RELR 564 | Religion, Marriage, and Family             | (3) |

##### DOMAIN II

PREREQUISITE: Abnormal Psychology (3)

##### Theory and cognitive competence

Candidates are challenged with a variety of theoretical constructs from which to develop an approach to counseling that is compatible with their own belief systems and personhood. They are expected to learn how to deconstruct theories, critically evaluate them, and create a foundation upon which to build their professional skills and relationships. Courses include:

- |          |   |     |
|----------|---|-----|
| COUN 575 | Counseling Theory and Applications  | (3) |
| COUN 556 | Psychopathology and Diagnosis Procedures                                    | (3) |
| COUN 568 | Group Process Theory and Procedures: Theories in Marital and Family Therapy | (3) |
| COUN 576 | Exceptional and Medically Challenged Children                               | (3) |
| COUN 577 | Assessment in Counseling  | (3) |
| COUN 584 | Advanced Child and Adolescent Development                                   | (3) |
| COUN 674 | Human Sexual Behavior   | (3) |

##### DOMAIN III

##### Counseling competence and commitment to service

The counseling program is based on the assumption that counseling competence develops from the foundational knowledge, personal epistemologies, and theoretical understanding learned in Domains I and II.

Another assumption is that competence embraces the concept of service. Activities involving case study and field experience are designed to emphasize service and the development of altruism. By helping K-12 pupils sense the dimensions of personal need and worth in others, candidates grow in their ability to respond with compassion, empathy, and cultural competence. Working in education, school counselors help K-12 students in their personal development, career preparation, and academic achievement in order to become lifelong learners. Courses in this domain include:

- |                    |  |     |
|--------------------|--|-----|
| COUN 514           | Cross-cultural Counseling                                    | (2) |
| COUN 515           | Crisis Intervention Counseling                               | (3) |
| COUN 578           | College and Career Counseling                                | (3) |
| COUN 678           | Consultation and Leadership                                  | (3) |
| COUN 679           | School Counseling: History and Practice                      | (3) |
| COUN 614           | Law and Ethics   | (3) |
| COUN 624           | Individual and Systems Assessment                            | (3) |
| COUN 638           | Family Therapy and Chemical Abuse                            | (3) |
| COUN 644           | Child Abuse and Family Violence                              | (3) |
| COUN 680A, B, C, D | Field Experience/Supervision in School Counseling: 600 hours | (3) |

California Basic Educational Skills Test (CBEST) is required.

## Criminal Justice—ST (M.S.)—ST

EDWARD COCHRANE, Program Coordinator

Crime disrupts personal and community relationships, endangers public health and safety, and threatens the moral contours of everyday social life. Loma Linda University's mission "to make man whole" provides a powerful and much-needed context in which criminal justice can be addressed on the basis of healing and restoration. The principles of restorative justice elevate the dimensions of justice that:

- promote the acceptance of responsibility,
- promote the fulfillment of obligations,
- embrace forgiveness and reconciliation, and
- culminate in the restoration of personal and social relationships.

This multidisciplinary approach to deviance and the administration of justice takes into consideration the social, physical, and spiritual well-being of victims, offenders, and communities—which provides a deeper understanding of crime and the struggle of the modern criminal justice system.

### Program objectives

The purpose of the Criminal Justice Program is to prepare students to think critically, analytically, and creatively about the problems of crime and social control in the contemporary world. The program is designed to meet the diverse needs of criminal justice professionals. It will accomplish a number of objectives, including:

- To prepare students for careers in law enforcement, corrections, criminal justice administration, and planning.
- To provide students with a thorough knowledge of social science theory and of applying criminological theory and research to current problems in criminal justice.
- To provide students with a thorough knowledge of current issues in criminal justice; and of the importance of the relationship of criminal justice to other disciplines and professions, such as social work, psychology, medicine, dentistry, nursing, and public health.
- To prepare students for the application of various computer technologies to decision-making in the criminal justice system.
- To prepare students to conduct social research on crime and the effect of policies and programs on crime outcomes.

### Program description

All students must complete a two-year program consisting of 48 quarter units of course work. There are 28 units of foundation content required for all students, followed by one of the two concentrations: administration or forensic mental health. Students opting for the administration concentration will study public administration, the economic dimensions of social policy, organizational theory, program planning, and policy analysis as they relate to contemporary

problems in criminal justice. The forensic mental health concentration provides students with both global and domestic perspectives on violence, mental health, and drug and alcohol abuse issues. Both concentrations emphasize a thoughtful reflection about public philosophy and ethical issues in criminal justice that will provide students with a deeper understanding of the logic influencing policy, administration, and practice issues affecting the field.

### PREREQUISITE

This master's degree builds on a broad liberal arts (general education) foundation. Consistent with this view, the program assesses the liberal arts foundation of students applying for the M.S. degree in criminal justice. The required prerequisite course work provides students with foundation concepts and/or skills in each of the following:

Interviewing and counseling	(3)
Human growth and development	(3)
Cross-cultural issues	(3)
Introductory statistics	(3)

Unit values represent a quarter system of measurement. Content from multiple courses may be used to meet most requirements.

### Admission requirements

This program follows the admission requirements of the School of Science and Technology, including:

- Applicants must demonstrate satisfactory performance on the Graduate Record Examination (GRE). For admission with regular status, satisfactory performance is defined as a minimum combined score verbal and quantitative of 1000, and an analytical writing score of 4.0 for admission with regular status. Students submitting lower scores may be considered for provisional status.

Applicants must demonstrate satisfactory adherence with the minimum academic and professional compatibility criteria established by the program, which includes:

- A cumulative grade-point average of 3.0 or above (on a 4.0 scale) (special consideration may be given to applicants with grade-point averages as low as 2.75 if the last part of their college work shows significant improvement).
- Evidence of professional compatibility, personal qualifications, and motivation to complete a graduate program by obtaining a passing score on the admissions interview with the department's Admissions Committee.

Evaluation criteria for the interview include—

- ~ verbal communication skills,
  - ~ critical-thinking ability,
  - ~ values congruent with the criminal justice profession,
  - ~ appreciation of human diversity,
  - ~ evidence of reflective learning, and
  - ~ comportment.
- Submission of a completed application, including—a personal statement, application fee, all college and/or university transcripts, and three

letters of recommendation (one from an academic source and one from a work supervisor preferred).

**Curriculum**

The 48-unit curriculum for the M.S. degree in criminal justice provides the mix of academic, experiential, and research activities essential for M.S. degree students. Students must maintain a grade-point average of 3.0 (or a letter grade of B on a 4.0 scale); and meet the knowledge, skill, and professional performance competencies outlined by the program. Students must also maintain a B- (2.7) or better in all required (core) courses and a minimum of a C (2.0) in all selective courses. Courses with grades falling below the standards set for required and selective courses must be repeated. Students are financially responsible for the cost of repeating courses when grades do not meet these minimum standards.

**General overview**

The two-year, 48-quarter unit program begins with 28 units of core course work required for all students. Course work during the first year of study is divided into three professional areas of study, which include: criminal justice; religion, philosophy, and ethics; and social research methods; information technology as well. At the end of the first year, students select their concentration area of administration or forensic mental health— each requiring 9 units of concentration-specific course work.

To complete the program, the student has two options:

1. Professional practica (9 professional units requiring 540 hours of integrated practicum and seminar) and 11 units of didactic selectives, or
2. 6 units of academic thesis and 5 units of didactic selectives.

**CORE COURSES (28 units)**

**Criminal justice (18 units)**

- CRMJ 515 Crime and Society (4)
- CRJM 517 Criminal Procedure and Rules of Evidence (3)
- CRMJ 520 Restorative Justice (3)
- CRMJ 574 Criminological Theory (4)
- CRMJ 645 Special Tools and Analysis in Criminal Justice (2)
- SOWK 682 Legal and Ethical Aspects in Health and Mental Health Services (3)

**Religion, philosophy, and ethics (4 units)**

- RELE 524 Christian Bioethics (4)
- or
- an approved course in consultation with adviser (4)

**Social research methods (6 units)**

- SOWK 547 Research Methods I (3)
- SOWK 549 Research Methods II (3)

**CONCENTRATION COURSES**

**Administrative concentration (9 units)**

**REQUIRED**

- SOWK 672 Theories of Organizations and Systems (3)

- CRMJ 630 Criminal Justice Planning and Administration (3)

**Concentration selectives (select 3 units)**

- SOWK 494 Conflict Resolution and Dispute Mediation (2)
- SOWK 673 Program Planning and Evaluation (3)
- PUAD 673 Public Administration Management (3)
- SOWK 683 Advanced Policy Analysis (3)
- SOWK 676A Human Resources Planning and Development Seminar (3)
- SPOL 665 Information Technology and Decision Science (4)

**Forensic mental health concentration**

**REQUIRED**

- CMRJ 620 Forensic Mental Health (3)

**Concentration selectives (select 6 units)**

- SOWK 648 Dual Diagnosis (2)
- SOWK 681 Health and Mental Health Policy and Services (2)
- SOWK 659 Interventions with the Chronically Mentally Ill (2)
- SOWK 648 Dual Diagnosis (2)
- MFAM 644 Child Abuse and Family Violence (2)
- PSYC 685 Drug Addiction and Therapy (2)
- PSYC 686 Child, Partner, and Elder Abuse (2)

**Thesis option (6 units)**

- CRMJ 697 Research (2, 2)
- CRMJ 698 Thesis (2)

**Internship option**

- CRMJ 687A, B, C Professional Practicum Seminar (3, 3, 3)

(Students complete 3 professional practicum units during each quarter of CRMJ 757A, B, C. Each 3 units of professional practicum and seminar requires 160 hours of practicum and 20 hours of seminar.

Professional practicum and seminar units are not calculated into degree units. Students pay program fees for professional practicum units instead of tuition.)

**General selectives\*\***

**Select 5 units for thesis option**

**Select 11 units for internship option**

- CRMJ 518 Legal Discourse (2)
- CRMJ 519 Moot Court (2)
- CRMJ 640 Forensic Evidence (4)
- CRMJ 614 Social Science Concepts and Theories (2)
- CRMJ 599 Directed Study/Special Project (1-4)
- SPOL 614 Social Science Concepts and Theories (4)
- SPOL 615 Economic Theory and Social Policy (4)
- SOWK 663 Advanced Practice with Individuals (3)
- SOWK 659 Social Work Practice with the Chronically Mentally Ill (2)
- BIO\_\_ \_\_\_ Principles of Forensic Science (3)

HPRO 548	Community and Domestic Violence	(3)
HADM 510	Public Health Policy	(3)
INTH 518	Women in Development	(3)
INTH 548	Violence Issues: Global Public Health Perspective	(2)

\*\*Other courses may be approved for elective credits in consultation with the faculty adviser.

TOTAL UNITS	48
PRACTICUM AND SEMINAR HOURS	480 + 60

## Cytotechnology—AH (B.S., certificate)

MARLENE M. OTA, Program Director

Cytotechnology is a specialty within the broad field of clinical laboratory science. The cytotechnologist, working under the direction of a pathologist, detects cell changes caused by different disease processes; and is able to differentiate between normal, atypical, and malignant cell changes. In recognizing microscopic abnormalities of cells and cellular patterns from various body sites, the cytotechnologist assists the pathologist in detecting cancer at its earliest and potentially most curable stage. As a result, physicians are able to diagnose and treat cancer long before discovering its existence by alternate methods.

### Opportunities

Cytotechnologists work in hospitals, clinics, and independent pathology laboratories. The employment outlook for cytotechnologists is favorable, with the demand for trained workers exceeding the supply. Cytotechnologists can advance to supervisory positions, participate in research activities, or become teachers in the field. Advancement is based on experience, skill, and advanced education.

### The program

The Cytotechnology Program, based on the completion of two years of study at an accredited college or university, leads either to a certificate or to a certificate and a Bachelor of Science degree. The program of study begins with the Autumn Quarter. A certificate is awarded at the completion of the fourth quarter of study, and those electing to continue are awarded the Bachelor of Science degree upon the completion of an additional two quarters of study. With the certificate in cytotechnology and the baccalaureate degree, the student is eligible to take a national examination and become a registered cytotechnologist.

Registered cytotechnologists entering the program to receive the Bachelor of Science degree are considered to have completed, on the basis of registry, the equivalent course work listed in the first four quarters of the program. A total of 64 quarter units is applied toward the graduation requirements, provided the course work in pathology is equivalent to that offered in the certificate program at this University. Where credit in pathology is not equivalent, the requirement may be met by taking AH CJ 402, 403 at this University; or by completing a minimum of 8 quarter units of upper-divi-

sion course work in developmental biology or comparative animal physiology at an accredited college or university.

A writing-validation examination and a mathematics-competency examination will be administered to all students. For those students achieving a score of less than 4 on the Wholistic Writing Score Sheet, remedial writing must be taken within the first academic year. Upon retest, the student must achieve a score of 4 or higher. A passing score of 75 percent must be achieved in the mathematics competency examination.

### Accreditation

The program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP), 35 East Wacker Drive, Suite 1970, Chicago, IL 60601-2208, in collaboration with the Cytotechnology Programs Review Committee—telephone: 302/429-8802; FAX: 302/429-8807; e-mail: caahep@caahep.org or ASCP@cytopathology.org; or Web site: <<http://www.cytopathology.org>>.

### Professional registration

Upon completion of the certificate program (fourth quarter of study) and the completion of a baccalaureate degree, the student is eligible to sit for the certifying examination given by the Board of Registry of the American Society of Clinical Pathologists, P. O. Box 12277, Chicago, IL 60612-0277. Information about qualifying examinations can be obtained at the office of the department chair.

### The program objectives

Upon completion of the program, the graduate should be qualified to:

1. Determine and implement the appropriate procedures for collecting and processing biological specimens for cytologic analysis.
2. Detect, differentiate between, and diagnose presence and absence of disease in gynecologic and nongynecologic samples.
3. Integrate and relate data generated by the various clinical departments, making judgments regarding possible discrepancies; confirm cytologic results; verify quality-control procedures; and develop solutions to problems concerning the generation of laboratory data.
4. Use contemporary and uniform diagnostic terminology in reporting laboratory results.
5. Judge the results of quality-assurance measures and institute proper procedures to maintain accuracy and precision.
6. Evaluate current and new techniques, instruments, and procedures in terms of their clinical and diagnostic usefulness and practicality.
7. Demonstrate professional conduct and interpersonal communication skills with patients, laboratory personnel, other health care professionals, and the public.
8. Recognize, encourage, and act upon the individual's need for continuing education as a function of growth and maintenance of professional competence.
9. Apply sound principles of management and supervision.
10. Understand and apply sound principles of scientific research.

**Admission**

PLEASE NOTE: GRADES OF C- ARE NOT TRANSFERABLE FOR CREDIT.

**PREREQUISITE**

Baccalaureate degree from an accredited college/university  
 General biology, complete sequence  
 Human anatomy and physiology, complete sequence  
 Microbiology with laboratory  
 General chemistry with laboratory, complete sequence  
 College algebra  
 English composition, complete sequence

**PREREQUISITE FOR CYTOTECHNOLOGY, B.S.**

20 units minimum in humanities  
 (choose minimum of two areas from:  
 history, literature, philosophy, foreign language, art/music appreciation/history)

Included in the 20-unit minimum:

4 units of religion per year of attendance at a Seventh-day Adventist college or university

General biology, complete sequence  
 Human anatomy and physiology, complete sequence  
 Microbiology with laboratory  
 General chemistry with laboratory, complete sequence  
 College algebra  
 Cultural anthropology or an approved course dealing with cultural diversity  
 Select 8 units from a minimum of two areas:  
 Sociology, economics, geography, political science, psychology, anthropology  
 English composition, complete sequence  
 (minimum of 9 quarter units)  
 Personal health or nutrition  
 Two physical activity courses  
 Electives to meet the minimum total requirement of 96 quarter units

For total unit requirements for graduation, see Section II, Division of General Studies.

**How to apply**

Prospective students should apply as soon after January 1 as possible for the next academic year. The certificate program begins in August and the B.S. degree program begins in September. Preference will be given to applicants whose applications and completed transcripts are received by March 1.

It is suggested that applicants take a minimum of two years of mathematics and natural sciences (excluding general science) during the high school years. A high school diploma or the GED is required for acceptance.

If English is not the native language, an undergraduate must submit a minimum score of 550 for the Test of English as a Foreign Language (TOEFL) or a minimum score of 90 percent on the Michigan Test of English Language Proficiency (MTELP) or the equivalent. Minimum scores of 5 both on the TOEFL writing test and the speaking test (TWE and TSE-A) are

required for acceptance (see Section II, INTERNATIONAL STUDENTS).

**Academic progression**

A minimum grade of C (2.0) is required for all courses in the program. A grade of less than C in any one course, or unsatisfactory clinical performance, will be cause for dismissal from the program for the remaining academic year. Readmission to the program will require reapplication.

**PROGRAM OF INSTRUCTION****CERTIFICATE**

CLSC 341	Female Genital Cytology	(12)
CLSC 351	Respiratory Cytology	(7)
CLSC 353	Urinary Tract and Prostate Cytology	(3)
CLSC 357	Gastrointestinal Tract Cytology	(2)
CLSC 361	Body Cavity and Miscellaneous Secretions Cytology	(8)
CLSC 363	Bone Biopsy Cytology	(1)
CLSC 365	Breast Cytology	(1)
CLSC 367	Cytogenetics	(1)
CLSC 371	Cytopreparation Techniques	(3)
CLSC 373	Histotechnology Techniques	(1)
CLSC 481	Supervised Cytology Research Project	(4)
CLSC 491, 492	Cytology Affiliation I, II	(6, 6)
AHCJ 328	Portfolio Practicum I	(1)
AHCJ 402, 403	Pathology I, II	(4, 4)

A microscope rental fee and a usage-and-replacement fee are required for the Autumn, Winter, Spring, and Summer quarters.

In addition to the certificate requirements above, the B.S. degree requires completion of the following:

**BACHELOR OF SCIENCE****Junior Year**

CLSC 341	Female Genital Cytology	(12)
CLSC 351	Respiratory Cytology	(7)
CLSC 353	Urinary Tract and Prostate Cytology	(3)
CLSC 357	Gastrointestinal Tract Cytology	(2)
CLSC 361	Body Cavity and Miscellaneous Secretions Cytology	(8)
CLSC 363	Bone Biopsy Cytology	(1)
CLSC 365	Breast Cytology	(1)
CLSC 367	Cytogenetics	(1)
CLSC 371	Cytopreparation Techniques	(3)
CLSC 373	Histotechnology Techniques	(1)
AHCJ 402, 403	Pathology I, II	(4, 4)
AHCJ 328	Portfolio Practicum I	(1)
RELJ 457	Christian Ethics and Health Care	(3)
RELJ ___	Adventist selective	(3)

A microscope rental fee and a usage-and-replacement fee are required for the Autumn, Winter, Spring, and Summer quarters.

**Senior Year**

CLSC 301, 302	Introduction to Radiographic Procedures I, II	(2, 2)
CLSC 404	General Histology	(5)
CLSC 405	Pathology	(5)
CLSC 424	Hematology	(3)
CLSC 431	Advanced Specialties	(3)
CLSC 432	Current Research Techniques	(3)
CLSC 481	Supervised Cytology Research Project	(4)
CLSC 483	Supervised Hematology Research Project	(2)
CLSC 491, 492	Cytology Affiliation I, II	(6, 6)
AHCJ 331	Human-Resource Management	(3)
AHCJ 426	Introduction to Computer Applications I	(2)
AHCJ 498	Portfolio Practicum II	(1)
RELF 423	Loma Linda Perspectives	(2)

Summer Quarter is the best time to take the religion units; 8 units of religion are required for graduation.

## Dental Anesthesiology, Advanced—SD (certificate)

LARRY D. TRAPP, Program Director

**FACULTY**

David L. Anderson  
Barry Krall  
Larry D. Trapp

The postdoctoral Dental Anesthesiology Program is offered to dentists who desire to pursue a career in anesthesiology for dentistry. The educational design of this twenty-four month program provides a strong clinical background in anesthesiology. The program is based in the Surgery Center for Dentistry, located in the School of Dentistry, where approximately 4,000 patients are treated on an annual basis. Additional training at area hospitals is received in structured rotations in cardiology, internal medicine, and anesthesiology.

Didactic instruction is coordinated through the School of Dentistry's Department of Dental Anesthesiology. Residents attend an anesthesiology lecture series and weekly grand rounds at Loma Linda University Medical Center. In addition, regular meetings of the dental anesthesiology residents are held, during which a variety of contemporary topics are discussed—including a review of the current literature. Residents also participate in teaching pain control in the predoctoral curriculum.

In an effort to develop dentist-educators, an optional third year of study leading to a master's degree in physiology or pharmacology is available.

Upon successful completion of the program, the dental anesthesiologist will be eligible to take the diplomate examination of the American Dental Board of

Anesthesiology and to apply for a general anesthesia permit in any state of the United States.

**Application deadline**

Application for admission should reach the School of Dentistry Department of Anesthesiology no later than October 1 of the year prior to the summer of intended enrollment.

**Tuition (2005-2006)**

No additional tuition is required. Insurance is \$300 per quarter, and student-service fees are \$93 per quarter. The information technology fee is \$150 per quarter.

**DEPARTMENTAL REQUIRED COURSES**

ANES 521	Principles of Medicine, Physical Diagnosis, and Hospital Protocol	(2, 2)
ANES 546	General Anesthesia	(3000-3400 clock hours)
ANES 547	Anesthesia Grand Rounds	(1)
ANES 548	Anesthesia Residents Seminar	(2)
ANES 604	Anesthesia Literature Review	(1)
ANES 654	Practice Teaching in Anesthesia (arranged)	(1)
ANES 697	Research	(1)

**INTERDISCIPLINARY AND NON-DEPARTMENTAL REQUIRED COURSES**

RELE_	Religion selective	(3)
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## Dental Hygiene—SD (B.S.)

KRISTI J. WILKINS, Chair

**FACULTY**

Darlene Armstrong  
Sharon Boggs  
Tina Bruinsma  
Kathleen Carmicino  
Sylvia Castro  
D. Darlene Cheek  
Dena Devlin  
Coralie Dinger  
Mak Nai Dohr  
Lorraine Ehrler  
Debra Friesen  
Heather Gillespie  
Theresa Guillen  
Laurel Haglund  
Rhonda Hamerslough  
Marilynn Heyde  
Brad Hunt  
Tricia Hunt  
Michelle Hurlbutt  
Jacqueline Jimenez  
Michelle Johnson  
Shirley Lee  
Patricia Lennan  
Leticia Lenoir  
Pearl McDonald  
Shirley McIntire

Karla McKee  
 Mary Quishenberry  
 Darla Rich  
 Marisa Russo  
 Mary Schumacher  
 Karen Simpson  
 Corey Steinbrunn  
 Jonell Stephens  
 Patricia Tappen  
 Teresa Thomas  
 Sheila Thornton  
 Nicole Vongschanphen  
 Deborah Webster  
 Kristi Wilkins  
 Ellen Young

Established in 1959, the Department of Dental Hygiene, the undergraduate program of the School of Dentistry, is largely concerned with preventive oral health services and maintenance care. Dental science courses, preclinical lectures and seminars, laboratory exercises, and clinical assignments have been developed to provide training in the variety of procedures delegated to the dental hygienist within the dental practice setting. These experiences are sequenced in an organized manner that provides for continual growth and proficiency in performance of all traditional and expanded-function procedures.

The purpose of the program is to develop professionals prepared for the current practice of dental hygiene, as well as graduates who are additionally prepared to deal with future changes in dentistry. Courses that encourage critical thinking and problem-solving techniques and that enhance the ability to evaluate the latest in research are important adjuncts to clinical training.

Upon completion of this curriculum, graduates will be prepared to enter a variety of career options available to a dental hygienist.

### Curriculum

Dental hygiene, a profession dating back to 1913, is largely concerned with preventive health services. The hygienist works in association with the dentist in private-practice offices, industrial organizations, schools, hospitals, state or federal public health services, and the armed forces. Salary ranges compare with those for registered nurses.

The curriculum is organized as a four-year college program leading to the Bachelor of Science degree. The freshman and sophomore years of largely prescribed, preprofessional study may be taken at any accredited college. The professional program begins with the junior year in the School of Dentistry. The program is approved by the Commission on Dental Accreditation of the American Dental Association. The first class at this University graduated in 1961.

### Philosophy

A profession in the health arts and sciences calls increasingly for persons of intelligence, integrity, industry, responsibility, and depth of human understanding. Therefore, the program of instruction is planned on a strong liberal arts foundation. The student is encouraged to take electives that contribute to breadth of knowledge and quality of values. The choice of electives in early college work is important for many reasons.

The School of Dentistry is interested in applicants with the potential to become hygienists who are well-read and gracious persons—prepared to communicate effectively in professional and community relationships. They should be able to draw on knowledge of the structure and function of the human body in health and disease, applying resources based on Christian ideals and values to aid in the solution of personal problems. They should also be able to develop the attitudes and skills which will most effectively serve society.

### Goal

The goal of the Dental Hygiene Program is to educate competent, concerned, and active members of the dental hygiene profession who possess the ability to effectively perform the expanding scope of practice of the dental hygienist.

Loma Linda University emphasizes Christian values and beliefs and the concept of whole-person care. Opportunities for spiritual growth and fellowship among faculty and students are interwoven into daily academic pursuits, clinical practice, and social interactions.

The advancement of dental hygiene depends on an ever-growing body of knowledge. Therefore, this program also places great importance on providing an atmosphere in which students can develop the skills necessary to objectively assess new theories and trends in dentistry, in light of scientific knowledge and principles. By combining Christian values with an appreciation for research and the scientific method, graduates will continually apply sound principles to patient care and exhibit God's love in the quality of service they render.

### Admission

The student must have a diploma or its equivalent from a four-year secondary school, and must meet college-entrance requirements. After successful completion of the prescribed pre-entrance course work in an accredited college or university, admission to the Dental Hygiene Program is in the junior year.

For entrance to the junior professional year, the applicant must have:

- 96 quarter or 64 semester units of acceptable college credit.

NOTE: Loma Linda University requires all students who graduate with a baccalaureate degree to complete a minimum of 68 quarter units of general education, which are integrated into the entire undergraduate program.

See Section II of this CATALOG, Division of General Studies, for information regarding this requirement.

- good scholastic standing, with a grade-point average of 2.5 or higher in science course work and in nonscience course work, averaged separately; a minimum grade of C for all pre-entrance course work to be transferred to the University. The average entering grade point average is 3.0 or above.
- acceptable personal qualities.
- a personal interview with a representative designated by the School of Dentistry.
- the subject requirements outlined hereafter.

**Office experience**

The preprofessional student should seek experience observing and assisting in a dental office, not necessarily for remuneration. Such experience provides opportunities for familiarization with the procedures of the dentist's office and ascertaining one's interest in and fitness for the practice of dental hygiene.

**Regulations**

The student is also subject to the conditions of registration, attendance, financial policy, governing practices, and graduation requirements outlined in other sections of this CATALOG.

**Employment**

Dental hygiene students may accept part-time employment during the school year after receiving approval from the department chair and the associate dean for academic affairs. Permission to work is determined on the basis of grades, class load, and health. Work hours may not interfere with class, laboratory, or clinic assignments.

**Supplies**

For the professional years of the program, the student must have prescribed textbooks, supplies, instruments, and uniforms. The official instrument issued must be purchased from the School of Dentistry during registration. Unauthorized or incomplete equipment is not acceptable. Advance consent must be obtained for any exception. The student must buy the professional apparel (uniforms, glasses, and shoes) specified by the School of Dentistry.

**License**

To practice, the dental hygienist must pass state licensing examinations given by state and/or regional dental examining boards. The examinations are given several times each year. Credentials from the National Board of Dental Examiners are accepted in lieu of the written portion of a state examination in all states. Some states have additional written tests. Further information can be obtained from each state licensing board.

**ACADEMIC INCENTIVE PROGRAM**

The School of Dentistry has an incentive system to reward dental hygiene students for exceptional performance on the Dental Hygiene National Board Examination. A student who achieves a score of 90 or above on the Dental Hygiene National Board Examination will be acknowledged as follows:

- Notification of receipt of the Academic Excellence Award
- Certificate of recognition awarded during the pinning ceremony on commencement weekend
- \$750 scholarship
- Recognition at LLUSD faculty meeting
- Recognition in LLU Dentistry Journal
- Recognition in LLUSD "DentalGram"
- Press release to student's hometown newspaper

**REQUIREMENTS FOR GRADUATION**

In order to be eligible for graduation, the student must have:

1. Completed the Undergraduate Intent to Graduate Form.
2. Completed all requirements for admission to the chosen curriculum.
3. Completed satisfactorily all chosen requirements of the curriculum, including specified attendance, level of scholarship, length of academic residence, and number of credit units.
4. Attended an accredited college for the first two years, and Loma Linda University School of Dentistry for the junior and senior years.
5. Achieved no lower than a C grade in all core courses and a minimum grade-point average of 2.5.
6. Completed special examinations covering any or all subjects of the curriculum, as required by faculty action.
7. Passed the national board examination.
8. Demonstrated evidence of satisfactory moral and professional conduct, of due regard for Christian citizenship, and of consistent responsiveness to the established aims of the University.
9. Discharged financial obligations to the University.
10. Been certified by the faculty as approved for graduation.

The candidate completing requirements in the Spring Quarter is expected to be present at the commencement exercises and receive the diploma in person. Permission for the degree to be conferred in absentia is contingent upon the recommendation of the dean to the chancellor and can be granted only by the chancellor. If a candidate has not satisfactorily fulfilled all requirements, the University reserves the right to prohibit participation in commencement exercises.

**PRE-DENTAL HYGIENE****SUBJECT REQUIREMENTS FOR ADMISSION****General education requirements**

The general education courses required for earning the baccalaureate degree are to be selected from the areas/domains listed in the Division of General Studies (Section II). It is necessary to complete all requirements before matriculating in the School of Dentistry. A student may be accepted with a deficiency in one or more of the areas but is expected to eliminate deficits before enrolling in the Dental Hygiene Program.

The following areas, including specific courses, must be completed prior to entrance to the program:

**COMMUNICATION SKILLS**  
(13 quarter / 9 semester units)

- \*English composition and literature (a complete sequence)
- \*Computers (highly recommended)
- \*Speech/interpersonal communication/persuasion.  
If English is not the native language, an undergraduate must submit a minimum score of 550 for the Test of English as a Foreign Language (TOEFL).

**SPIRITUAL AND CULTURAL HERITAGE**

**Spiritual**  
(required: 4 quarter/3 semester units per year of attendance at a Seventh-day Adventist college)

**Cultural**  
(12 quarter/\_\_\_ semester units)

Courses selected from the following (must be in a minimum of three areas):

History/Civilization

Fine arts (theory course work only)

Literature

Philosophy/Ethics

Foreign language

Cultural diversity

Performing arts/Visual arts  
(not to exceed 4 quarter units)

**NATURAL SCIENCES**  
(12-16 quarter/\_\_\_ semester units)

- Chemistry, with course work covering a full year of inorganic, organic, and biochemistry, with laboratory
- Human anatomy and human physiology, with laboratory (two separate courses or a sequential course)
- Microbiology, with laboratory
- College mathematics

**SOCIAL SCIENCES**  
(12-16 quarter/8 semester units)

Courses selected from the following (must be in a minimum of two areas):

Introduction to sociology (specific required course)

\*Anthropology

\*Political science

\*Psychology

\*Geography

Cultural diversity  
health and wellness  
(2-6 quarter/2 semester units)

Personal health or nutrition

\*Physical education

\*Two activity courses

\*Program-specific pre-entrance requirements

## DENTAL HYGIENE— DISTRIBUTION OF INSTRUCTION

### Junior Year

		CLOCK HOURS			UNITS		
		Lec./Semr.	Lab.	Clin.	Total		
<b>AUTUMN QUARTER</b>							
†ANAT	301	Head and Neck Anatomy	33	33	—	66	4
†DNHY	303	Dental Materials and Techniques	11	22	—	33	2
†DNHY	305	Dental Anatomy, Lecture	22	—	—	22	2
†DNHY	305L	Dental Anatomy, Laboratory	—	44	—	44	1
†DNHY	309	Radiology I	33	28	—	61	3
†DNHY	321	Preclinical Dental Hygiene, Lecture	22	—	—	22	2
†DNHY	321L	Preclinical Dental Hygiene, Laboratory	—	66	—	66	2
†RELF	406	Adventist Beliefs and Life	22	—	—	22	2
			143	193	—	336	18
<b>WINTER QUARTER</b>							
†ANAT	303	General and Oral Histology and Embryology	22	33	—	55	3
†ANES	314	Local Anesthesia and Inhalation Sedation	41	14	—	55	4
†DNHY	310	Radiology II	22	28	—	50	2
†DNHY	322	Preclinical Dental Hygiene, Lecture	22	—	—	22	2
†DNHY	322L	Preclinical Dental Hygiene, Laboratory	—	66	—	66	2
†DNHY	375	Dental Hygiene Clinic	—	—	44	44	1
†DNHY	380	Medically Compromised Patient*	22	—	—	22	2
†PHRM	411	Pharmacology*	11	—	—	11	1
			140	141	44	325	17
<b>SPRING QUARTER</b>							
†DNHY	323	Preclinical Dental Hygiene, Lecture	22	—	—	22	2
†DNHY	323L	Preclinical Dental Hygiene, Laboratory	—	40	—	40	1
†DNHY	376	Dental Hygiene Clinic*	—	—	88	88	2
†DNHY	380	Medically Compromised Patient*	22	—	—	22	2
†DNHY	405	Introduction to Periodontics	22	—	—	22	2
†ODRP	311	General and Oral Pathology	55	—	—	55	5
†PHRM	411	Pharmacology*	11	—	—	11	1
RELE	457	Christian Ethics and Health Care	22	—	—	22	2
			154	40	88	282	17

\*Grade given at end of multiple-quarter course

†Core course; minimum grade of C- required

## Senior Year

		CLOCK HOURS			UNITS		
		Lec./Semr.	Lab.	Clin.	Total		
<b>SUMMER QUARTER</b>							
†DNES	305	Etiology and Management of Dental Caries	16	8	–	24	2
†DNHY	324	Preclinical Dental Hygiene, Lecture	22	–	–	22	2
†DNHY	324L	Preclinical Dental Hygiene, Laboratory	–	33	–	33	1
†DNHY	376	Dental Hygiene Clinic*	–	–	176	176	4
†DNHY	390	Introductory Statistics	33	–	–	33	3
†DNHY	406	Orthodontic Concepts for Dental Hygiene	11	–	–	11	1
†DNHY	416	Dental Health Education I	22	–	–	22	2
†DNHY	421	Research Design	8	30	–	38	2
			112	71	176	359	17
<b>AUTUMN QUARTER</b>							
†DNHY	417	Dental Health Education II	22	–	–	22	2
†DNHY	422	Research II	11	22	–	33	2
†DNHY	435	Special Topics in Periodontal Therapy	22	–	–	22	2
†DNHY	451	Clinical Seminar/Dental Hygiene Topics	33	–	–	33	3
†DNHY	475	Dental Hygiene Clinic I	–	–	176	176	4
RELE	475	The Art of Integrative Care	22	–	–	22	2
			110	22	176	308	15
<b>WINTER QUARTER</b>							
†DNHY	415	Applied Nutrition	22	–	–	22	2
†DNHY	408	Professional Ethics	22	–	–	22	2
†DNHY	412	Dental Hygiene Topics II	22	–	–	22	2
†DNHY	418	Critical Issues of Health Care	22	–	–	22	2
†DNHY	423	Research III	–	33	–	33	1
†DNHY	431	Public Health Dentistry	33	–	–	33	3
†DNHY	452	Clinical Seminar II	11	–	–	11	1
†DNHY	476	Dental Hygiene Clinic II	–	–	176	176	4
			132	33	176	341	17
<b>SPRING QUARTER</b>							
DNHY	409	Jurisprudence	22	–	–	22	2
†DNHY	413	Dental Hygiene Topics III	22	–	–	22	2
DNHY	414	Personal Finance	22	–	–	22	2
DNHY	453	Clinical Seminar III	11	–	–	11	1
†DNHY	477	Dental Hygiene Clinic III	–	–	176	176	4
RELR	408	Christian Perspectives on Marriage and Family	22	–	–	22	2
			99	0	176	275	13
<b>TOTALS</b>							
(Junior and Senior years)			890	500	836	2226	114

\*Grade given at end of multiple-quarter course

†Core course; minimum grade of C- required

NOTE: Consult adviser regarding other courses that may be applied to the program.

## Dentistry, General—SD (D.D.S.)

The goal of the General Dentistry Program is to train practitioners in the delivery of high-quality dental care that is preventive in purpose and comprehensive in scope, and that is based on sound biological principles.

### Curriculum

Dentistry, like all health professions, exists to benefit society and, therefore, continually assesses its professional services to ascertain what measures, attitudes, and skills most effectively serve society.

The School of Dentistry is committed to:

- Beginning the curriculum with a strong foundation in the sciences that are basic to knowledge of the structure and function of the human being in health and in sickness.
- Providing an educational environment that progressively leads a student to mastery and correlation of clinical sciences and skills.
- Developing a frame of reference from which to mobilize the resources of dentists and associated professional personnel in both delivery of health care and contribution to community well-being by education for the prevention of illness.

These concepts include responsibility for contributing to the body of scientific knowledge by questioning, investigating, and teaching; for remaining sensitive and adaptive to the needs of humanity in ever-changing conditions; and for maintaining consciousness of the individual obligation to live, practice, and strive for the good of humanity.

The curriculum in dentistry, organized to be completed in four academic years, fulfills requirements for the Doctor of Dental Surgery degree.

### Objective

The primary objective of the dental curriculum is to graduate men and women who attest to the purpose of the University and the goals of the School of Dentistry, which include advancing knowledge and understanding of health, disease, and ways to improve health and the dental health care-delivery system through basic and applied research.

### Admission standards

Before starting the first (D1) year, the applicant must have completed a minimum of three academic years and no fewer than 96 semester or 144 quarter units in a college accredited by a regional accrediting association. Acceptance is contingent on completion of specified subject requirements. A four-year undergraduate curriculum leading to a bachelor's degree is highly recommended. A student having completed such a degree is given preference for admission to the dental program.

As a rule, credits earned in professional schools (business, medical technology, nursing, veterinary medicine, pharmacy, or medicine) do not fulfill admission requirements.

Loma Linda University School of Dentistry insists that all dental students must possess the capabilities required to complete the full curriculum in the allotted time and to achieve the levels of competence required

by the faculty. In broad terms, the following are standards required for admission:

- Intellectual capability to complete the curriculum.
- Emotional adaptability and stability.
- Social and perceptual skills.
- Physical ability to carry out activities in observations and communications, and the possession of sufficient motor and sensory abilities to practice general dentistry.

For admission, the applicant must meet specific criteria related to past academic performance (G.P.A.), performance on the Dental Admission Test, and analysis of a personal profile interview. The weight given to these admission factors is approximately equal.

Students who are enrolled in a graduate program in the University are not considered for admission until they have completed or have been released from the graduate program.

Credits for college work should show a minimum grade-point average of 2.7 in science subjects and in nonscience subjects, averaged separately. The student must have a grade of C or above for all required pre-entrance course work.

Prior to consideration for admission, the applicant is required to have taken the test recommended by the American Dental Association. The student entering the first (D1) year is expected to have taken the test within the past two years, preferably not later than October of the year preceding admission. At the applicant's request, test results are sent to the School by the testing service. Information may be obtained directly from the American Dental Association, 211 East Chicago Avenue, Chicago, IL 60611. Or an application form and descriptive material may be obtained from the School of Dentistry.

### Physical requirements

A technical standards policy defines special physical requirements for students entering the School of Dentistry. This policy is outlined in Section III of this CATALOG under **Admissions Information** and is available in the School of Dentistry Office of Student Affairs.

### Background

The subjects listed as required form the minimum background for professional study. The student should avoid duplicating science courses that are offered in the professional curriculum and should plan a college program in keeping with individual interests and abilities. The student's purpose should be the pursuit of diverse knowledge, the cultivation of an inquiring mind, the practice of efficient methods of study, and the habit of thinking and reasoning independently. These are of paramount importance to the student's development as a unique and responsible human being.

The choice of electives can broaden the student's view of the scope of knowledge. Being well read will give a perspective on the sweep of human thought throughout the ages, and often this will be of assistance in written and verbal communication and will improve the ability to think and express oneself well. Psychological, social, philosophical, and religious insights will help develop basic resources for the solution of personal problems and the growth of that self-understanding the student must first have to understand and help associates.

## PRE-ENTRY REQUIREMENTS

Although the pre-dentistry curriculum in an accredited college can be completed in three years, a baccalaureate degree, or the equivalent, is strongly recommended. The following complete college courses are required for entrance into the D.D.S. degree program:

### HUMANITIES

Freshman English (complete sequence).

### NATURAL SCIENCES

(complete course, one full year or equivalent)

General biology or Zoology with laboratory

General chemistry with laboratory

General physics with laboratory

Organic chemistry with laboratory

### ELECTIVES

(strongly recommended)

Ceramics

Principles of management

Basic accounting

Mathematics

Basic human nutrition

Anatomy

Histology

Biochemistry

Psychology

The minimum of 96 semester or 144 quarter units may be completed from fields that contribute to a broad educational background.

### Employment

Because of the heavy class load, first-year students in dentistry may not accept part-time employment during the first term, and may accept such employment thereafter only upon receiving written permission from the Office of the Associate Dean for Academic Affairs.

### Instruments, textbooks, additional materials

The instruments, textbooks, and materials required for the study and practice of dentistry are prescribed by the School of Dentistry. The school issues dental instruments each quarter as needed in the program.

Unauthorized or incomplete equipment is not acceptable. Advance administrative approval must be obtained for any exception.

## NATIONAL BOARDS

Successful completion of the National Board Examination Parts I and II (NBE-I and NBE II) is a requirement for graduation. These examinations are designed to assess cognitive knowledge of the basic, behavioral, and clinical sciences. Eligibility to sit for either part of the National Board Examination is determined by successful completion of the curriculum leading up to the examination. In addition, students are required to pass a comprehensive examination that assesses mastery of the test specifications prior to each National Board Examination. The eligibility requirements and timetable for

passing the National Board Examination are stated below:

### Part I

1st attempt—Scheduled in July following completion of the second year. If a student fails the July examination, s/he will have her/his scheduled clinic time substantially reduced. During this time, students will be required to study for a re-examination no later than December.

2nd attempt—If a student does not successfully complete the second attempt of the Part I examination by the end of December, s/he will be required to take a two-quarter leave of absence to prepare for re-examination the following July.

3rd attempt—After taking the re-examination in July, the student will be allowed to work on the clinic until examination results are received. If the student successfully completes the Part I examination, s/he will continue to work on the clinic for the Summer and Fall Quarters and will begin didactic courses again during the Winter Quarter with the current third-year students. If the student does not successfully complete the National Board Examination Part I on the third attempt, s/he will be discontinued from the program.

### Part II

1st attempt—Scheduled in December of the fourth year. If the examination is not successfully completed, access to the clinic will be restricted in order to provide additional time for study. The student will be given an opportunity to retake the examination in the spring. National Board Examination policy requires subsequent attempts to be at least ninety days apart.

2nd attempt—If a student fails the second attempt of the Part II examination, s/he will be unable to participate in licensure examinations and may be required to take a leave of absence to prepare for a re-examination. A candidate for the Doctor of Dental Surgery degree must have successfully completed Parts I and II of the National Board Examination before being awarded the degree.

## ACADEMIC INCENTIVE PROGRAM

The School of Dentistry has an incentive system to reward students for exceptional performance on the National Board Examinations (NBE-I and NBE-II).

### Academic Excellence Silver Award

A student who achieves a score of one standard deviation above the national mean on the NBE-I is acknowledged as follows:

- Certificate of Recognition given at School of Dentistry Awards Chapel at the end of the fourth year
- School pays the fee for NBE-II
- Recognition at LLUSD faculty meeting
- Recognition in *LLU Dentistry Journal*
- Recognition in LLUSD "*DentalGram*"

### Academic Excellence Gold Award

A student who achieves a score of one standard deviation above the national mean on both NBE-I and NBE-II is acknowledged as follows:

- Certificate of Recognition given at the School of Dentistry Awards Chapel at the end of the fourth year

- School pays \$1500 towards the application fee for one examining board
- Recognition in *LLU Dentistry Journal*
- Recognition in LLUSD "*DentalGram*"
- Recognition on a "perpetual" plaque on public display

The names of students who receive the Academic Excellence Silver and Gold Awards will be listed in the commencement program.

## LICENSING

Eligibility to take examinations given by the state and regional boards of dental examiners is based on essentially the same requirements as are stipulated by the School of Dentistry for the Doctor of Dental Surgery degree. Information about the examinations of the respective states is available from the associate dean for academic affairs.

Credentials from the National Board of Dental Examiners are accepted in lieu of the written portion of a state examination in most states. Many states require the National Board Examination and provide no alternative. (The national board does not include a clinical examination.)

## REQUIREMENTS FOR GRADUATION

A candidate for the Doctor of Dental Surgery degree must be at least twenty-one years of age and must have:

1. Completed all requirements for admission to the chosen curriculum.
2. Attended an accredited school of dentistry for four academic years. The last two years (D3 and D4) must have been spent at this School.
3. Completed satisfactorily all requirements of the curriculum, including specified attendance, level of scholarship, length of academic residence, number of credit units, and service-learning requirements.
4. Completed special examinations covering any or all subjects of the curriculum, as may be required by the faculty.
5. Successfully completed Parts I and II of the National Board Examination.
6. Demonstrated evidence of satisfactory moral and professional conduct, of due regard for Christian citizenship, and of consistent responsiveness to the established aims of the University.
7. Discharged financial obligations to the University.
8. Been certified by the faculty as approved for graduation.

A candidate completing requirements in the Spring Quarter is expected to be present at the commencement exercises and receive the diploma in person. Permission for the degree to be conferred in absentia is contingent upon the recommendation of the dean to the chancellor and can be granted only by the chancellor. If a candidate has not satisfactorily fulfilled all requirements, the University reserves the right to prohibit participation in commencement exercises.

## D.D.S. COMPETENCIES

The curriculum is designed to ensure that by graduation all students will have the skills, attitudes, and competencies important to the successful practice of dentistry. Students must be competent in the following knowledge and skills, and are expected to be able to perform each major competency as they relate to the following twenty-one major areas.

### DOMAIN I: PROFESSIONALISM

1. **CRITICAL THINKING**—Perform clinical decision-making that is supported by foundational knowledge and evidence-based rationales.

The new dentist must be able to:

- a. Understand the fundamental principles governing the structure and functioning of the human organism.
- b. Integrate information from biomedical, clinical, and behavioral sciences in addressing clinical problems.
- c. Read and evaluate scientific literature and other appropriate sources of information in making oral health management decisions.
- d. Demonstrate the ability to use sound scientifically derived laboratory and clinical evidence to guide clinical decision making.
- e. Apply critical thinking and problem-solving skills in the comprehensive care of patients.
- f. Understand the role of lifelong learning and self-assessment in maintaining competency and attaining proficiency and expertise.

2. **COMMUNITY INVOLVEMENT**—Promote, improve, and maintain oral health in patient-centered and community settings.

The new dentist must be able to:

- a. Explain the role of the dental professional in a community setting.
- b. Recognize the effectiveness of community-based programs.
- c. Explain the role of professional dental organizations in promoting the health of the public.
- d. Explain the concept of a worldwide community as described in the world mission of the Seventh-day Adventist Church.

3. **DIVERSITY**—Function as a leader in a multicultural work environment and manage a diverse patient population.

The new dentist must be able to:

- a. Demonstrate the ability to serve patients and interact with colleagues and allied dental personnel in a multicultural work environment without discrimination.
- b. Demonstrate honesty and confidentiality in relationships with staff.
- c. Explain the principles of leadership and motivation.
- d. Demonstrate the skills to function successfully as a leader in an oral health care team.

- e. Communicate effectively with patients, peers, other professionals, and staff.

**4. PROFESSIONAL PRACTICE—Understand the basic principles important in developing, managing and evaluating a general dental practice.**

The new dentist must be able to:

- a. Evaluate the advantages and disadvantages of different models of oral health care management and delivery.
- b. Explain legal, ethical, and risk-management principles relating to the conduct of dental practice.
- c. Explain the basic principles of personnel management, office systems, and business decisions.
- d. Apply financial management skills to debt and business management.
- e. Apply knowledge of informational technology resources in contemporary dental practice.
- f. Understand the importance of spiritual principles as a basis for developing a philosophy of health care.

**5. PERSONAL AND PROFESSIONAL BALANCE—Understand the importance of maintaining physical, emotional, financial, and spiritual health in one's personal life.**

The new dentist must be able to:

- a. Demonstrate the ideal of service through the provision of compassionate, personalized health care.
- b. Understand the importance of maintaining a balance between personal and professional needs for successful life management.
- c. Explain the issues associated with chemical dependency, its signs in oneself and others, and the resources and treatments available.
- d. Explain the basic principles of personal financial planning and retirement planning.
- e. Explain the concept of personal wholeness espoused by Loma Linda University and the Seventh-day Adventist Church.

**6. PATIENT MANAGEMENT—Apply behavioral and communication skills in the provision of patient care.**

The new dentist must be able to:

- a. Recognize and manage significant cultural, psychological, physical, emotional, and behavioral factors affecting treatment and the dentist-patient relationship.
- b. Establish rapport and maintain productive and confidential relationships with patients, using effective interpersonal skills.
- c. Recognize common behavioral disorders and understand their management.
- d. Use appropriate and effective techniques to manage anxiety, distress, discomfort, and pain.

- e. Manage dental fear, pain, and anxiety with appropriate behavioral and pharmacologic techniques.

**7. ETHICS—Apply ethical principles to professional practice and personal life.**

**DOMAIN II: ASSESSMENT OF THE PATIENT AND THE ORAL ENVIRONMENT**

**8. EXAMINATION OF PATIENTS—Conduct a comprehensive examination to evaluate the general and oral health of patients of all ages within the scope of general dentistry.**

The new dentist must be able to:

- a. Identify the chief complaint and take a history of the present illness.
- b. Conduct a thorough medical history, social history, and dental history.
- c. Perform an appropriate clinical and radiographic examination using diagnostic aids and tests as needed.
- d. Identify patient behaviors that may contribute to orofacial problems.
- e. Identify biologic, pharmacologic, and social factors that may affect oral health.
- f. Identify signs of abuse or neglect.
- g. Establish and maintain accurate patient records.

**9. DIAGNOSIS—Determine a diagnosis by interpreting and correlating findings from the examination.**

The new dentist must be able to:

- a. Identify each problem that may require treatment.
- b. Establish a clinical or definitive diagnosis for each disorder identified.
- c. Assess the impact of systemic diseases or conditions on oral health and/or delivery of dental care.
- d. Recognize conditions that may require consultation with or referral to another health care provider and generate the appropriate request.

**10. TREATMENT PLANNING—Develop a comprehensive treatment plan and treatment alternatives.**

The new dentist must be able to:

- a. Identify treatment options for each condition diagnosed.
- b. Identify systemic diseases or conditions that may affect oral health or require treatment modifications.
- c. Identify patient expectations and goals for treatment.
- d. Explain and discuss the diagnosis, treatment options, and probable outcomes for each option with the patient or guardian.

- e. Develop an appropriately sequenced integrated treatment plan.
- f. Modify the treatment plan, when indicated, due to unexpected circumstances, noncompliant individuals, or for patients with special needs (such as frail or elderly, or medically, mentally, or functionally compromised individuals).
- g. Present the final treatment plan to the patient, including time requirements, sequence of treatment, estimated fees, payment options, and other patient responsibilities in achieving treatment outcomes.
- h. Secure a signed consent to treatment.

**11. MANAGEMENT OF PAIN AND ANXIETY—Manage pain and anxiety with pharmacologic and nonpharmacologic methods.**

The new dentist must be able to:

- a. Evaluate the patient's physical and psychological state and identify factors that may contribute to orofacial pain.
- b. Manage patients with craniofacial pain and be able to differentiate pain of a nondental origin.

**12. EMERGENCY TREATMENT—Manage dental emergencies and medical emergencies that may be encountered in dental practice.**

The new dentist must be able to:

- a. Manage dental emergencies of infectious, inflammatory, and traumatic origin.
- b. Provide basic life-support measures for patients.
- c. Develop and implement an effective office strategy for preventing and managing medical emergencies.

**13. HEALTH PROMOTION AND MAINTENANCE—Provide appropriate preventive and/or treatment regimens for patients with various dental carious states using appropriate medical and surgical treatments.**

The new dentist must be able to:

- a. Use accepted prevention strategies such as oral hygiene instruction, microbiologic evaluation, nutritional education, and pharmacologic intervention to help patients maintain and improve their oral and systemic health.
- b. Properly isolate the tooth/teeth from salivary moisture and bacterial contamination.
- c. Differentiate between sound enamel, hypomineralized enamel, remineralized enamel, and carious enamel.
- d. Develop and implement an appropriate treatment plan for enamel surfaces that can be managed by remineralization therapies.
- e. Develop and implement an appropriate treatment plan for tooth surfaces with caries involving the enamel and/or dentin.
- f. Remove or treat carious tooth structure and restore with appropriate materials.

- g. Determine when a tooth has such severe carious involvement as to require extraction.

**14. ASSESSMENT OF TREATMENT OUTCOMES—Analyze continuously the outcomes of patient treatment to improve the treatment.**

- a. Perform periodic chart review and case presentations.
- b. Review and assess patient-care outcomes.

**DOMAIN III: RESTORATION TO OPTIMAL ORAL HEALTH, FUNCTION, AND ESTHETICS**

**15. TREATMENT OF PERIODONTAL DISEASE—Evaluate and manage the treatment of periodontal diseases.**

The new dentist must be able to:

- a. Design and provide an appropriate oral hygiene-instruction plan for the patient.
- b. Remove hard and soft deposits from the crown and root surfaces.
- c. Evaluate the outcomes of the initial phase of periodontal treatment.
- d. Manage the treatment of patients in the maintenance phase of therapy.
- e. Recognize and manage the treatment of advanced periodontal disease.
- f. Recognize the need for and appropriately use chemotherapeutic agents.
- g. Manage the treatment of mucogingival periodontal problems.
- h. Manage the treatment of hard-and soft-tissue problems in preparation for restorative procedures.

**16. MANAGEMENT OF DISEASES OF PULPAL ORIGIN—Evaluate and manage diseases of pulpal origin and subsequent periradicular disease.**

The new dentist must be able to:

- a. Prevent and manage pulpal disorders through the use of indirect and direct pulp capping and pulpotomy procedures.
- b. Assess case complexity of each endodontic patient.
- c. Manage endodontic emergencies.
- d. Manage nonsurgical endodontic therapy on permanent teeth.
- e. Recognize and manage endodontic procedural accidents.
- f. Manage pulpal and periradicular disorders of traumatic origin.
- g. Manage endodontic surgical treatment.
- h. Manage bleaching of endodontically treated teeth.
- i. Evaluate outcome of endodontic treatment.

**17. MANAGEMENT OF PATHOLOGIC CHANGES—Recognize and manage pathologic changes in the tissues of the oral cavity and of the head and neck area.**

The new dentist must be able to:

- a. Recognize clinical and radiographic changes that may indicate disease.
- b. Recognize variations of normal and developmental anomalies.
- c. Identify conditions that may require treatment.
- d. Manage oral and maxillofacial pathologic conditions using pharmacologic and nonpharmacologic methods.

**18. BASIC SURGICAL CARE—Provide basic surgical care.**

The new dentist must be able to:

- a. Perform uncomplicated extractions of teeth.
- b. Manage surgical extraction as well as common intraoperative and postoperative surgical complications.
- c. Manage pathological conditions such as lesions requiring biopsy, localized odontogenic infections, and impacted third molars.
- d. Manage patients with dentofacial deformities or patients who can benefit from preprosthetic surgery.

**19. MANAGEMENT OF OCCLUSAL INSTABILITY—Recognize and manage problems related to occlusal stability.**

The new dentist must be able to:

- a. Recognize and manage occlusal discrepancies.

**20. ASSESSMENT AND MANAGEMENT OF MAXILLARY AND MANDIBULAR SKELETO-DENTAL DISCREPANCIES—Assess and manage maxillary and mandibular skeletodental discrepancies, including space maintenance, as represented in the early, mixed, and permanent dentitions.**

The new dentist must be able to:

- a. Perform mixed dentition analyses utilizing the Moyers and Nance methods.

- b. Perform a Steiner cephalometric analysis to evaluate for individual sagittal and coronal plane skeletodental discrepancies compared to normative data.
- c. Evaluate the noncephalometric skeleto-dental facial esthetics of the child, adolescent, or adult patient.
- d. Manage multidisciplinary treatment cases involving orthodontics.
- e. Recognize the effects of abnormal swallowing patterns, mouth breathing, bruxism, and other parafunctional habits on the skeletodental structures; and manage treatment.

**21. RESTORATION AND REPLACEMENT OF TEETH—Manage the restoration of individual teeth and the replacement of missing teeth, for proper form, function, and esthetics.**

The new dentist must be able to:

- a. Assess teeth for restorability.
- b. Assess esthetic and functional considerations.
- c. Manage preservation of space following loss of teeth or tooth structure.
- d. Select appropriate methods and restorative materials.
- e. Design fixed and removable prostheses.
- f. Implement appropriate treatment sequencing.
- g. Perform biomechanically sound preparations.
- h. Fabricate and place biomechanically sound provisional restorations.
- i. Make impressions for diagnostic and treatment casts.
- j. Obtain anatomic and occlusal relation records for articulation of casts.
- k. Prepare casts and dies for the construction of restorations and prostheses.
- l. Manage the laboratory fabrication of restorations and prostheses.
- m. Evaluate and place restorations that are clinically acceptable.
- n. Instruct patients in follow-up care of restorations and prostheses.

## YEAR D1

			CLOCK HOURS			UNITS	
			Lec./Semr.	Lab.	Clin.	Total	
<b>AUTUMN QUARTER</b>							
ANAT	506	Human Neuroscience	46	24	8	78	5
BCHM	509	Biochemistry of the Human Body	50	10	–	60	5
DNES	708	Introduction to the Dental Profession	10	–	–	10	1
DNES	711	Introduction to Clinical Experience	11	11	12	34	2
RESD	701	Restorative Dentistry I, Lecture	22	–	–	22	2
RESD	701L	Restorative Dentistry I, Laboratory	–	66	–	66	2
RELF	718	Adventist Heritage and Health	22	–	–	22	2
			161	111	20	292	19
<b>WINTER QUARTER</b>							
ANAT	508	Human Anatomy for Dentists I	44	70	–	114	7
DNES	712	Introduction to Clinical Experience	–	–	8	8	0.5
DNES	771	Applied Nutrition	14	8	–	22	2
PHSL	504	Physiological Systems of the Human Body	46	8	–	54	5
RESD	702	Restorative Dentistry II, Lecture	28	–	–	28	2
RESD	702L	Restorative Dentistry II, Laboratory	–	66	–	66	2
RELE	734	Christian Ethics for Dentists	22	–	–	22	2
			154	152	8	314	20.5
<b>SPRING QUARTER</b>							
ANAT	509	Head and Neck Anatomy for the Dentist	47	60	6	113	8
DNES	705	Etiology and Management of Dental Caries	22	–	–	22	3
DNES	707	Personal Development	11	–	–	11	1
DNES	713	Introduction to Clinical Experience	–	–	8	8	0.5
PHSL	505	Homeostatic Mechanisms of the Human Body	38	8	–	46	4
RESD	708	Restorative Dentistry III, Lecture	20	–	–	20	2
RESD	708L	Restorative Dentistry III, Laboratory	–	66	–	66	2
			138	134	14	286	20.5

## YEAR D2

			CLOCK HOURS			UNITS	
			Lec./Semr.	Lab.	Clin.	Total	
<b>SUMMER QUARTER</b>							
ODRP	501	Principles of Microbiology	42		-	42	4
ODRP	701	Radiology I: Clinical Procedures	11	16	-	27	1.5
ODRP	725	Patient Assessment and Data Management	28	17	-	45	3
ODRP	751	General and Systemic Pathology I	40	-	-	40	4
PERI	705	Introduction to Periodontics	20	-	-	20	2
RESD	709	Restorative Dentistry IV, Lecture*	20	-	-	20	2
RESD	709L	Restorative Dentistry IV, Laboratory*	-	60	-	60	2
PERI	742	Essential Periodontal Therapy Laboratory					
			161	93	-	254	18.5
<b>AUTUMN QUARTER</b>							
ANES	751	Dental Anesthesia: Local Anesthesia	44	11	-	55	4
ODRP	726	Patient Diagnosis and Treatment Planning	12	13	-	25	1.5
ODRP	752	General and Systemic Pathology II	40	-	-	40	4
ODRP	755	Radiology II: Theory and Interpretation	22	-	-	22	2
PERI	741	Essential Periodontal Therapy, Lecture	22	-	-	22	2
RESD	754	Orientation to Restorative Clinic Protocol	10	8	-	18	1
RESD	761	Removable Prosthodontics I, Lecture	22	-	-	22	2
RESD	761L	Removable Prosthodontics I, Laboratory	-	66	-	66	2
RESD	771	Single Casting Technique, Lecture	22	-	-	22	2
RESD	771L	Single Casting Technique, Laboratory	-	66	-	66	2
			194	164	-	358	22.5
<b>WINTER QUARTER</b>							
DNES	775	Clinic Orientation II	10	2	-	12	1
ODRP	761	Oral Pathology and Diagnosis	66	-	-	66	6
RESD	762	Removable Prosthodontics II, Lecture	22	-	-	22	2
RESD	762L	Removable Prosthodontics II, Laboratory	-	60	-	60	2
RESD	772	Fixed Prosthodontics, Lecture	22	-	-	22	2
RESD	772L	Fixed Prosthodontics, Laboratory	-	66	-	66	2
			120	128	-	248	15
<b>SPRING QUARTER</b>							
DNES	789	National Board Part I Review	40	-	-	40	1
ENDN	831	Endodontics I	11	-	-	11	1
ENDN	832	Endodontics II	-	44	-	44	1
ODRP	735	Dental Emergency Diagnosis and Treatment	11	-	-	11	1
ORDN	751	Principles of Orthodontics I	11	-	-	11	1
PEDN	753	Pediatric Dentistry I, Lecture	22	-	-	22	2
PEDN	753L	Pediatric Dentistry I, Laboratory	-	44	-	44	1
PHRM	501	Pharmacology and Therapeutics	44	-	-	44	4
RESD	763	Removable Prosthodontics III, Lecture	11	-	-	11	1
RESD	763L	Removable Prosthodontics III, Laboratory	-	33	-	33	1
RESD	773	Fixed Prosthodontics II, Lecture*	11	-	-	11	1
RESD	773L	Fixed Prosthodontics II, Laboratory*	-	44	-	44	1
			161	165	-	326	16

\* Grade given at end of multiple-quarter course

## YEAR D3

			CLOCK HOURS			UNITS	
			Lec./Semr.	Lab.	Clin.	Total	
<b>SUMMER QUARTER</b>							
ANES	801	Dental Anesthesia: Advanced Topics	22	–	–	22	2
DNES	804	Applied Statistics	22	–	–	22	2
DNES	806	Research Design	40	–	–	40	2
ENDN	833	Endodontics III	–	44	–	44	1
ODRP	825	ODRP Clinic (1 of 4)*	–	–	var.	–	1
OMFS	805	Oral Surgery I	11	–	–	11	1
PEDN	825	Pediatric Dentistry Clinic*	–	–	var.	–	0.5
RELR	749	Personal and Family Wholeness	22	–	–	22	2
RESO	773	Fixed Prosthodontics II, Lecture*	11	–	–	11	1
RESO	773L	Fixed Prosthodontics II, Laboratory*	–	44	–	44	1
RESO	809	Prosthodontics Treatment-Planning Seminar	8	–	–	8	1
RESO	811	Dental Materials II	11	–	–	11	1
SDCL	801	Clinical Patient Care	–	–	54	–	2
			147	88	var.	235	17.5
<b>AUTUMN QUARTER</b>							
DNES	806L	Research Design, Laboratory	–	33	–	33	1
ENDN	834	Endodontics IV, Lecture	11	–	–	11	1
ODRP	807	Oral Medicine I	11	–	–	11	1
ODRP	825	ODRP Clinic*	–	–	var.	–	0.5
ORDN	801	Minor Tooth Movement	9	30	–	39	2
OMFS	811	Oral Surgery II*	11	–	–	11	1
OMFS	825	Oral Surgery Clinic I	–	–	var.	–	1
PEDN	825	Pediatric Dentistry Clinic*	–	–	var.	–	1
PERI	765	Special Topics in Periodontal Therapy	22	–	–	22	2
RELR	775	The Art of Integrative Care	22	–	–	22	2
SDCL	802	Clinical Patient Care	–	–	54	–	2
			86	63	var.	149	14.5
<b>WINTER QUARTER</b>							
ODRP	808	Oral Medicine II	22	–	–	22	2
ODRP	821	Special Care Dentistry	10	–	–	10	1
ODRP	825	ODRP Clinic*	–	–	var.	–	0.5
ORDN	811	Principles of Orthodontics II	11	–	–	11	1
OMFS	811	Oral Surgery II*	11	–	–	11	1
PEDN	821	Pediatric Dentistry II	8	–	–	8	1
PEDN	825	Pediatric Dentistry Clinic (3 of 4)*	–	–	var.	–	1
PERI	805	Periodontal Surgical Therapy	10	3	–	13	1
RESO	854	Implant Dentistry	10	–	–	10	1
RESO	822	Operative Dentistry II, Lecture	9	–	–	9	1
RESO	822L	Operative Dentistry II, Laboratory	–	29	–	29	1
REL_	___	Religion selective	22	–	–	22	2
SDCL	803	Clinical Patient Care	–	–	54	–	2
			113	32	var.	145	15.5
<b>SPRING QUARTER</b>							
DNES	794	Public Health Dentistry	22	–	–	22	2
ODRP	811	Oral Medicine III	11	–	–	11	1
ODRP	825	ODRP Clinic*	–	–	var.	–	1
PEDN	825	Pediatric Dentistry Clinic*	–	–	var.	–	1
PHRM	503	Clinical Pharmacology in Dentistry	22	–	–	22	2
RESO	801	Fixed Prosthodontics and Occlusion	11	–	–	11	1
RESO	823	Operative Dentistry III, Lecture	16	–	–	16	1
RESO	823L	Operative Dentistry III, Laboratory	–	24	–	24	1
SDCL	804	Clinical Patient Care	–	–	54	–	2
			82	24	var.	106	12

\* Grade given at end of multiple-quarter course

## YEAR D4

			CLOCK HOURS			UNITS	
			Lec./Semr.	Lab.	Clin.	Total	
<b>SUMMER QUARTER</b>							
ODRP	826	Oral Medicine IV	22	-	-	22	2
ODRP	875	ODRP Clinic*	-	-	var.	-	1
PEDN	875	Pediatric Dentistry Clinic*	-	-	var.	-	0.5
PERI	875	Periodontics Clinic*	-	-	var.	-	2
RES D	875	Restorative Dentistry Clinic*	-	-	var.	-	9.5
SDCL	805	Clinical Patient Care	-	-	54	-	2
			22	-	var.	22	17
<b>AUTUMN QUARTER</b>							
DNES	807	Practice Management I	22	-	-	22	2
DNES	889	National Board Part II Review	44	-	-	44	2
ODRP	875	ODRP Clinic*	-	-	var.	-	1
PEDN	875	Pediatric Dentistry Clinic*	-	-	var.	-	0.5
PERI	875	Periodontics Clinic *	-	-	var.	-	2
RES D	861	Senior Lecture in Removable Prosthodontics	20	-	-	20	2
RES D	875	Restorative Dentistry Clinic*	-	-	var.	-	9.5
SDCL	806	Clinical Patient Care	-	-	54	-	2
			86	-	var.	86	21
<b>WINTER QUARTER</b>							
DNES	809	Practice Management II	22	-	-	22	2
DNES	851	The Dentist and the Law	22	-	-	22	2
ODRP	875	ODRP Clinic*	-	-	var.	-	1
PEDN	875	Pediatric Dentistry Clinic*	-	-	var.	-	1
PERI	875	Periodontics Clinic *	-	-	var.	-	2
RES D	875	Restorative Dentistry Clinic*	-	-	var.	-	9.5
REL R	715	Christian Dentist in the Community	22	-	-	22	2
SDCL	807	Clinical Patient Care	-	-	54	-	2
			66	-	var.	66	21.5
<b>SPRING QUARTER</b>							
ENDN	875	Endodontics Clinic	-	-	var.	-	1
ODRP	875	ODRP Clinic*	-	-	var.	-	1
ORDN	875	Orthodontics Clinic	-	-	var.	-	1
OMFS	875	Oral Surgery Clinic II	-	-	var.	-	1
PEDN	875	Pediatric Dentistry Clinic*	-	-	var.	-	1
PERI	875	Periodontics Clinic*	-	-	var.	-	1.5
RES D	844	Restorative Study Club Seminar	6	-	-	6	0.5
RES D	875	Restorative Dentistry Clinic*	-	-	var.	-	9
SDCL	808	Clinical Patient Care	-	-	54	-	2
			6	0	var.	6	18
<b>TOTALS (D1, D2, D3, D4)</b>			<b>1707</b>	<b>1154</b>	<b>var.</b>	<b>2893</b>	<b>269</b>

\* Grade given at end of multiple-quarter course

## THE DEPARTMENTS OF THE GENERAL DENTISTRY PROGRAM

The nine departments of the School of Dentistry include:

- *Dental Anesthesiology*
- *Dental Educational Services*
- *Endodontics*
- *Oral Diagnosis, Radiology, and Pathology*
- *Oral and Maxillofacial Surgery*
- *Orthodontics and Dentofacial Orthopedics*
- *Pediatric Dentistry*
- *Periodontics*
- *Restorative Dentistry*

### DENTAL ANESTHESIOLOGY

DAVID L. ANDERSON, Chair  
JOHN W. LEYMAN, Director, Advanced Education Program

#### FACULTY

David L. Anderson  
Barry Krall  
John W. Leyman  
Larry Trapp

The Dental Anesthesiology Department is staffed by dentists with advanced training in anesthesiology. Staff members provide didactic and clinical instruction in all areas of pain and anxiety control in dentistry. Undergraduate, predoctoral, and postdoctoral students learn techniques ranging from local anesthesia and par-enteral sedation to general anesthesia. Related topics taught include physical diagnosis, clinical pharmacology, management of medically compromised patients, and management of medical emergencies. Observation of and participation in the anesthetic management of patients in the School of Dentistry Outpatient Surgery Center provide a unique opportunity for students and postdoctorals to learn advanced skills in general anesthesia techniques.

### DENTAL EDUCATIONAL SERVICES

RONALD J. DAILEY, Chair

#### FACULTY

Ronald J. Dailey  
Ronald Forde  
William Hooker  
Fred Kasischke  
James Kettering  
J. S. (Jay) Kim  
William Loveless  
Maynard Lowry  
Kathleen Moore  
Quint Nicola  
James Padgett  
Thomas Rogers  
Ronald Secor  
Yanina Toledo  
Wu Zhang

The Division of Dental Educational Services provides administrative and support services for a variety of subject areas such as: behavioral science, practice management, preventive and community dentistry, and service-learning programs. The interactions of patients, staff, and dentists are examined in light of varied personality characteristics; the art and science of establishing and operating a successful practice are examined; and preventive dentistry in the office and community is studied as the underlying philosophy of all dental practice. Students are required to participate in providing dental services and dental health education in dentally underserved settings outside the dental school clinic, providing the experience of involvement in the real world “to make man whole.”

### ENDODONTICS

LEIF K. BAKLAND, Chair  
MAHMOUD TORABINEJAD, Director, Advanced Education Program

#### FACULTY

Leif K. Bakland  
Robert Handysides  
David Jaramillo  
Steven Morrow  
Shahrokh Shabahang  
Mahmoud Torabinejad

The Department of Endodontics is the branch of dentistry concerned with the morphology, physiology, and pathology of the human dental pulp and periradicular tissues. Its study and practice encompass the basic clinical science including biology of the normal pulp; the etiology, diagnosis, prevention, and treatment of diseases and injuries of the pulp; and associated periradicular conditions. The department faculty have developed preclinical lectures, laboratory exercises, and clinical training that cover a wide spectrum of endodontics. These experiences are coordinated and incorporated in a manner that provides patients with optimum oral health care in a setting that promotes the mission of the School of Dentistry.

### ORAL DIAGNOSIS, RADIOLOGY, AND PATHOLOGY

LANE THOMSEN, Chair

#### FACULTY

Heidi Christensen  
Heidi Kohltfarber  
Charles Lee  
Hilbert Lentz  
Susan Richards  
Susan Roche  
Lane Thomsen

The Department of Oral Diagnosis, Radiology, and Pathology covers a variety of disciplines. The over-

all focus of the department is to train dental students to consider all related factors when arriving at a diagnosis and formulating a treatment plan that will best meet the needs of each patient. Courses are offered that cover aspects of general and systemic pathology, oral medicine, geriatric and special-needs dentistry, emergency diagnosis and treatment, oral pathology, radiology, diagnosis, and treatment planning. The department's aim is to prepare dental students to excel in compassionate and knowledgeable service to patients that is based on a comprehensive gathering and interpretation of pertinent data.

## **ORAL AND MAXILLOFACIAL SURGERY**

ALAN HERFORD, Program Director

WAYNE TANAKA, Predoctoral Program Director

### **FACULTY**

Gregory Litvinoff  
Wayne Tanaka

The predoctoral courses in the Department of Oral and Maxillofacial Surgery include didactic and clinical instruction to prepare the student for dealing with patients seen in the general practice of dentistry. Subject matter considered includes patient evaluation prior to surgery, surgical instruments, complications and ways of preventing them, infections of the region, antibiotics, analgesic drugs to alleviate pain resulting from surgical procedures, prescription writing, and preparation of the mouth for prostheses. Oral and maxillofacial surgery procedures not done by the general dentist are included in the lectures because knowledge regarding these procedures is necessary to provide a basis for proper advice to patients with conditions that are treated by the specialist. Clinical experience ranges from a basic minimum of routine cases to more difficult, advanced cases, according to the student's demonstrated ability, perseverance, judgment, and interest in oral and maxillofacial surgery.

## **ORTHODONTICS AND DENTOFACIAL ORTHOPEDICS**

JOSEPH M. CARUSO, Chair; Director, Advanced Education Program

### **FACULTY**

Joseph Caruso  
James Farrage  
V. Leroy Leggitt  
Roland Neufeld  
R. David Rynearson

The predoctoral courses in the Department of Orthodontics, as outlined by the American Dental Association, apply the knowledge derived from the basic sciences, research, and clinical treatment to the sci-

ence of orthodontics so that the dental graduate will have the background necessary to recognize those conditions s/he is capable of managing. Clinical experience ranges from minor tooth movement and early treatment cases to more difficult, advanced cases—according to the student's demonstrated ability, perseverance, judgment, and interest in orthodontics.

The graduate will be able to:

1. Anticipate and detect malocclusions.
2. Take steps to prevent or intercept malocclusion where possible.
3. Use this knowledge as an adjunct to procedures in all other phases of dental practice.
4. Provide a basis for understanding the possibilities of orthodontic treatment.
5. Treat limited orthodontic problems that fall within the general dentist's sphere of knowledge and training.
6. Know the bases on which case referrals are made and how to handle a referral correctly.

## **PEDIATRIC DENTISTRY**

BONNIE NELSON, Chair

JOHN PETERSON, Program Director, Advanced Education Program

### **FACULTY**

Sharika Boland  
Richard Grabowsky  
J. Todd Milledge  
Bonnie Nelson  
Wesley Okumura  
Valeria Pereira  
John Peterson

The Department of Pediatric Dentistry is committed not only to teaching excellent clinical techniques in children's dentistry but also to instilling within the dental student the importance of providing an emotionally healthy environment for the child patient while "at the dentist." The faculty has developed didactic, laboratory, and clinical learning environments in pediatric dentistry. This broad experience is designed to prepare the student for the general practice of dentistry for children.

## **PERIODONTICS**

CRAIG RIRIE, Director, Predoctoral Program

TORD LUNDGREN, Director, Advanced Education Program

### **FACULTY**

Nicola Angelov  
R. Leslie Arnett, Jr.  
Max Crigger  
Juliana deCarvalho  
P. G. Hallstrom  
Oliver Hoffman  
Robert Holt, Jr.  
Sangmoo Lee

Leticia Lenoir  
Tord Lundgren  
Adrian Mobilia  
Suraiya Rahman  
Craig Ririe  
Barbara Valadez

The Department of Periodontics provides education and training for predoctoral, dental hygiene, and graduate students in the art and science of periodontics. Periodontics encompasses the study of the supporting structures of the teeth; as well as the etiology, pathogenesis, diagnosis, and treatment of diseases that affect the supporting structures of the teeth. The study of periodontics helps form basic concepts of health and disease. These concepts are applied in the treatment of periodontal diseases and in the maintenance of dental health over a patient's lifetime, providing comprehensive dental therapy for the individual patient. In this way the Department of Periodontics contributes directly to the School of Dentistry's academic and service mission "to make man whole."

### COURSES

PERI 705	Introduction to Periodontics	(2)
PERI 741	Essential Periodontal Therapy, Lecture	(1)
PERI 742	Essential Periodontal Therapy, Laboratory	(1)
PERI 751	Planning and Evaluation in Periodontal Therapy	(1)
PERI 765	Special Topics in Periodontal Therapy	(2)
PERI 805	Periodontal Surgical Therapy	(1)
PERI 875	Periodontics Clinic	(7.5)

### RESTORATIVE DENTISTRY

DOUGLASS B. ROBERTS, Chair

CHARLES GOODACRE, Acting Director, Advanced Education Program in Prosthodontics

JAIME L. LOZADA, Director, Advanced Education Program in Implant Dentistry

### FACULTY

Matty Abbate  
Daniel Armstrong  
Frederick Berry  
Brian Black  
George Blount  
David Brodeur  
Garth Brown  
Ron Crudo  
Theresa Cutler  
Sandip Desai  
James Dunn  
Mark Estey  
Michael Fitzpatrick  
Gary Golden  
Charles Goodacre  
B. Dan Hall  
William Heisler  
Joseph Kan

Mathew Kattadiyil  
Robert Kinzer  
S. Alejandro Kleinman  
Edward Ko  
Sean Lee  
Yiming Li  
Jaime Lozada  
Lin Martin  
Michael Meharry  
Ranu Mishra  
William Naylor  
Doyle Nick  
Mac-Rey Ojano  
Bindoo Punjabi  
Paul Richardson  
Douglass Roberts  
Clyde Roggenkamp  
Edwin Shryock  
Daniel Tan  
Anthony Theodorou  
Marcello Toledo  
Fidel Torres  
Robert B. Walter  
Charles Westrick  
John Whittaker  
Myron Winer  
Wu Zhang

The Department of Restorative Dentistry encompasses the specific disciplines of operative dentistry, fixed prosthodontics, and removable prosthodontics. It provides a home base for biomaterials research and graduate programs in implant dentistry and prosthodontics. It is the aim of the department to provide each student with a thorough understanding of both technical and clinical skills, enabling the comprehensive treatment of diseased or lost tooth structure and the replacement of missing teeth. Other goals are to instill in each student an interest in exploring new frontiers in dentistry and in recognizing the need for a continued quest for knowledge.

## Dentistry, International Program—SD (D.D.S.)

B. DAN HALL, Program Director

### FACULTY

R. Leslie Arnett, Jr.  
B Dan Hall  
Mac-Rey Ojano  
Bindoo Punjabi  
William S. Seibly  
John M. Whittaker

The International Dentist Program at Loma Linda University is designed to allow qualified dentists educated in countries outside the United States, to earn a Doctor of Dental Surgery (D.D.S.) degree in the United States. The D.D.S. degree from a U.S. dental college is an educational requirement for eligibility to take the dental licensure examination in many states. The program has a minimum length of two academic

years (twenty-one calendar months) but may be extended, when necessary, to meet the needs of a particular student. All instruction is under the direction of Loma Linda University School of Dentistry.

### History

Dr. Lloyd Baum founded the International Dentist Program in 1985. Since then, more than 250 students from fifty countries have graduated from the program.

### Application

Application forms are available from the School of Dentistry Office of Admissions. Requests for applications are accepted by mail, e-mail, or by telephone. Prerequisite requirements are as follows:

- Dental degree from a recognized foreign dental school;
- National Dental Board Examination Part I and Part II;
- TOEFL examination;
- Dental school transcript (evaluated by an evaluation center approved by the National Association of Credential Evaluation Services).

Other documentation is required, as outlined in the application. An application fee of \$60 is required with the application and accompanying documentation by the September 15 deadline. All application material sent to the International Dentist Program becomes the property of the program.

Students currently enrolled in a similar program at another university are not eligible to apply and will not be accepted for admission.

### Language

All classes are conducted in English, and patients treated in the clinic communicate in English. Applicants must demonstrate a working knowledge of both written and spoken English.

### Selection process

**Prescreening:** Completed applications submitted before the application deadline will first be evaluated by the selection committee. Top candidates nominated by the committee will be invited for dexterity testing.

**Dexterity test:** Dexterity testing is conducted on one Sunday in October. Approximately thirty-two of the top performers will be invited for an interview.

**Interview:** Interview will be scheduled on the following day after the dexterity test (Monday).

**Final selection:** The results of the dexterity test and interview, as well as the candidate's application materials, are presented to the School of Dentistry Admissions Committee for final selection. Sixteen candidates are accepted each year to join the International Dentist Program for enrollment in the following year. One class (eight students) matriculates in March, and the other class (eight students) in September.

Upon the candidate's acceptance of the invitation of admission, an official transcript must be sent directly from the registrar of his/her previous dental school to the registrar of Loma Linda University.

### Entering students

When a candidate is accepted into the program, a deposit of \$1,000 USD is due and payable to Loma Linda University by a specified date. Additionally, a pre-entrance medical record and eye examination must

be submitted. At registration for the first quarter, a tuition deposit of \$15,000 is required.

Students in the program have the same benefits, including health care coverage, as are described elsewhere in this CATALOG.

### Student financial aid

Loans are available only to United States citizens, green-card holders, or those with permanent-resident status. Qualified students can obtain loans for approximately 75 percent of tuition costs.

For more information, contact the Office of Financial Aid at e-mail: [finaid@univ.llu.edu](mailto:finaid@univ.llu.edu); or by telephone: 909/558-4509.

### Awards

Students in the International Dentist Program are eligible to receive awards based on accomplishments and achievements that reflect the ideals of this program.

### Requirements for graduation

A candidate for the Doctor of Dental Surgery degree must be at least twenty-one years of age and must have:

1. Completed all requirements for admission to the chosen curriculum.
2. Graduated from a recognized foreign dental school with a diploma in dentistry.
3. Completed satisfactorily all requirements of the curriculum, including specified attendance, level of scholarship, length of academic residence, and number of credit units.
4. Completed special examinations covering any or all subjects of the curriculum, as may be required by the faculty.
5. Successfully completed the National Dental Board Examination Part I and Part II.
6. Demonstrated evidence of satisfactory moral and professional conduct, of due regard for Christian citizenship, and of consistent responsiveness to the established aims of Loma Linda University.
7. Discharged financial obligations to the University.
8. Been certified by the faculty as approved for graduation.

A candidate completing requirements in the Spring Quarter is expected to be present at the commencement exercises and receive the diploma in person. Permission for the degree to be conferred in absentia is contingent upon the recommendation of the dean to the chancellor and can be granted only by the chancellor. If a candidate has not satisfactorily fulfilled all requirements, the University reserves the right to prohibit participation in commencement exercises. Candidates who complete the program in December will march in the Spring Quarter commencement prior to completing their requirements.

**DISTRIBUTION OF INSTRUCTION  
INTERNATIONAL DENTIST PROGRAM**
**Spring Start**
**IDP 1**
**SPRING QUARTER**

DNES	707	Personal Development	11	–	–	11	1
ENDN	831	Endodontics I	11	–	–	11	1
ENDN	832	Endodontics II	–	44	–	44	1
IDPC	825	General Clinic	–	–	var.	var.	1
IDPG	750	Review of General Dentistry	123	167	–	290	14
IDPP	759	Special Topics in Periodontal Therapy	22	–	–	22	2

			CLOCK HOURS			UNITS	
Lec./Semr.	Lab.	Clin.	Total				
167	211	var.	378	20			

**IDP 2**
**SUMMER QUARTER**

ENDN	833	Endodontics III	–	44	–	44	1
IDPC	825	General Clinic	–	–	var.	var.	8
IDPP	754	Clinical Periodontics	14	–	–	14	1
IDPR	845	Scientific Investigation and Research Design	28	8	–	36	3
IDPR	846	Restorative Dentistry I	16	8	4	28	2

58	60	var.	122	15	
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**AUTUMN QUARTER**

ENDN	834	Endodontics IV	11	–	–	11	1
IDPC	825	General Clinic	–	–	var.	var.	8
IDPR	845	Scientific Investigation and Research Design	8	–	–	8	1
ORDN	801	Minor Tooth Movement	9	30	–	39	2
RESD	861	Senior Lecture in Removable Prosthodontics	24	–	–	24	2

52	30	var.	82	14	
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**IDP 3**
**WINTER QUARTER**

DNES	807	Practice Management I	-----Self-Study Course-----				1
IDPC	835	General Clinic	–	–	var.	var.	8
IDPR	847	Restorative Dentistry II	24	–	–	24	2
IDPO	535	Oral Pathology and Diagnosis	22	–	–	22	2
ORDN	811	Principles of Orthodontics II	11	–	–	11	1
RELT	717	Christian Beliefs and Life	22	–	–	22	2

79	0	var.	79	16	
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**SPRING QUARTER**

DNES	809	Practice Management II	-----Self-Study Course-----				1
IDPC	835	General Clinic	–	–	var.	var.	8
IDPR	848	Restorative Dentistry III	24	–	–	24	2
PEDN	753	Pediatric Dentistry I, Lecture	22	–	–	22	2
PEDN	753L	Pediatric Dentistry I, Laboratory	–	33	–	33	1
PHRM	503	Clinical Pharmacology	22	–	–	22	2
RELR	749	Personal and Family Wholeness	22	–	–	22	2

90	33	var.	123	18	
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**Spring Start, continued**

**IDP 4**

**SUMMER QUARTER**

IDPC	845	General Clinic
IDPO	534	Oral Medicine-Orofacial Pain and TMD
IDPO	826	Oral and Maxillofacial Surgery
IDPP	755	Pediatric Dentistry Clinic

CLOCK HOURS			UNITS	
Lec./Semr.	Lab.	Clin.	Total	
-	-	var.	var.	8
22	-	-	22	2
12	-	4	16	1
-	-	24	24	0.5
34	-	var.	62	11.5

**FALL QUARTER**

IDPC	845	General Clinic
IDPP	755	Pediatric Dentistry Clinic
IDPT	754	Advanced Topics in Dentistry
RELE	734	Christian Ethics for Dentists

-	-	var.	var.	8
-	-	24	24	0.5
22	-	2	24	2
22	-	-	22	2
44	-	var.	70	12.5

**TOTALS**

<b>524</b>	<b>334</b>	<b>var.</b>	<b>916</b>	<b>107.0</b>
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**Fall Start**

**IDP 1**

**FALL QUARTER**

IDPC	825	General Clinic
IDPG	750	Review of General Dentistry
IDPP	759	Special Topics in Periodontal Therapy
ORDN	801	Minor Tooth Movement

-	-	var.	var.	1
123	167	-	290	14
22	-	-	22	2
9	30	-	39	2
154	197	var.	351	25

**IDP 2**

**WINTER QUARTER**

DNES	807	Practice Management
IDPC	825	General Clinic
IDPP	754	Clinical Periodontics
IDPO	535	Oral Pathology and Diagnosis
IDPR	846	Restorative Dentistry I
ORDN	811	Principles of Orthodontics II

-----Self-Study Course-----				1
-	-	var.	var.	8
14	-	-	14	1
22	-	-	22	2
16	8	4	28	2
11	-	-	11	1
63	8	4	75	15

**SPRING QUARTER**

DNES	707	Personal Development
DNES	809	Practice Management II
ENDN	831	Endodontics I
ENDN	832	Endodontics II
IDPC	825	General Clinic
PEDN	753	Pediatric Dentistry I, Lecture
PEDN	753L	Pediatric Dentistry I, Laboratory

11	-	-	11	1
-----Self-Study Course-----				1
11	-	-	11	1
-	44	-	44	1
-	-	var.	var.	8
22	-	-	22	2
-	33	-	33	1
44	77	var.	121	15

Fall Start, continued

IDP 3

SUMMER QUARTER

ENDN 833	Endodontics III	-	44	-	44	1
IDPC 835	General Clinic	-	-	var.	var.	8
IDPO 534	Oral Medicine-Orofacial Pain and TMD	22	-	-	22	2
IDPO 826	Oral and Maxillofacial Surgery	12	-	4	16	1
IDPR 845	Scientific Investigation and Research Design	28	8	-	36	3

CLOCK HOURS				UNITS	
Lec./Semr.	Lab.	Clin.	Total		
-	44	-	44	1	
-	-	var.	var.	8	
22	-	-	22	2	
12	-	4	16	1	
28	8	-	36	3	
62	52	var.	118	15	

AUTUMN QUARTER

IDPC 835	General Clinic	-	-	var.	var.	8
IDPR 845	Scientific Investigation and Research Design	8	-	-	8	1
IDPT 754	Advanced Topics in Dentistry	22	-	2	24	2
RESO 861	Senior Lecture in Removable Prosthodontics	24	-	-	24	2
RELE 734	Christian Ethics for Dentists	22	-	-	22	2
ENDN 834	Endodontics IV	11	-	-	11	1

-	-	var.	var.	8	
8	-	-	8	1	
22	-	2	24	2	
24	-	-	24	2	
22	-	-	22	2	
11	-	-	11	1	
87	-	var.	89	16	

IDP 4

WINTER QUARTER

IDPC 845	General Clinic	-	-	var.	var.	8
IDPP 755	Pediatric Dentistry Clinic	-	-	24	24	0.5
IDPR 847	Restorative Dentistry II	24	-	-	24	2
RELT 717	Christian Beliefs and Life	22	-	-	22	2

-	-	var.	var.	8	
-	-	24	24	0.5	
24	-	-	24	2	
22	-	-	22	2	
46	-	var.	70	12.5	

SPRING QUARTER

IDPC 845	General Clinic	-	-	var.	var.	8
IDPP 755	Pediatric Dentistry Clinic	-	-	24	24	0.5
IDPR 848	Restorative Dentistry III	24	-	-	24	2
PHRM 503	Clinical Pharmacology	22	-	-	22	2
RELR 746	Personal and Family Wholeness	22	-	-	22	2

-	-	var.	var.	8	
-	-	24	24	0.5	
24	-	-	24	2	
22	-	-	22	2	
22	-	-	22	2	
68	-	var.	92	14.5	

TOTALS

524	334	var.	916	107.0	
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# Diagnostic Medical Sonography—AH (certificate)

MARK J. CLEMENTS, Program Coordinator

MARIE M. DELANGE, Clinical Program Director

GLENN A. ROUSE, Medical Director

## FACULTY

Laura L. Alipoon  
 Kelly A. Burk  
 Mark J. Clements  
 Noha S. Daher  
 Carol A. Davis  
 Marie M. DeLange  
 Intithar S. Elias  
 Erma P. Ezpeleta  
 Brenda S. Holden  
 Barbara S. Holshouser  
 Helen J. King  
 Noriece R. Kisinger  
 Arthur W. Kroetz  
 Steven L. Leber  
 Renee N. S. Mercado  
 Terese R. Pfeiffer  
 Glenn A. Rouse

The diagnostic ultrasound profession is a multispecialty field comprised of diagnostic medical sonography (DMS)—with subspecialties in abdominal, neurologic, obstetric/gynecologic, and ophthalmic ultrasound; diagnostic cardiac sonography (DCS)—with subspecialties in adult and pediatric echocardiography; vascular technology (VT); and other emerging fields. These diverse specialties are distinguished by their use of diagnostic medical ultrasound as primary technology in their daily work. The diagnostic ultrasound professional is an individual qualified by professional credentialing and academic clinical experience to provide diagnostic patient-care services using ultrasound and related diagnostic procedures. Diagnostic ultrasound professionals perform patient assessments, acquire and analyze data obtained using ultrasound-related diagnostic technologies, provide a summary of findings to the physician to aid in patient diagnosis and management, and use independent judgment and systematic problem-solving methods to produce high-quality diagnostic information and optimize patient care.

### Track 1 (General RDMS and RVT)

Track 1 is a twenty-four-month program leading to credentials in two areas. General RDMS sonographers perform examinations of the internal organs—such as the liver, kidneys, uterus, and thyroid. They also assist in diagnosis of abnormal/normal conditions in children and pregnant women. Vascular sonographers perform a variety of noninvasive examinations of the arteries and veins—assessing blood flow, valve competence, and presence of clots.

### Track 2 (Cardiac RDCS)

Track 2 is a twelve-month program leading to proficiency in diagnostic imaging of cardiac function and disease processes.

### Track 3 (RVT)

Track 3 is a twelve-month program leading to a career in noninvasive vascular imaging of arteries and veins; and assessment of blood flow, direction of flow, valve competency, and presence of clots. Track 3 requires that the applicant already hold certification as a registered diagnostic medical sonographer (RDMS).

### Accreditation

The program has been accredited since 1983 in both general sonography and echocardiography by the Commission on Accreditation of Allied Health Education Programs (CAAHEP), 35 East Wacker Drive, Suite 1970, Chicago, IL 60601-2208; and the Joint Review Committee on Education in Diagnostic Medical Sonography, 1248 Harwood Road, Bedford, TX 76021-4244; telephone: 817/685-6629.

### Professional registration

Upon completion of the certificate requirements, the student is eligible to write the qualifying examination of the American Registry of Diagnostic Medical Sonographers.

### Admission

#### THE APPLICANT MUST FULFILL ONE OF THE FOLLOWING FOUR REQUIREMENTS:\*

- Be an ARRT-registered radiologic technologist;
- or
- Be a graduate of an accredited allied health program, including nursing (two years minimum training), licensed vocational nurse, or registered nurse;
- or
- Have any associate degree;
- or
- Have any baccalaureate degree;

#### AND

#### MUST HAVE CREDITS IN THE FOLLOWING:\*

- Human anatomy and physiology with laboratory, complete sequence
- Intermediate algebra
- Medical terminology
- Patient-care methods
- Introduction to computers

\*Specific course requirements must be completed at an accredited college or university.

### CPR certification

Students are required to have current health care provider cardiopulmonary resuscitation (CPR) certification (adult, child, and infant) for all scheduled clinical experiences. American Heart Association certification is recommended. Classes are available on campus at Life Support Education, University Arts building, 24887 Taylor Street, Suite 102.

**PROGRAM OF INSTRUCTION****Track 1:**

Two-year certificate

Two credentials—(General RDMS, RVT)

RTMS 344	Introduction to Medical Sonography (1 or 4)	
RTMS 345	OB-GYN and Neurosonography	(4)
RTMS 346	Vascular Technology/Doppler/Scan Techniques	(5)
RTMS 348	Abdomen Small-Parts Sonography	(4)
RTMS 371-378	Medical Sonography Clinical Affiliation	(1, 1, 1, 1, 1, 1, 1)
RTMS 379	Ultrasound Physics and Instrumentation I	(2)
RTMS 381-384	Topics in Medical Sonography I-IV	(1, 1, 2, 2)
RTMS 387	Ultrasound Physics and Instrumentation II	(2)
HPRO 443	Writing for Publication	(2)
RELE 457	Christian Ethics and Health Care	(2-3)
	Option: Third credential (RDMS) requires additional nine months	

**Track 2:**

One-year certificate

One credential—Cardiac (RDMS)

RTMS 339	Introduction to Echocardiography	(4)
RTMS 347	Echocardiography, Adult and Pediatric Specialties	(4)
RTMS 365-368	Cardiac Ultrasound Clinical Affiliation	(1, 1, 1, 1)
RTMS 379	Ultrasound Physics and Instrumentation I	(2)
RTMS 383	Topics in Medical Sonography III	(2)
RTMS 387	Ultrasound Physics and Instrumentation II	(2)
RELE 457	Christian Ethics and Health Care	(2-3)
EMMC 315	Cardiology	(3)
	Option: RVT or RDMS credential requires one additional year	

**Track 3:**

One-year certificate (Prerequisite: RDMS certification)

One credential—Vascular (RVT)

RTMS 344	Introduction to Medical Sonography	(4)
RTMS 346	Vascular Technology/Doppler/Scan Techniques	(5)
RTMS 361-364	Vascular Ultrasound Clinical Affiliation	(1, 1, 1, 1)
RTMS 379	Ultrasound Physics and Instrumentation I	(2)
RTMS 383	Topics in Medical Sonography III	(2)
RTMS 387	Ultrasound Physics and Instrumentation II	(2)
	Option: RDMS credential requires one additional year	

A minimum grade of C (2.0) is required for all courses in the program.

## Dietetic Technology—AH

(A.S., PB certificate)

GEORGIA W. HODGKIN, Program Director, A.S. in Dietetic Technology

MAXINE J. TAYLOR, Academic Coordinator, Dietetic Technology Certificate Program

**A.S. FACULTY**

Kenneth Burke  
Bertrum C. Connell  
Georgia W. Hodgkin  
Martina I. Karunia  
Cindy L. Kosch  
JeJe Noval  
Louise E. Schneider  
Maxine J. Taylor

**CERTIFICATE FACULTY**

Kenneth I. Burke  
Bertrum C. Connell  
Noha S. Daher  
Ronald H. Hillock  
Georgia W. Hodgkin  
Martina I. Karunia  
Cindy L. Kosch  
JeJe Noval  
Louise E. Schneider  
David M. Stanton  
Maxine J. Taylor

The dietetic technician is a support member of the nutrition-care team. At the direction of the dietitian, the dietetic technician screens patients for nutrition-care needs, marks menus, teaches individuals or groups, monitors effectiveness of nutrition care, and documents findings in the patient's medical record. Dietetic technicians contribute to the overall success of the food service by developing menus, supervising food-service employees, monitoring quality of food, and providing in-service training for employees.

**Opportunities**

The dietetic technician practices with other members of the nutrition-care team, including the registered dietitian, the dietetic assistant, and food-production and food-service personnel. Employment may be found in a variety of environments, including hospitals and other health care facilities, retirement centers, schools and universities, government and community agencies, food-management companies, and industrial feeding sites.

**DIETETIC TECHNOLOGY—A.S.**

The Program A.S. degree in dietetic technology consists of four quarters and integrates the theory of the classroom studies with the experience of the laboratory and supervised clinical experience. Students participate as active learners in a variety of settings planned to develop competent dietetic technicians. The Associate in Science degree is awarded upon successful completion of the program.

**Accreditation**

The Dietetic Technology Program is currently granted continuing accreditation by the Commission on Accreditation for Dietetics Education of the American Dietetic Association, 120 South Riverside Plaza, Suite 2000, Chicago, IL 60606-6995; telephone: 312/899-5400. Web site <www.eatright.org/cade>; FAX: 312/899-4817.

**Professional registration**

Upon satisfactory completion of the program and upon recommendation of the faculty, the graduate will be eligible to take the registration examination of the Commission on Dietetic Registration in order to become a dietetic technician, registered (DTR).

**Professional association**

Students and graduates are eligible for membership in the American Dietetic Association. The mission of the association is to provide direction and leadership for quality practice, education, and research; and to promote optimal health and nutritional status of the American population. This organization grants student membership at a nominal cost to undergraduates of accredited programs. The national office of the American Dietetic Association is at 120 South Riverside Plaza, Suite 2000, Chicago, IL 60606-6995. Along with membership in the American Dietetic Association, students become members of the California Dietetic Association. Students are encouraged to join the Inland District Dietetic Association and, where possible, the Seventh-day Adventist Dietetic Association.

**The program goals**

1. Prepare graduates to be competent entry-level dietetic technicians.
2. Assure 90 percent of enrolling students complete the program with encouragement, empowerment, and support of faculty and staff.
3. Provide professionally trained dietetic technicians, registered, who may be employed by the health care and educational systems of the Seventh-day Adventist Church; or local, national, or international entities.
4. Develop a "career ladder" for nutrition education at Loma Linda University.

**The program objectives**

Upon completion of the program, the graduate should be qualified to:

1. Perform competently at the entry level of technical practice.
2. Value life-long learning.
3. Utilize current technology.
4. Participate as a leader in nutrition care.
5. Recognize the option to pursue a bachelor's degree program upon completion of the Associate in Science degree.
6. Fill the need for registered dietetic technicians, where appropriate, within the health care and educational network of Seventh-day Adventist institutions as well as local organizations.

**Admission**

Admission to the program is based on a selective process. To be eligible for consideration, the applicant must meet the following criteria:

- a 2.5 G.P.A. or above
- an interview
- a letter of application
- recommendations

**PREREQUISITE FOR DIETETIC TECHNOLOGY, A.S.**

Religion required, 4 units per year of attendance at a Seventh-day Adventist college or university

Human anatomy and physiology with laboratory

Introductory chemistry with laboratory, complete sequence

Two years high school mathematics with grades of C or better

or

Intermediate algebra in college

Sociology

English composition, complete sequence

Speech

Human nutrition

Electives to meet the total minimum requirements of 46 quarter units

**PROGRAM OF INSTRUCTION****SOPHOMORE YEAR****Postsummer Session (4 weeks):**

August 22–September 16, 2005

DTCH 201	Human Nutrition	(3)
DTCH 202	Food Selection and Preparation	(4)
DTCH 203	The Art of Food Presentation	(3)

**Autumn Quarter:**

September 21–December 9, 2005

DTCH 205	Professional Issues in Nutrition and Dietetics	(1)
DTCH 239	Life-Cycle Nutrition	(2)
DTCH 241	Nutrition Assessment	(3)
DTCH 271	Quantity Food Purchasing, Production, and Service	(5)
AHCJ 407	Financial Management	(2)

**Winter Quarter:**

January 2–March 17, 2006

DTCH 242	Nutritional Care	(4)
DTCH 272	Food-Systems Management	(4)
REL 436	Adventist Heritage and Health	(3)

**Spring Quarter:**

March 27–June 9, 2006

DTCH 204	Community Nutrition	(4)
DTCH 281	Operations Management in Quantity Food Production	(4)
DTCH 291	Dietetic Technology Affiliation	(4)
AHCJ 305	HIV/AIDS and the Health Provider	(1)
AHCJ 408	Health Care Management	(4)
REL_ ___	Religion elective	(2)

A minimum grade of C (2.0) is required for all courses in the program.

## DIETETIC TECHNOLOGY—PB certificate

### Admission

To be eligible for admission, the applicant to the postbaccalaureate certificate program must have earned a minimum of a baccalaureate degree at an accredited college or university.

### PREREQUISITE

Bachelor's degree from an accredited college/ university  
 Human anatomy and physiology with laboratory, complete sequence  
 Introductory chemistry with laboratory, complete sequence  
 Sociology  
 Speech

### SUBJECT REQUIREMENTS

Applicants must meet the core professional requirements as specified for the A.S. degree.

The program of instruction for students seeking the certificate in dietetic technology is identical to the program of instruction for the A.S. degree. Courses previously taken that are identical to courses required for the degree may, with proper documentation, be considered as meeting the requirements. The final decision is made through the academic variance process.

This program meets the 450 clock hours of professional practice necessary to establish eligibility to write the registration examination for the dietetic technician.

## Drug and Alcohol Counseling—ST (PB certificate)

RANDALL WALKER, Program Coordinator

### FACULTY

See Marital and Family Therapy (MFAM) Program.

The Drug and Alcohol Counseling Program certificate is offered by the School of Science and Technology's Department of Counseling and Family Sciences through the Marital and Family Therapy Program.

### Objectives

The objectives of the Drug and Alcohol Counseling Program certificate are to:

- Prepare master's degree and doctoral-level professionals to effectively counsel substance abusing and addicted adults and their families;
- Offer curriculum and experience for master's and doctoral level professionals that meet the

requirements for certification by national certification organizations;

- Integrate certificate requirements into the existing MFAM curriculum; and
- Allow hours of experience to be accrued concurrently to meet BBS, AAMFT, and other certifying organization requirements.

### Application process

Applicants must meet the School of Science and Technology admission requirements outlined in this CATALOG and give evidence of academic ability, emotional stability, and maturity. The drug and alcohol counseling certificate is designed to be a track in the M.S. degree program in marital and family therapy or the D.M.F.T. and Ph.D. degree programs in marital and family therapy (MFAM).

The certificate program is open to currently enrolled MFAM students or other master's degree level students or graduates. Students in the MFAM program must first complete the current core MFAM curriculum. Candidates will be screened for appropriateness to complete the certificate program and for ability to work with addicted adults and their families. A written application letter is required, which must include how the applicant will integrate the substance-abuse certificate into work as a marriage and family therapist or other clinical professional, and how the applicant will contribute to the addiction-treatment field and professional field by completing the certificate. Two letters of reference are required. A panel interview composed of faculty and student(s) currently enrolled in the certificate program is required. The critical-essay test (if not already taken) is required, and a writing course is required if the student does not pass the essay examination.

### PROGRAM COURSES

(18 quarter units minimum)

Course work is developed to help candidates successfully take and pass certification examinations offered through the National Association of Alcoholism and Drug Abuse Counselors (NAADAC) and the American Academy of Health Care Providers in the Addictive Disorders (AAHCPAD).

### REQUIRED COURSES

MFAM 638	Family Therapy and Chemical Abuse	(3)
#MFAM 645	Advanced Substance-Abuse Strategies	(3)
MFAM 515	Crisis-Intervention Counseling	(3)
MFAM 635, 636, and 637	Case Presentation	(2, 2, 2)
or		
MFAM 694	Directed Study: Marriage and Family	(6)

For master's-degree level students not working directly with clients (i.e., clergy, educators, administrators). Research and writing about a topic relevant to substance abuse and its relationship to the student's discipline/profession.

A religion course (3)

TOTAL UNITS 18

**FIELDWORK**

Candidates will complete three quarters of fieldwork in an approved site dealing with addicts and families. Fieldwork provides excellent opportunities to gain experience working with substance abusers and their families. The student will be evaluated quarterly.

Matrix Institute on Addictions in Rancho Cucamonga is connected with the National Institute on Drug Addiction (NIDA) research system and will be running government-funded studies. My Family, Inc. (MFI, Craig Lambdin) in Riverside offers a variety of opportunities to work with substance abusers in residential and outpatient settings. Inland Valley Drug and Alcohol Recovery Services (IVDARS, Randall Walker) in Upland offers opportunities for students to work with substance abusers in residential treatment.

The Loma Linda University Behavioral Medicine Center offers students opportunities to work with substance abusers in a hospital setting. The Betty Ford Hospital in Rancho Mirage, Cedar House in Bloomington, and Riverside County Office of Alcohol and Drug Programs may also offer additional opportunities for candidates to gain experience. In addition, there are numerous other programs offering substance abuse services in San Bernardino and Riverside counties.

## Earth Science—ST (Ph.D.)

H. PAUL BUCHHEIM, Program Coordinator

**FACULTY**

Leonard R. Brand  
Doug Britton  
H. Paul Buchheim  
Ronald L. Carter  
Benjamin Clausen  
Robert A. Cushman Jr.  
Stephen G. Dunbar  
Raul Esperante  
Robert Ford  
H. Thomas Goodwin  
Kevin E. Nick  
Samuel Soret

The specific research and academic interests and strengths of the faculty (see by specific names in Section VI) are in:

- vertebrate paleontology, taphonomy, philosophy of science
- sedimentology, limnogeology, paleoenvironments
- molecular ecology and systematics
- biostratigraphy, paleopalynology, terrestrial paleoecology
- tropical marine and intertidal ecology and marine invertebrate ecophysiology, comparative physiology
- behavior and distribution
- Earth systems and sustainability science
- paleomagnetism and sedimentology
- geographic information analysis and technology

- Igneous petrology, nuclear physics, and geophysics
- Hydrogeology and environmental geology
- Vertebrate paleontology and biogeography

**Ph.D. in earth science**

The School of Science and Technology's Department of Earth and Biological Sciences offers the Program leading to a Doctor of Philosophy degree in Earth science. Emphasis is on research and courses in geology, paleontology, and paleobiology that prepare the student to understand the history of life, its geological context, and the science involved in deciphering this history. Students are encouraged to think independently and to consider various approaches to understanding earth history. Areas of curricular strength and research emphasis include sedimentary and environmental geology, paleontology, including paleoenvironmental reconstruction, paleoecology, paleobotany, taphonomy, and earth-systems science. Research in paleontology can also be pursued through the Master of Science degree program in geology and the Doctor of Philosophy program in biology.

**Objectives**

The School of Science and Technology's Earth Science Program strives to:

1. Instill in students the values of honesty, scientific integrity, careful research, and critical, independent thinking.
2. Provide the tools and intellectual environment in which earth scientists can attain their highest potential in scholarship, research, and teaching.
3. Challenge graduate students to consider the relationship between science, faith, and societal responsibility.
4. Prepare students to contribute to service outreach in applied environmental earth science, promoting sustainable development and livelihoods in vulnerable ecosystems (human dimensions of global environmental change).

**Admission**

The successful applicant must meet the general admission requirements of the University and the School of Science and Technology, as outlined in Sections II and III of this CATALOG. Expected undergraduate preparation includes physical geology, mineralogy, igneous and metamorphic petrology, structural geology, geological field mapping, two quarters of college mathematics including calculus and one year each of general biology, general physics, and general chemistry.

**CURRICULUM**

The following constitutes the curriculum for the Doctor of Philosophy degree in earth science.

A minimum of 72 quarter units of academic credit for courses, seminars, and research beyond the master's degree is required; that is, a minimum of 120 units beyond the baccalaureate degree, including the following required courses:

<b>CORE CURRICULUM</b>		<b>(36+ units)</b>
GEOL 547	Advanced Historical Geology	(4)
GEOL 556	Paleoenvironments	(4)

GEOL 558	Philosophy of Science and Origins	(4)
GEOL 566	Advanced Sedimentology	(4)
GEOL 567	Stratigraphy and Basin Analysis	(4)
GEOL 607	Seminar (1 unit each quarter in residence)	(12+)
GEOL 616	Research and Experimental Design	(2)
GEOL 617	Proposal Writing and Grantsmanship	(2)

**During the undergraduate or graduate program:**

GEOL 431	Geochemistry	(4)
GEOL 454	Sedimentary Petrology	(4)
Graduate paleontology—two courses at Loma Linda University		(7)
A GIS course		(3)
Statistics (course to be approved by Ph.D. committee)		(4)

**Remaining units to complete a total of 120 quarter units must include:**

Research	(16)
Dissertation	(2)
Religion, course beyond master's degree requirement	(3)
Additional courses required by the student's guidance committee	

**Special attendance requirement**

Attendance at geology seminars is required of the student during all quarters in residence at Loma Linda University.

**Recommended**

Teaching is recommended during at least one quarter. This experience may be obtained in the laboratory or it may involve presenting part of the lectures for a course.

**Comprehensive examinations**

Oral and written comprehensive examinations are given near completion of the formal course work. The purpose is to measure the student's knowledge of the various fields of geology, paleontology, philosophy of science, paleobiology, and preparation for research. These examinations should be completed by the beginning of the third year of study.

**Advancement to candidacy**

The student may apply for advancement to doctoral candidacy after:

1. completing all deficiencies and prerequisites,
2. passing the comprehensive examinations,
3. selecting a research committee,
4. having an approved written research proposal,
5. passing the oral defense of the research proposal, and
6. being recommended by the department faculty.

**Dissertation**

The written dissertation must demonstrate the completion of significant, original research.

**Defense of dissertation**

An oral presentation and defense of the dissertation is required.

**Varied course offerings**

In addition to the primary offerings of the department, with committee approval the student may take courses in other departments as part of the graduate work, according to special interests and needs.

**ROSARIO BEACH SUMMER COURSES**

In cooperation with the Walla Walla College Marine Station in Anacortes, Washington, facilities are available for marine courses and research by students in this program.

## Emergency Medical Care— AH (B.S.)

EHREN B. NGO, Program Director

JEFF T. GRANGE, Medical Director for Bachelor of Science

JAMES GUSS, Director of Clinical Education for Bachelor of Science

**FACULTY**

James Goss  
Jeff Grange  
Ehren Ngo

**ADVISORY COMMITTEE**

Gail Dodge  
Jeff T. Grange  
Jim T. Holbrook  
Craig R. Jackson\*  
Traci L. Marin  
Sara Momsen  
Ehren B. Ngo  
Joshua Stapleton  
Tamara L. Thomas

\* ex officio

The two-year, upper-division program leading to the Bachelor of Science degree is a sequence of additional professional course work intended to prepare emergency medical care (EMC) providers for positions in education, management, or advanced clinical practice. Course work may be applied toward meeting entrance requirements for dentistry, medicine, and other graduate programs.

Those electing to study on a part-time basis must complete the junior and senior years within a four-year period. Students new to the profession should be employed a minimum of sixteen hours per week in an emergency medical care-related position in order to gain the most from the program.

**The program objectives**

Upon completion of the program, the graduate should be qualified to:

- Demonstrate leadership skills through advanced and multilevel thinking, providing options and alternatives for the care of patients.

- Demonstrate leadership in the emergency medical care field by sharing the knowledge attained through the program with members of other professional disciplines.
- Develop and refine critical thinking skills to enhance ability to analyze and develop the most effective means of caring for patients.
- Compare and contrast the different disciplines of prehospital health care providers that contribute to emergency medical care.
- Differentiate among the different areas of a Level I trauma center and the significance each area of the hospital has in the care of a critical patient.
- Effectively modify practice within the discipline, using the knowledge learned in the program.

### Admission

To be eligible for the junior year of the Emergency Medical Care (EMC) Program, the applicant must:

- Be an EMT or a paramedic, a registered nurse/MICN, or a respiratory therapist.
- Complete the subject requirements listed as prerequisites (students who have not completed these requirements may be accepted on a provisional basis).
- Arrange for an interview at the University by appointment.
- Satisfactorily complete a writing and mathematics sample. Students must achieve a satisfactory score on their writing and mathematics samples prior to starting the second half of professional course work.

### PREREQUISITE/COREQUISITE

20 units minimum in humanities (choose minimum of three areas from: history, literature, philosophy, foreign language, art/music appreciation/history)

Included in this minimum, 4 units of religion per year of attendance at a Seventh-day Adventist college or university

\*Human anatomy and physiology with laboratory, complete sequence

\*Microbiology with laboratory

\*Chemistry one quarter or semester, with laboratory

\*Introductory physics with laboratory, one quarter; or high school physics

\*Two years high school mathematics with grades of C or above, or intermediate algebra in college

\*General psychology

Cultural anthropology or an approved course dealing with cultural diversity

Select 4 more quarter units from sociology, economics, geography, political science, psychology

\*English composition, complete sequence

\*Computers (high school or college)

Personal health or nutrition

Two physical activity courses

In addition to course work listed above, electives to meet 118 quarter units.

\*denotes EMC B.S. degree program prerequisites

### General education requirements

For total unit requirements for graduation, see Section II, Division of General Studies.

### Computer requirement

The Emergency Medical Care Program faculty are proud to be on the cutting edge in using distant-education technology to facilitate teaching their course work. This technology, however, requires that all prospective students applying for admission to the EMC program have access to a computer with Internet capabilities by the time they actually begin the program. The EMC program and its faculty will not be responsible for course work not completed due to inability to access a computer. Computer hardware specifications may be obtained from the cardiopulmonary department secretary.

### Portfolio requirement

In addition to the requirements listed under PROGRAM OF INSTRUCTION, students accepted into the EMC program must maintain a working portfolio. The exact details of this requirement will be explained to the student during the initial orientation meeting.

### PROGRAM OF INSTRUCTION

EMMC 308	Pharmacology	(3)
EMMC 314	ECG Interpretation and Analysis	(2)
EMMC 315	Cardiology	(3)
EMMC 316	12-Lead ECG Interpretation	(2)
EMMC 325	Current Issues in Emergency Medical Care	(2)
EMMC 331	Introduction to Theories of Emergency Medical Services	(2)
EMMC 332	Theories of Emergency Medical Services	(2)
EMMC 427	Cardiopulmonary Therapeutics	(2)
EMMC 435	Disasters, WMD, and Terrorism	(2)
EMMC 444	Diversity in EMS	(2)
EMMC 445	Perinatal and Pediatric Care	(3)
EMMC 446	Physical Diagnosis	(2)
EMMC 447	Geriatrics and Aging	(2)
EMMC 451	Health Care Management for Prehospital Providers	(2)
EMMC 452, 453	Seminars in EMS Management I, II	(2, 2)
EMMC 471, 472	Senior Project I, II	(2, 2)
EMMC 484	Legal Issues in Health Care	(2)
EMMC 489	Senior Seminars	(1)
RTCH 464	Moral Leadership	(2)
RTCH 475	Curriculum Development in Health Sciences	(2)
RSTH 471	Instructional Techniques I	(2)
AHCJ 305	HIV/AIDS and the Health Provider	(1)
AHCJ 324	Psycho-Social Models and Interventions	(2)
AHCJ 328	Portfolio Practicum I	(1)
AHCJ 351	Statistics for the Health Professions	(3)
AHCJ 402, 403	Pathology I, II	(4, 4)
AHCJ 461	Research Methods	(2)
AHCJ 498	Portfolio Practicum II	(1)
RELE 457	Christian Ethics and Health Care	(3)

RELF 416	God and Human Suffering	(3)
RELF 423	Loma Linda Perspectives	(2)

## Endodontics, Advanced— SD (M.S., PD certificate)

MAHMOUD TORABINEJAD, Program Director

### FACULTY

Leif K. Bakland  
Robert Handysides  
David Jaramillo  
Shahrokh Shabahang  
Mahmoud Torabinejad

The mission of the advanced dental education Endodontics Program is to train endodontists who are proficient in treating teeth that require root canal therapy (art), possess an in-depth biological knowledge related to endodontics (science), and have participated in endodontic research and teaching.

The goals of the advanced dental education program in endodontics are to:

1. Provide in-depth didactic instruction and clinical training to prepare dentists to manage patients with a variety of endodontic needs.
2. Provide comprehensive and formal courses in biomedical sciences, with emphasis on their relationship to endodontics.
3. Engage residents in research and teaching experiences for continued professional growth and development after graduation.

The program begins in July and requires twenty-seven months in residence for the specialty certificate.

Following enrollment into the program, residents may apply for acceptance to the Master of Science (M.S.) degree track in addition to the specialty certificate. The application should be submitted before the end of the first year and must be supported by a letter of recommendation from the program director. Acceptance into the M.S. degree program may extend the length of study; the additional time must be in residence.

Graduates in both the certificate and graduate degree programs are educationally qualified for certification by the American Board of Endodontics.

### Application deadline

Application for admission should reach the department by August 15 of the year prior to the summer of intended enrollment.

### Tuition

Tuition for the 2005-2006 academic year is \$8300 per quarter. Insurance is \$300 per quarter and student-service fees are \$93 per quarter. The technology fee is \$150 per quarter.

A separate fee of \$1400 is charged for GRDN 632 Basic Microsurgery Technique course (2 units). This fee does not include instruments and textbooks.

### DEPARTMENTAL REQUIRED COURSES

ENDN 534	Endodontic Treatment Conference	(2)
ENDN 601	Principles of Endodontics	(2)
ENDN 604	Literature Seminar in Endodontics	(2)
ENDN 625	Clinical Practice in Endodontics	(2160 clock hours)
ENDN 654	Practice Teaching in Endodontics	(3-4)
ENDN 697A	Research	(1)
ENDN 697B	Research	(1)
ENDN 698	Thesis (M.S. degree only)	(1)

### INTERDISCIPLINARY AND NON- DEPARTMENTAL REQUIRED COURSES

GRDN 514	Introduction to Biomedical Research	(4)
GRDN 531	Applied Surgical Anatomy	(2)
IMPD 611	Introduction to Implant Dentistry	(2)
IMPD 612	Advanced Implant Dentistry	(2)
GRDN 601	Practice Management	(2)
GRDN 604	Topics in Medicine and Hospital Protocol	(2)
GRDN 609	Professional Ethics	(2)
GRDN 622	Biomedical Science I	(4)
GRDN 623	Biomedical Science II	(4)
GRDN 632	Basic Microsurgery Technique	(2)
GDRN 535	Clinical Oral Pathology	(2)
ORPA 533	Radiology	(2)
RELE_ ___	Religion elective	(3)

## Environmental and Occupational Health—PH (M.P.H.)

DAVID T. DYJACK, Chair

### FACULTY

Daniel Alves  
Mohan Balagopalan  
Yonan Benjamin  
C. Raymond Cress  
Jayanth K. Devasundaram  
Ann L. H. Dew  
Angela B. Dyjack  
David T. Dyjack  
Eric K. Frykman  
Donna R. Gurule  
Arnd Hallmeyer  
William C. Hoffman  
Daniel Jimenez  
George E. Johnston  
Marilyn S. Kraft  
Robert Krieger  
Kristian D. Lindsted  
Harold (Hal) J. Marlow, Jr.  
Brooke McKnight  
Corwin Porter  
Cynthia A. Paulo  
Samuel Soret

Padma P. Uppala  
Seth A. Wiafe

**E**nvironmental health professionals are diverse in background, education, and function. The department builds upon students' existing foundation in the sciences to prepare them to meet the growing employment market for environmental health specialists, industrial hygienists, geographic information-system specialists, and other professions that examine human-environment interactions.

The Environmental and Occupational Health Program provides a California state-approved professional program that leads to the Master of Public Health (M.P.H.) degree in environmental and occupational health. Courses and laboratories provide training in the anticipation, recognition, evaluation, and control of health hazards in places of employment and communities. Our graduates secure rewarding careers in government, industry, and the private sector.

#### Program goals

The Department of Environmental and Occupational Health Program will:

1. Train competent environmental and occupational health professionals.
2. Apply policy and conduct technical research that expands the existing knowledge base in the field of environmental and occupational health sciences, both in the United States and in international communities.
3. Provide environmental and occupational health-related consultation to local and national governments, international agencies, nongovernmental organizations, industry, private associations, labor organizations, and academic institutions.
4. Provide opportunity to meet the eligibility requirements to sit for the Registered Environmental Health Specialist (REHS) Examination.

#### Learner outcomes

Students who complete this academic program will be able to:

1. Communicate scientific findings to technical and nontechnical audiences.
2. Conduct field surveys.
3. Evaluate sample data.
4. Lead an interdisciplinary team to resolve environmental issues.
5. Assess environmental exposures to working and nonworking populations.
6. Conduct applied research.
7. Direct environmental projects.
8. Provide suitable consultation to stakeholders.
9. Contribute to conflict resolution and mediation.
10. Describe key environmental and occupational health legislation.
11. Influence legislators on key environmental and occupational health issues.
12. Conduct environmental health-risk assessments.
13. Contribute to a cost-benefit analysis process.
14. Meet the eligibility requirements to sit for the California Registered Environmental Health Specialist (REHS) Examination.

#### PROGRAM EMPHASES

**T**his M.P.H. degree program is designed for individuals with professional practitioner career objectives in the area of environmental and occupational health.

##### Experienced health professional (HP) emphasis (I)

The experienced health professional (HP) emphasis (I) is designed for students who can provide verification of at least two years of applicable environmental health experience. Preference is given to applicants who are registered environmental health specialists.

##### Environmental health specialist (HS) emphasis (II)

The environmental health specialist (HS) emphasis (II) provides career skills in the environmental health sciences for individuals without previous professional experience. Graduates with these skills seek employment in private business/industry as environmental quality-control professionals; or in local, state, or federal government health departments/agencies. The program has been approved by the State of California Environmental Health Specialist Registration Committee, 601 North 7th Street, MS 396, P.O. Box 942732, Sacramento, CA 94234-7320. Satisfactory completion of this curriculum meets, in part, the eligibility requirements to sit for the Registered Environmental Health Specialist (REHS) Examination administered by the California State Department of Health Services. Satisfactory performance on the examination qualifies individuals for practice as registered environmental health specialists in California and, by reciprocity, in the forty-nine remaining states.

##### PREREQUISITE (HP AND HS)

The following prerequisite courses must be completed prior to enrolling in the REHS programs in environmental health:

- Biological science with laboratory (one year)
- General chemistry with laboratory (one year)
- Organic chemistry with laboratory (minimum of two-quarter sequence)
- General microbiology with laboratory (one course)
- General physics with laboratory (one year)
- College algebra (one course)
- Verification of at least two years of applicable environmental health experience to qualify as an experienced health professional

##### Environmental and occupational hygiene emphasis (III)

The environmental and occupational hygiene emphasis (III) is designed for established individuals who intend to use graduate-level knowledge of environmental health as an adjunct to their primary career goals. Environmental attorneys, health care managers, corporate administrators, and others who require working knowledge of the field are ideal candidates for this program. The program is virtually identical in scope and rigor to other programs offered in the department, with the exception of the science prerequisites. This program is not intended to meet the California REHS certification requirements.

**PREREQUISITE (EMPHASIS III)**

The following prerequisite courses must be completed prior to enrolling in the non-REHS program in environmental and occupational hygiene:

- General chemistry with laboratory (one year)
- Organic chemistry with laboratory (minimum of two-quarter sequence)
- General microbiology with laboratory (one course)
- General physics with laboratory (one year)
- College algebra (one course)
- Verification of at least two years of applicable environmental health experience to qualify as an experienced health professional.

**DEGREE REQUIREMENTS****(Emphases I, II, AND III)****Public health core courses (17 units)**

ENVH 586	Environmental Health Administration	(3)
EPDM 509	Principles of Epidemiology I	(3)
HPRO 509	Principles of Health Behavior	(3)
REL_ 5__	Religion	(3)
SHCJ 605	Philosophy of Public Health	(1)
STAT 509	General Statistics	(4)

**Environmental health core courses (18 units)**

ENVH 566	Outdoor Air Quality and Human Health	(3)
or		
ENVH 575	Indoor Air Quality	(3)
ENVH 567	Hazardous Materials and Solid-Waste Management	(3)
ENVH 568	Water-Quality Assurance	(3)
ENVH 581	Principles of Industrial Hygiene	(3)
ENVH 587	Environmental Toxicology	(3)
ENVH 589	Environmental Risk Assessment	(3)

**Electives (13-14 units)\***

ENVH 515	Food Quality Assurance	(3)
ENVH 569	Environmental Sampling and Analysis	(4)

**Seminar (1-2 units)\*\***

ENVH 605	Seminar in Environmental and Occupational Health	(1-2)
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**Practicum\*\*\***

ENVH 798B	Field Practicum	(400 clock hours)
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TOTAL UNITS 50

\*Experienced professionals may take 14 units of elective course work, including at least three ENVH units. Students without experience may take 13 units of elective course work, including ENVH 515, ENVH 569, and an additional 3-unit ENVH course.

\*\*Experienced professionals must take ENVH 605 for 1 unit. Students without experience must take ENVH 605 for 2 units.

\*\*\*Required of students without experience.

**Culminating activity (Emphases I, II, and III)**

A formal, oral presentation on a topic of current environmental health importance is required as a culminating activity. Student presentations are evaluated on professionalism, scientific merit, and thoroughness. The culminating activity shall include a written comprehensive examination (prior to the field experience), field experience (upon completion of essential major course work), professional portfolio (upon completion of the field experience), and an exit interview with the department chair (at the conclusion of the program).

**Comprehensive examination (Emphases I, II, and III)**

Students must satisfactorily complete a departmental comprehensive examination prior to graduation. The examination will allow students to demonstrate their ability to integrate and apply skills and knowledge expected of master's level environmental-health practitioners.

**ADDITIONAL OPTIONS****Peace Corps Master's International Program/  
Master of Public Health (M.P.H./MIP)**

Loma Linda University is one of eighty-two universities currently participating in the Master's International Program. As one of eleven institutions in the country offering this prestigious program, in conjunction with the Master of Public Health degree, the School of Public Health is proud to collaborate with the United States Peace Corps in this academic partnership.

For details, see Peace Corps Master's International Program.

**Environmental epidemiology**

This double major is administered jointly by the Department of Environmental and Occupational Health and the Department of Epidemiology and Biostatistics, and is designed for persons with special interest in studying how environmental factors affect health and disease. Students in this major gain the epidemiologic skills necessary to conduct research, as well as to meet the eligibility requirements to sit for the Registered Environmental Health Specialist Examination.

**Occupational medicine residency**

Occupational medicine residents are required to complete an M.P.H. degree as part of their residency training. The Department of Environmental and Occupational Health in the School of Public Health offers the didactic portion required for occupational medicine board eligibility and experience with industry not available in the resident's general rotations. The M.P.H. degree must include the following course work:

ENVH 567	Hazardous Materials and Solid-Waste Management	(3)
ENVH 581	Principles of Industrial Hygiene	(3)
ENVH 587	Environmental Toxicology	(3)

## Epidemiological Research Methods—PH (PB certificate)

SYNNOVE M. F. KNUTSEN, Program Coordinator

### FACULTY

Instruction for the certificate program is primarily provided by regular School of Public Health faculty members on campus during regular quarter terms.

The purpose of this certificate is to enable the holder to more effectively apply for and design research studies and surveys and do basic descriptive analyses of collected data.

### Learner outcomes

At the end of this program, participants should be able to:

- Critically read and interpret the medical literature.
- Write applications for research and survey grants.
- Conduct disease surveillance as practiced in state and county health departments.
- Design research studies and surveys, including special designs for developing countries.
- Create questionnaires for use in different studies and different settings.
- Perform and interpret simple statistical analysis.

### PREREQUISITE

Successful completion of a basic certificate program

Completed application for a graduate-degree program in the School of Public Health

GRE scores

Two recommendation letters

Interview with departmental faculty member

### CERTIFICATE REQUIREMENTS

EPDM 509	Principles of Epidemiology I	(3)
EPDM 568	Primary Health Care Research Methods	(3)
STAT 509	General Statistics	(3)
STAT 515	Grant and Contract Proposal Writing	(3)
STAT 564	Survey and Advanced Research Methods	(3)
RELX —	Religion (relational, ethical, foundational)	(3)

### Choice of descriptive epidemiology (3)

EPDM 534	Epidemiology of Maternal-Child Health	(3)
EPDM 544	Epidemiology of Infectious Disease	(3)
EPDM 565	Epidemiology of Cancer	(3)
EPDM 566	Epidemiology of Cardiovascular Disease	(3)
EPDM 567	Epidemiology of Aging	(3)
EPDM 588	Environmental and Occupational Epidemiology	(3)

### Forums

Participants are required to attend a minimum of five forums in the School of Public Health's Department of Epidemiology and Biostatistics and/or Center for Health Research during their certificate program

## Epidemiology—PH (M.P.H in epidemiology and in health-services research, Dr.P.H. in epidemiology, certificates)

SYNNOVE M. F. KNUTSEN, Chair, Department of  
Biostatistics and Epidemiology

### FACULTY

W. Lawrence Beeson  
Terrence L. Butler  
Jacqueline Chan  
Gary E. Fraser  
Bessie L. Hwang  
Jayakaran S. Job  
Raymond Knutsen  
Synnove M. F. Knutsen  
Kristian D. Lindsted  
Tomás P. Matamala  
John W. Morgan  
Warren R. Peters  
Thomas J. Prendergast, Jr.  
Joan Sabaté  
Charles S. Salemi  
Pramil N. Singh  
Loretta J. Wilber

Although the science of epidemiology began with the investigation of the infectious disease outbreaks, the modern plagues of heart disease, cancer, stroke, and injuries are also considered by the modern epidemiologist. Contemporary epidemiology builds upon the premise that disease or health is not randomly distributed within populations. Epidemiology comprises the research methods that identify and isolate the underlying causes of disease and injury as well as health. The diversity of this investigative science is illustrated by a number of research accomplishments ranging from identification of control and preventive measures for AIDS and diabetes mellitus; to etiologic processes important in the development of malignant neoplasms, cardiovascular diseases, and infectious diseases. Other accomplishments of epidemiology include discovery of social and biological mechanisms involved in the spread of measles, AIDS, and pertussis through human populations; and preventive measures for surgical-wound and other hospital-acquired infections. Contemporary epidemiologic inquiry ranges from investigation of the roles of prescription medications, nutrition, electromagnetic fields, and pesticides in human cancer; to identification of the health benefits of cholesterol reduction, smoking cessation, and use of safety bindings on skis. The epidemiologist studies the distribution and determinants of health and disease in populations. The emphasis placed upon the investigative process has

inspired some to describe the epidemiologist as a medical detective. Epidemiologic research incorporates use of statistical techniques and an understanding of environmental, genetic, and social characteristics important in disease development and spread.

Although epidemiology is a relatively young discipline, this collection of investigative methods has become an integral part of public health; epidemiologic findings permeate all fields of human health. The efficacy and confirmed success of epidemiology guarantee an exciting future for those who meet the challenges of this advancing science.

### Program goals

The Epidemiology Program:

1. Trains students to become professionals in epidemiology.
2. Fosters a spirit of collaboration among students and faculty by including students in research projects and as teaching assistants.
3. Provides practical research experience, including presentation of data, through field practice in a public health department or other agency, or on one of the research projects within the University.
4. Conducts high-quality research, collaborates on research projects within the School of Public Health and Loma Linda University, and develops research collaboration with other academic and research communities.
5. Provides consultation services regarding research design; and analyzes and interprets results to other groups within the University, the community, and outside agencies.

## EPIDEMIOLOGY—M.P.H

The program leading to an M.P.H. degree in epidemiology provides theoretical and practical training applicable to a variety of public health problems. Two tracks (each with a different focus) are offered by the program. Each track is designed to meet a particular professional need.

### Learner outcomes

Graduates from the Epidemiology Program will have the skills and experience necessary to:

1. Conduct high-quality epidemiologic research—including appropriate design, statistical analysis of data, and interpretation and reporting of results.
2. Evaluate and conduct clinical trials.
3. Conduct disease surveillance as practiced in state and county health departments.
4. Critically review the literature and identify strengths and weaknesses of design, analyses, and conclusions.
5. Evaluate the effects of potential confounding and interaction in a research design.
6. Apply knowledge of disease mechanisms and information from the biological disciplines to interpretation of statistical findings in biomedical research.
7. Collaborate with or serve as a research consultant to health professionals by providing technical

expertise with regard to literature review, study design, data analysis, and interpretation and reporting of results.

## MEDICAL EPIDEMIOLOGY (TRACK I)

This track is designed for persons with a health-professions background who wish to conduct or participate in research related to their health profession. An adequate background in biological science is assumed, with courses concentrating on epidemiology and statistics. One variant within this track provides a greater emphasis on research and may allow students to complete a moderately sized project with publication potential.

### Learner outcomes

Upon completion of this degree, the graduate should be able to:

1. Evaluate and conduct clinical trials.
2. Extend existing clinical skills with the addition of epidemiologic training in the interpretation of statistical findings in biomedical research.
3. Conduct high-quality epidemiologic research—including appropriate design, statistical analyses, and interpretation and reporting of results.
4. Conduct disease surveillance as practiced in state, county, and national health agencies/departments.
5. Critically review the health literature and identify strengths and weaknesses of design, analyses, and conclusions.

### PREREQUISITE

License to practice a health profession in the United States or the country of usual residence

College algebra or equivalent (calculus preferred)

## RESEARCH EPIDEMIOLOGY (TRACK II)

This track is designed for persons interested in a career studying the relationship of risk factors to a variety of disease outcomes (e.g., the effect of nutrients, inactivity, stress, high blood pressure, environmental exposure, obesity, or immunologic characteristics on heart disease, cancer, osteoporosis, longevity, infectious diseases, reproductive outcome, etc.).

### Learner outcomes

Upon completion of this degree, the graduate should be able to:

1. Collaborate with or serve as a research consultant to health professionals by providing technical expertise with regard to literature review, study design, data analysis, and interpretation and reporting of results.
2. Conduct high-quality epidemiologic research—including appropriate design, statistical analyses, and interpretation and reporting of results.
3. Conduct disease surveillance as practiced in state, county, and national health agencies/departments.
4. Critically review the literature and identify strengths and weaknesses of design, analyses, and conclusions.

**PREREQUISITE**

College algebra or equivalent (calculus preferred)  
 Biochemistry  
 Behavioral science

At least four of the following courses:

#Human anatomy	Cancer biology
#Human physiology	Embryology
#Histology	Genetics
#Microbiology	#Pathology
Vertebrate anatomy	Cell biology
Anatomy and physiology	Zoology
Molecular biology	Immunology

#recommended courses

**COREQUISITE**

(a limited number of the above courses may be taken during first two quarters of program, in addition to units required for degree)

**ENVIRONMENTAL EPIDEMIOLOGY**

This double major is administered jointly by the Environmental and Occupational Health and the Epidemiology Programs and is designed for persons with special interest in studying how environmental factors affect health and disease. Students in this major gain the epidemiologic skills necessary to conduct research as well as to meet the eligibility requirements to sit for the Registered Environmental Health Specialist Examination.

**HEALTH-SERVICES RESEARCH—M.P.H.**

This double major M.P.H. degree is administered jointly by the Department of Health Administration and the Epidemiology Program in the School of Public Health. It is designed for persons with interests that include assessment of health care organization and maintenance. Students gain the skills needed for health-services administration and epidemiologic research in the health-organization setting.

**EPIDEMIOLOGY—DR.P.H.**

The aim of this major is to prepare Doctor of Public Health degree graduates for career options that include epidemiologic research, teaching, and public health practice. The curriculum is planned on an individual basis. Details depend upon the student's interest and academic needs, the program requirements, and the nature of the proposed research program. Where appropriate to the career interest, the student is expected to gain relevant teaching experience as part of the training. The program ordinarily consists of twelve quarters. At least five of these quarters must be devoted to a research project. Students are responsible for gaining the commitment of an appropriate faculty member to serve as their research mentor.

**Learner outcomes**

Students completing the doctoral program in epidemiology are expected to have attained skills and knowledge in addition to that required for the M.P.H. degree program. These additional learning objectives

are enumerated below. The graduate of this program will be able to independently:

- Identify public health problems requiring epidemiologic research.
- Design, analyze and implement epidemiologic studies.
- Select and execute appropriate and valid analyses of epidemiologic data using available statistical software.
- Interpret and communicate results of epidemiologic research that expands scientific understanding, directs health policy, and promotes disease control and prevention.
- Write grant proposals to obtain funding for research.

**PREREQUISITE**

Organic chemistry  
 College algebra or equivalent (calculus preferred)  
 Behavioral science  
 Biochemistry  
 Microbiology

**COREQUISITE**

(may be taken during first two quarters of program, in addition to units required for degree)

ENVH 509	Principles of Environmental Health	(3)
EPDM 509	Principles of Epidemiology I	(3)
HADM 509	Principles of Administration in Public Health	(3)
HPRO 509	Principles of Health Behavior	(3)
PHCJ 605	Philosophy of Public Health	(1)

**DEGREE REQUIREMENTS**

<b>Epidemiologic methods</b>		<b>(38 units)</b>
*EPDM 510	Principles of Epidemiology II	(3)
*EPDM 512	Multivariate Modeling in Epidemiology	(3)
*EPDM 515	Clinical Trials	(3)
EPDM 555	Epidemiologic Methods in Outcomes Research and Continuous Quality Improvement	(3)
HPRO 543	Writing for Health Professionals	(2)
NUTR 543	Concepts in Nutritional Epidemiology	(3)
*STAT 515	Grant- and Contract-Proposal Writing	(3)
*STAT 521	Biostatistics I	(4)
*STAT 522	Biostatistics II	(4)
STAT 523	Biostatistics III	(4)
STAT 525	Applied Multivariate Analysis	(2)
STAT 535	Introduction to Nonparametric Statistics	(3)
STAT 538	Probability and Statistical Theory I	(3)
STAT 539	Probability and Statistical Theory II	(3)
STAT 545	Advanced Survival Analysis	(3)
*STAT 548	Analytical Applications of SAS	(2)
STAT 557	Research-Data Management	(3)
*STAT 558	Advanced Statistical Packages	(3)

*STAT 564	Survey and Advanced Research Methods	(3)
STAT 568	Data Analysis	(3)

**Descriptive epidemiology (12 units)**

EPDM 534	Epidemiology of Maternal-Child Health	(3)
EPDM 544	Epidemiology of Infectious Disease	(3)
EPDM 565	Epidemiology of Cancer	(3)
EPDM 566	Epidemiology of Cardiovascular Disease	(3)
EPDM 567	Epidemiology of Aging	(3)
EPDM 588	Environmental and Occupational Epidemiology	(3)
EPDM 635	Epidemiological Studies of Seventh-day Adventists	(2)

**Biomedical sciences (26 units)**

#ANAT 503	Human Histology	(5)
HPRO 501	Human Anatomy and Physiology I	(4)
HPRO 502	Human Anatomy and Physiology II	(4)
HPRO 503	Human Anatomy and Physiology III	(4)
HPRO 531	Pathology of Human Systems I	(3)
HPRO 532	Pathology of Human Systems II	(3)
NUTR 509	Public Health Nutrition	(3)

**Administration and leadership (6 units)**

HADM 510	Public Health Policy	(3)
HADM 514	Health Care Economics	(3)
HADM 528	Organizational Behavior in Health Care	(3)
HADM 542	Managerial Accounting for Health Care Organizations	(3)
HADM 604	Health-Systems Strategic Planning	(3)

**Electives (8 units)**

May be chosen from another institution, in consultation with adviser.

**Research and dissertation (19 units)**

*EPDM 685	Preliminary Research Experience	(2)
EPDM 694	Research	(5)
EPDM 698	Dissertation	(12)

**Religion (3 units)**

REL_ 5__	Selective	(3)
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**Total didactic units (93 units)**

**Research/Dissertation (19 units)**

TOTAL UNITS 112

\*required

**Forums**

Doctoral students are required to attend a minimum of twenty School of Public Health Department of Epidemiology and Biostatistics forums and/or Center for Health Research forums during their program. Attendance at these forums will be in addition to attendance at public health seminars.

## EPIDEMIOLOGY—CERTIFICATES

### BASIC EPIDEMIOLOGY

There is a growing need to be able to read and evaluate scientific medical literature; understand basic study designs, problems, and biases associated with different designs; and do simple descriptive and analytical statistical analysis. There is also a need for professionals in other disciplines to have at least a minimal knowledge of research design and analytical reasoning. The purpose of the certificate in basic epidemiology is to enable the holder to more effectively read scientific literature, design clinical research studies, and evaluate study designs and associated data.

#### Learner outcomes

Upon completion of this certificate program, participants will be able to:

- Critically read and interpret the medical literature.
- Conduct disease surveillance as practiced in state and county health departments.
- Design epidemiologic studies, including clinical trials.
- Create databases and perform and interpret simple statistical analysis.

#### PREREQUISITE

U.S. baccalaureate degree or its equivalent

At least two courses in biological science

College algebra (calculus preferred)

One behavioral science course (e.g., general psychology, sociology)

Computer literacy or STAT 439

### CERTIFICATE REQUIREMENTS

EPDM 509	Principles of Epidemiology I	(3)
EPDM 510	Principles of Epidemiology II	(3)
EPDM 515	Clinical Trials	(3)
REL_ ___	Religion	(3)
STAT 521	Biostatistics I	(4)
STAT 548	Analytical Applications of SAS	(2)

**One descriptive epidemiology course (choose from those listed below) (3)**

EPDM 534	Epidemiology of Maternal-Child Health	(3)
EPDM 544	Epidemiology of Infectious Disease	(3)
EPDM 565	Epidemiology of Cancer	(3)
EPDM 566	Epidemiology of Cardiovascular Disease	(3)
EPDM 567	Epidemiology of Aging	(3)
EPDM 588	Environmental and Occupational Epidemiology	(3)

TOTAL UNITS 21

#### Forums

Students are required to attend a minimum of five forums in the School of Public Health's Department of Epidemiology Program and/or Center for Health Research during their certificate program

**ADVANCED EPIDEMIOLOGY**

There is a growing need for public health professionals to participate in research by designing studies, evaluating their strengths and weaknesses, and analyzing and critically interpreting the results. A strong background in epidemiology and biostatistics greatly enhances skills in these areas. This certificate gives the holder the ability to independently design and conduct research studies, accurately evaluate which statistical procedures should be utilized, and effectively work with biostatisticians and programmers. The certificate gives practical training in how to conduct and report research findings through practical experience in these areas.

**Learner outcomes**

1. Conduct high-quality epidemiologic research—including appropriate design, statistical analysis of data, and interpretation and reporting of results.
2. Evaluate and conduct clinical trials.
3. Design, implement, and evaluate methods for quality control.
4. Obtain funds through well-written grant proposals.
5. Write scientific papers for submission to scientific journals.
6. Critically review the literature and identify strengths and weaknesses of design, analyses, and conclusions.

**PREREQUISITE**

Successful completion of a basic certificate program  
 GRE scores  
 Completed application for a graduate-degree program in the School of Public Health  
 Two letters of recommendation  
 Interview with departmental faculty member

**CERTIFICATE REQUIREMENTS**

EPDM 512	Multivariate Modeling in Epidemiology	(3)
EPDM 699	Applied Research	(2)
REL_ ___	Religion	(3)
STAT 515	Grant- and Contract-Proposal Writing	(3)
STAT 522	Biostatistics II	(4)
STAT 557	Research-Data Management	(3)
<b>One descriptive epidemiology course (choose from those listed below) (3)</b>		
EPDM 534	Epidemiology of Maternal-Child Health	(3)
EPDM 544	Epidemiology of Infectious Disease	(3)
EPDM 565	Epidemiology of Cancer	(3)
EPDM 566	Epidemiology of Cardiovascular Disease	(3)
EPDM 567	Epidemiology of Aging	(3)
EPDM 588	Environmental and Occupational Epidemiology	(3)
TOTAL UNITS		21

**Forums**

Participants are required to attend a minimum of five forums in the School of Public Health's Epidem-

iology Program and/or Center for Health Research during their advanced epidemiology certificate program.

**EPIDEMIOLOGICAL RESEARCH METHODS**

The purpose of this certificate is to enable the holder to more effectively apply for and design research studies and surveys and do basic descriptive analyses of collected data.

**Learner outcomes**

At the end of this certificate program, participants should be able to:

- Critically read and interpret the medical literature.
- Write applications for research and survey grants.
- Conduct disease surveillance as practiced in state and county health departments.
- Design research studies and surveys, including special designs for developing countries.
- Create questionnaires for use in different studies and different settings.
- Perform and interpret simple statistical analysis.

**PREREQUISITE**

Successful completion of a basic certificate program  
 Completed application for a graduate-degree program in the School of Public Health  
 GRE scores  
 Two recommendation letters  
 Interview with departmental faculty member

**CERTIFICATE REQUIREMENTS**

EPDM 509	Principles of Epidemiology I	(3)
EPDM 568	Primary Health Care Research Methods	(3)
STAT 509	General Statistics	(3)
STAT 515	Grant-and Contract-Proposal Writing	(3)
STAT 564	Survey and Advanced Research Methods	(3)
REL_ ___	Religion (relational, ethical, foundational)	(3)
<b>Choice of descriptive epidemiology (3)</b>		
EPDM 534	Epidemiology of Maternal-Child Health	(3)
EPDM 544	Epidemiology of Infectious Disease	(3)
EPDM 565	Epidemiology of Cancer	(3)
EPDM 566	Epidemiology of Cardiovascular Disease	(3)
EPDM 567	Epidemiology of Aging	(3)
EPDM 588	Environmental and Occupational Epidemiology	(3)

**Forums**

Participants are required to attend a minimum of five forums in the School of Public Health's Epidemiology Program and/or Center for Health Research during their certificate program

## Family Counseling—ST (PB certificate)

MARY E. MOLINE, Program Coordinator

### FACULTY

See Marital and Family MFAM program.

The Family Counseling Certificate Program offered by the School of Science and Technology through the Marriage and Family Therapy Program is designed for individuals who find a significant part of their work directed toward dealing with the relationship problems of individuals, families, and children. It is for those professionals who would like to gain family counseling skills but who do not desire to complete another degree or earn a clinical license.

The program will help participants acquire theoretical and systemic knowledge about relationships, families, and children; as well as develop practical skills applicable both to their professional and personal lives. It is designed for people who have a wide range of experiences, backgrounds, and goals. Physicians, ministers, nurses, teachers, chaplains, EAP counselors, social workers, school counselors, childcare workers, drug counselors, lawyers, and others in related professions can enhance their effectiveness through this program. Paid paraprofessionals—such as group-home workers, and volunteers for counseling organizations—can also benefit from a knowledge of family counseling techniques. People involved in the business world—such as supervisors, managers, and personnel department employees—can also benefit from the improvement of interpersonal and family skills offered through the program.

The Family Counseling Program is offered on campus, and off campus in Canada.

### Admission

Applicants to the certificate program must meet the School of Science and Technology admission requirements and give evidence of completion of a B.A. or B.S. degree with a 3.0 G.P.A. or equivalent. In addition, they must provide evidence of emotional stability, academic ability, and maturity.

### Course requirements (25 units)

To earn the certificate, participants must successfully complete 25 quarter units. This includes 19 core units and 6 units of electives. It is possible to complete the certificate in three academic quarters. No clinical experience is required, but students may use their electives to become exposed to clinical modalities.

### REQUIRED COURSES (19 units)

MFAM 515	Crisis-Intervention Counseling	(3)
MFAM 535	Case Presentation and Professional Studies	(4)
MFAM 551	Family Therapy: Theory and Practice	(3)
MFAM 553	Family Systems Theory	(3)
MFAM 564	Family Therapy II: Theory and Practice	(3)

RELR 564 Religion, Marriage, and Family (3)  
Electives (6 units required as approved by adviser)

## Family Studies—ST (PB certificate in family-life education) (M.A., Ph.D. in family studies)

CURTIS FOX, Coordinator of Family Studies Program

### FACULTY

See Marital and Family MFAM program.

The Department of Counseling and Family Sciences in the School of Science and Technology at Loma Linda University offers M.A. and Ph.D. degree programs in family studies and the certificate in family-life education. The certificate in family-life education is offered both on campus at the University and off campus in Canada.

The Family Life Education Program certificate is designed for those who wish to complete the basic requirements for certification as a family-life educator. Students may apply for certification from the Department of Counseling and Family Sciences and/or for Certification from the National Council on Family Relations (NCFR). Family therapists, teachers, ministers of religion, school counselors, social service workers, health workers, and others have found this certificate to be useful for their career development.

The M.A. degree program in family studies is designed for individuals with academic or applied interests. It prepares students for doctoral studies in the family sciences, including family studies and family therapy. At the applied level, the program prepares students to develop, implement, and evaluate family life programs for school, community, and church settings. Students are prepared for employment in various settings such as community family agencies, Headstart, cooperative extensions, research, family life education, human development fields, community service, social service fields, mental health, and volunteer services.

The Ph.D. degree in family studies provides a systems approach to observing, understanding, and analyzing close relationships and families within diverse sociohistorical, political, cultural, and economic contexts. This is a nonclinical degree and includes a required internship. It is based on a scientist/professional model and will prepare students to be academicians; researchers in the field of family science; administrators of family-service agencies, child-care agencies, cooperative extensions, public-policy organizations, private practitioners, etc.

The Ph.D. degree program is designed to equip students with three major skills:

1. The acquisition, impartation, and integration of substantive and theoretical areas of human and family development in their social context and over their life course;
2. The use of statistics and methodologies to conduct empirical research on individuals and families; and

- The use of strategies to build individual and family competence informed by family science scholarship.

The M.A. and Ph.D. degrees in family studies, as well as the family-life education certificate, meet the requirements for certified family-life educator (CFLE) by NCFR. In fact, the certificate program, the M.A. degree, and courses in the Ph.D. degree program are approved by the NCFR and allow students who complete any or all of these programs to use a shortened application process and pay lower fees for their application for certification as a family-life educator by the NCFR. Family-life education certification increases professional standing in several important areas of concern to families.

## FAMILY-LIFE EDUCATION—PB CERTIFICATE

### Certificate requirements

The following requirements must be completed for the certificate program:

- An undergraduate degree or its equivalent for admission.
- A minimum of 26 units of graduate credit in family studies, as outlined below. Students may transfer up to 9 units of graduate credit earned at another approved institution.

### Specialization requirements (26 units)

Completion of the following courses meets the requirements for the certificate in family-life education offered by the School of Science and Technology and the National Council on Family Relations (NCFR). In addition to the Loma Linda University requirements for certification, students must complete the equivalent of at least two years of practical work in family-life education in order to qualify for full certification by the NCFR.

FMST 514	Cross-cultural Counseling and Family Values	(2)
FMST 515	Professional Issues in Family-Life Education	(3)
FMST 524	Family Resource Management	(2)
FMST 526	Marriage and the Family	(3)
FMST 528	Parenting	(2)
FMST 529	Family Life Education	(2)
MFAM 547	Social Ecology of Individual and Family Development	(3)
MFAM 553	Family Systems Theory	(3)
MFAM 674	Human Sexual Behavior	(3)
RELR 564	Religion, Marriage, and the Family	(3)

## DISTANCE EDUCATION OPTION

This postbaccalaureate certificate in family-life education is also offered in Canada, through the University's off-campus program.

## FAMILY STUDIES—M.A.

### Admission

Applicants must meet the School of Science and Technology admission requirements outlined in this CATALOG and give evidence of academic ability, emotional stability, and maturity.

In addition to completing the required application forms, providing character and academic references, and completing the critical-essay examination, the prospective student will also arrange for a personal interview with two of the program faculty.

Although no particular undergraduate major is specified as preparation for the family-studies program, an introductory statistics course is required for the student seeking the Master of Arts degree.

### Degree requirements

Following are the requirements for the Master of Arts degree in family studies:

- A minimum of 54 units of graduate credit in family studies, as outlined below.
- Satisfactory performance on a written comprehensive examination.
- Completion of a thesis or project near the end of the program.

### Core course requirements (11 units)

MFAM 515	Crisis-Intervention Counseling	(3)
MFAM 545	Gender Perspectives	(2)
MFAM 568	Groups: Process and Practice	(3)
MFAM 638	Family Therapy and Chemical Abuse	(3)

### Specialization requirements (26 units)

FMST 514	Cross-cultural Counseling and Family Values	(2)
FMST 515	Professional Issues in Family-Life Education	(3)
FMST 524	Family Resource Management	(2)
FMST 526	Marriage and the Family	(3)
FMST 528	Parenting	(2)
FMST 529	Family-Life Education	(2)
MFAM 547	Social Ecology of Individual and Family Development	(3)
MFAM 553	Family Systems Theory	(3)
MFAM 674	Human Sexual Behavior	(3)
RELR 564	Religion, Marriage, and the Family	(3)

### Research requirements (9 units)

FMST 505	Social Research Methods I	(3)
FMST 506	Social Research Methods II	(3)
FMST 697	Project	(3)
or		
FMST 698	Thesis	(3)

### Practicum requirements (2 units)

FMST 695	Internship in Family Studies	(1-4)
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### Electives

(6 units as approved by adviser)

**FAMILY STUDIES—Ph.D.****Admissions**

The Ph.D. degree in family studies is an advanced study over and above a standard master's degree curriculum in the field of family studies or related programs. Acceptance into this program is based on an integrated evaluation of the following criteria:

- A master's degree in a family studies, family therapy, or related field.
- Completion of core courses foundational to family science, if student enters program from an unrelated field.
- A minimum G.P.A. of 3.3
- Minimum total score of 1000 on the verbal and quantitative sections of the GRE and a score of 4.0 on the analytical writing section, taken within the past five years.
- An undergraduate course in statistics and personality psychology.
- Completed application forms
- Oral interviews with department.
- Three letters of references (academic and/or professional).
- Resume (preferred, but not required).
- Official transcripts for all colleges and universities attended.

**Degree requirements**

A minimum of 109 units of credit will be required to complete the Ph.D. degree in family studies. Total units represent a substantial amount of course work that will give focus to the student's interest in one or more substantive areas of family science. A dissertation is required of each student in the Ph.D. degree program.

**Internship**

Students are required to complete a 300-hour internship. An internship may include the following: family-life education in a community agency, research, or teaching experience at the tertiary level of education. The student will choose an internship based on his or her interest and future career goals.

A teaching internship will involve engagement in teaching opportunities so as to develop experience and skill in teaching. This may involve a teaching assistantship in the student's home department or at another school at the undergraduate or graduate level. Students will be expected to assist in or teach independently at least three courses in any area of family life. Opportunities outside of the student's home department may be pursued, especially if the student has an interest in a teaching career.

A research internship will involve a minimum of nine months of active research effort leading to the submission of papers for publication in relevant professional journals.

**Foundational prerequisite courses**

Families in crisis  
 Family systems theory  
 Human sexual behavior  
 Human and family development  
 Gender studies

**Family diversity**

Students are required to have adequate preparation in the areas listed above. These contents are to be satisfied by graduate courses in relevant areas taken at an accredited institution. If these courses were completed at another university, they will be evaluated for transfer into prerequisite requirements. Students may challenge courses upon approval of faculty.

**REQUIRED COURSES****Core courses (19 units)**

MFTH 604	Advanced Qualitative Methods	(4)
MFTH 605	Advanced Quantitative Methods	(4)
MFTH 519	Teaching Techniques	(2)
RELR, RELF, RELE	Religion (3 courses)	(9)

**Family studies courses (20 units)**

FMST 515	Professional Issues in Family-Life Education	(3)
FMST 518	Advanced Theories in Child Development	(3)
FMST 524	Family Resource Management	(2)
FMST 526	Marriage and Family	(3)
FMST 528	Parenting	(2)
FMST 529	Family-Life Education	(2)
MFTH 505	Advanced Family Studies	(4)

**Research sequence (41 units)**

MFTH 601	Statistics I	(4)
MFTH 602	Statistics II	(4)
MFTH 603	Statistics III	(4)
MFTH 608	Analysis and Presentation of Research	(3)
MFTH 694	Dissertation Seminar	(6)
MFTH 697	Dissertation Research	(17)
MFTH 698	Dissertation	(3)

**Elective courses (15 units)**

Specialty electives	(12)
Student-option elective(s)	(3)

**Internship (3 units)**

FMST 618	Family-Studies Internship (300 hours)	(3)
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**FITNESS INSTRUCTOR—PH CERTIFICATE**

Preparation for certification granted by the American College of Sports Medicine (ACSM)—National Center Certification Department, P. O. Box 1440, Indianapolis, IN 46206-1440—can be obtained at this University.

**Appropriate course work includes:**

HPRO 573	Exercise Physiology I	(3)
HPRO 578	Exercise Physiology II	(3)
NUTR 578	Exercise Nutrition	(2-3)

## Forensic Science—ST (PB certificate)

BEVERLY J. BUCKLES, Program Coordinator

### FACULTY

See Social Work Program.

The 23-unit curriculum of the Forensic Science Program provides a unique opportunity for individuals enrolled in the M.S. or Ph.D. degree programs to combine their chosen degree path with the study of criminal justice and forensic science, thus offering them expanded employment options. This certificate program is jointly administered by the Department of Social Work and Social Ecology in the School of Science and Technology and the Department of Basic Sciences in the School of Medicine.

### Admission requirements

Admission to the program is governed by the policies and procedures established by the School of Science and Technology. To be accepted into the program, applicants are required to have completed a graduate degree in the physical or biological sciences or to be concurrently enrolled in a graduate science program in biochemistry, microbiology, or biology at Loma Linda University. Applicants who are currently enrolled in another Loma Linda University program should consult with their program adviser when applying.

### PROGRAM OF STUDY

#### Criminal justice and legal studies (10 units)

CRMJ 515	Crime and Society	(3)
CRMJ 517	Criminal Procedure and Rules of Evidence	(3)
CRMJ 518	Legal Discourse	(2)
CRMJ 519	Moot Court	(2)

#### Religion and ethics (3 units)

RELE 525	Ethics for Scientists	(3)
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#### Forensic science (10 units)

CRMJ 640	Forensic Evidence	(4)
CRMJ 588	Topics in Forensic Science	(2, 2, 2)

### Internship

CRMJ 757A Professional Practicum and Seminar [3]  
(Students complete 3 professional practicum units. The practicum and seminar requires 160 hours of practicum and 20 hours of seminar. Professional practicum and seminar units are not calculated into degree units. Students pay program fees for professional practicum units instead of tuition.)

TOTAL UNITS 23

## Geology—ST (B.S., M.S.)

### GEOLOGY—B.S.

ROBERT A. CUSHMAN, Jr., Program  
Coordinator

### FACULTY

Leonard R. Brand  
Douglas R. Britton  
H. Paul Buchheim  
Benjamin L. Clausen  
Robert A. Cushman  
Raul Esperante  
Robert Ford  
James L. Gibson  
H. Thomas Goodwin  
Leroy Leggit  
Kevin E. Nick

### GEOLOGY—M.S.

H. PAUL BUCHHEIM, Jr., Program  
Coordinator

### FACULTY

Leonard R. Brand  
Douglas R. Britton  
H. Paul Buchheim  
Ronald L. Carter  
Ben Clausen  
Robert A. Cushman  
Stephen G. Dunbar  
Raul Esperante  
Robert Ford  
H. Thomas Goodwin  
Kevin E. Nick

The Department of Earth and Biological Sciences in the School of Science and Technology offers a program leading to the Bachelor of Science degree in geology. This program provides the student with a field-oriented education, emphasizing the application of geological principles in interpreting data. Sedimentary geology, paleontology, and environmental geology are areas of emphasis within the department.

### Objectives

The Geology Program focuses on field-oriented geology, particularly sedimentology, stratigraphy, and paleontology. The integrated core course sequence of the geology degree provides students with a general background in geology as preparation for advanced courses in stratigraphy, sedimentology, paleontology, and environmental geology.

Fieldwork is emphasized because it provides the student with unique opportunities to examine geological phenomena beyond the classroom and laboratory. Throughout the geology curriculum, students are taught to apply the scientific method to resolve geologic problems. Students are encouraged to consider multiple working hypotheses during this process.

**Intercollegiate program**

A student pursuing a Bachelor of Science degree in the Geology Program will take the first two years of general education and science course work at any accredited community college, college, or university; and the last two years of geology curriculum at Loma Linda University. Admission requirements for the B.S. degree in the Geology Program are a 2.5 G.P.A. during the first two years of course work, and letters of recommendation from two faculty at the institutions previously attended. The degree requirements below include a list of the courses that should be taken during the first two years as preparation for the geology curriculum at Loma Linda University.

**Employment**

A baccalaureate degree in geology prepares a student to enter graduate programs in geology or paleontology, or for employment in environmental and energy-related industries; or (with the necessary education courses) for teaching in secondary schools. Most employment opportunities in industry, research, or college teaching require a graduate degree.

**Preparation for teaching**

A student preparing to teach at the elementary or secondary level will need to complete the requirements for a teaching credential, in addition to the geology major. Consult the Geology Program undergraduate coordinator for further information. General elective units can be used for education courses.

**Graduate programs**

The Department of Earth and Biological Sciences offers a Master of Science degree in geology. Emphases available in this program are sedimentary geology, paleontology, and environmental geology. A Master of Science degree in biology and a Doctor of Philosophy degree in earth science are also available.

**PREREQUISITE**

Prerequisite cognates include one-year courses in:

- Biology (zoology, botany, ecology, nonhuman biology courses, etc.)
- Chemistry
- Mathematics through calculus
- Physics

**GENERAL STUDIES REQUIREMENTS**

**SPIRITUAL HERITAGE (16)**

A minimum of 4 units for each year the student is enrolled in a Christian college.

**CULTURAL HERITAGE (12-16)**

Must include one course dealing with human diversity among peers (e.g., cultural anthropology).

Other courses to be selected from:

- Civilization/History
- Fine arts
- Literature
- Modern language
- Performing/visual arts (2 quarter units maximum) or
- Philosophy

**NATURAL SCIENCES (16)**

Met by the geology degree requirements.

**SOCIAL SCIENCES (12-16)**

Two or more of the following required:  
 Anthropology, economics, geography, political science, psychology, and sociology.

**COMMUNICATION (9-13)**

Must include a full sequence in freshman English that meets the baccalaureate degree requirements at an accredited college or university. Also may include courses in computer-information systems, critical thinking, and public speaking.

**HEALTH AND WELLNESS (2-6)**

Must include two physical activities totaling at least 1 unit, and one course in personal health or nutrition.

**ELECTIVES**

Electives from the foregoing subjects may be chosen to complete the 68 units.

**GEOLOGY—B.S.**

**FIRST- AND SECOND-YEAR  
 PREGEOLOGY REQUIREMENTS  
 (to be taken at any college) (83-99 quarter units)**

**Required cognate courses**

- General chemistry (12)
- Physics (12)
- Math, including calculus (8-12)
- \*Genetics and \*Ecology (4)
- \*one year of general biology may substitute

**Optional courses for geology major**

- \*\*Physical geology (4)
- \*\*Geology elective (4)
- \*\*Can be taken at Loma Linda University

**General studies**

- Freshman English (9-12)
- Religion (8)
- History or language (8)
- Personal health or nutrition (2)
- Physical education activities (1)
- Other general studies (5-16)

**THIRD- AND FOURTH-YEAR COURSES  
 taken at Loma Linda University  
 (92-100 quarter units)**

- Geology major (66 units, including electives)**
- GEOL 204 Physical Geology (if not already taken) (4)

GEOL 316	Mineralogy	(4)
GEOL 317	Optical Mineralogy and Petrology	(4)
GEOL 424	Structural Geology	(4)
GEOL 431	Geochemistry	(4)
GEOL 441	Sedimentology	(4)
GEOL 442	Stratigraphy	(4)
GEOL 443	Historical Geology	(4)
GEOL 454	Sedimentary Petrology	(4)
GEOL 456	Field Methods of Geologic Mapping	(4)
GEOL 475	Philosophy of Science and Origins	(4)
GEOL 485	Seminar (1/2 unit per quarter, 4 quarters; and 1 unit per quarter, 2 quarters)	(4)
GEOL 486	Research and Experimental Design	(2)

**Geology electives (4)**

Must include one paleontology course

**Cognates (12)**

ESSC 401	Earth Systems Science and Global Change I	(4)
ESSC 402	Earth Systems Science and Global Change II	(4)
STAT 414	Introduction to Biostatistics	(3)
STAT 415	Computer Applications in Biostatistics	(1)

**General electives (14-18)****General studies (12-16)****Religion (8)****Other general studies (4-8)**

TOTAL UNITS 192

Students should consult with their adviser regarding courses in other programs that are appropriate to the B.S. degree in geology.

**GEOLOGY—M.S.**

The Department of Earth and Biological Sciences in the School of Science and Technology offers the Geology Program leading to the Master of Science degree. Research and course work emphasizes field and laboratory studies in sedimentology, paleontology, paleoenvironmental reconstruction, paleoecology, paleobotany, and taphonomy. Areas of curriculum strengths include sedimentary geology, paleontology, and environmental geology. Research in paleontology may also be pursued through the M.S. and Ph.D. degree programs in biology, and the Ph.D. degree program in earth science.

**Objectives**

The Geology Program aims to:

1. Instill in students the values of honesty, scientific integrity, careful research, and independent critical thinking.
2. Provide the tools and intellectual environment in which geologists can attain their highest potential in scholarship and research.
3. Challenge graduate students to consider the relationships among science, faith, and societal responsibility.

**Admission**

Applicants must meet the general School of Science and Technology admission requirements. Acceptable undergraduate preparation is a bachelor's degree and must include: physical geology, petrology, structural geology, and statistics. (Students with an undergraduate degree other than in geology may remove geology deficiencies while in residence in the graduate program.) Prerequisite cognates include one-year courses in biology (zoology, botany, ecology, nonhuman biology courses, etc.), chemistry, mathematics through calculus, and physics.

**Curriculum**

A minimum of 48 quarter units, including 28 at or above the 500 level, constitutes the curriculum for the Master of Science degree in geology. In addition to the general School of Science and Technology requirements, the following courses are required:

**During the graduate or undergraduate program**

GEOL 431	Geochemistry	(4)
GEOL 616	Research and Experimental Design	(2)
GEOL 617	Proposal Writing and Grantsmanship	(2)

**During the graduate program at LLU**

GEOL 456	Field Methods of Geologic Mapping	(4)
GEOL 547	Advanced Historical Geology	(4)
GEOL 556	Paleoenvironments	(4)
GEOL 558	Philosophy of Science and Origins	(4)
GEOL 566	Advanced Sedimentology	(4)
GEOL 567	Stratigraphy and Basin Analysis	(4)
GEOL 607	Seminar in Geology	(9)

**Research (4 units)**

**Thesis (2 units)**

**Religion (3 units)**

**Two of the following**

GEOL 524	Paleobotany	(4)
or		
GEOL 525	Paleopalynology	(4)
GEOL 534	Invertebrate Paleontology	(4)
GEOL 544	Vertebrate Paleontology	(4)
GEOL 588	Topics in Geology: Evolutionary Biology and Paleontology	(4)

The remainder of the student's program will be planned in consultation with the major professor and graduate advisory committee. In addition to course work, students are expected to attend all program seminars, fulfill research and thesis expectations, and successfully pass a final oral examination.

**Program objectives**

The Geology Program focuses on field-oriented geology, particularly sedimentology, stratigraphy, and paleontology. The integrated core-course sequence provides students with the tools to conduct research in the subdisciplines of sedimentology, paleontology, or environmental geology. Fieldwork is emphasized because it provides a first-hand experience with geological phenomena that cannot be satisfactorily grasped or understood solely from classroom or laboratory study. Throughout the geology curriculum, students are encouraged to develop an open-minded and investigative approach in the application of the scientific method to the resolution of geologic problems. Consideration of multiple working hypotheses is encouraged.

**Emphases**

The primary research and curriculum strength of the graduate Geology Program is paleontology and sedimentary geology. Environmental geology is available as a curriculum emphasis. In addition to the basic requirements listed above, students wishing to concentrate in one of these three emphases should take the following courses as electives:

**PALEONTOLOGY**

BIOL 545	Genetics and Speciation	(4)
GEOL 524	Paleobotany	(4)
GEOL 525	Paleopalynology	(4)
GEOL 534	Invertebrate Paleontology	(4)
GEOL 544	Vertebrate Paleontology	(4)

**Graduate paleontology and biology courses related to area of specialty also recommended.**

**SEDIMENTARY GEOLOGY**

GEOL 454	Sedimentary Petrology	(4)
GEOL 554	Limnogeology	(4)
GEOL 556	Paleoenvironments	(4)

**ENVIRONMENTAL GEOLOGY**

GEOL 437	Geophysics	(4)
GEOL 556	Paleoenvironments	(4)
GEOL 574	Environmental Geology	(3)
GEOL 575	Hydrogeology	(4)
ENVH 567	Hazardous-Materials and Solid-Waste Management (recommended)	(3)
ENVH 568	Water-Quality Assurance	(3)

**Students should consult with their academic adviser regarding additional courses available as electives, if approved by advisory committee.**

**ROSARIO BEACH SUMMER COURSES**

In cooperation with the Walla Walla College Marine Station in Anacortes, Washington, facility are available for marine courses and research by graduate students of this department. Some of the available courses are listed below.

BIOL 459	Marine Invertebrates	(5)
BIOL 460	Marine Ecology	(5)
BIOL 462	Ichthyology	(5)
BIOL 463	Marine Botany	(5)
BIOL 504	Biology of Marine Invertebrates	(4)

## Gerontology—ST (M.S.)

EDWARD COCHRANE, Program Coordinator

The aim of the Master of Science degree in gerontology is to prepare students to think critically, analytically, and creatively about the challenges of the aging population and older citizens in the contemporary world. The program is designed to meet the diverse needs of professionals in gerontology and will accomplish a number of objectives:

- To prepare students for positions in teaching, research, and aging administration at the local, state, and federal public levels; as well as in the private sector.
- To prepare students for careers in health and human services for older adults.
- To provide students with a thorough knowledge of social science theory and the application of theory and research to current problems in gerontology.
- To prepare students to conduct social research on aging and the effect of policies and programs on the lives of older adults.
- To provide students with a thorough knowledge of current issues in gerontology and the importance of the relationship of gerontology to other disciplines and professions—such as social work, psychology, medicine, dentistry, nursing, and public health.

**Program description**

All students must complete a two-year program consisting of 48 quarter units of course work. The 24 units of foundation content required for all students are

followed by one of the two concentrations: administration or clinical services. Students opting for the administration concentration will study the economic dimensions of social policy, organizational theory, public administration, program planning, and policy analysis as they relate to geriatric population and services. The clinical services concentration provides students with both global and domestic perspectives on violence, mental health, and drug-and alcohol-abuse issues. Both concentrations emphasize a thoughtful reflection about public philosophy and ethical issues in gerontology that will provide students with a deeper understanding of the logic influencing policy, administration, and practice issues affecting the field.

### Prerequisite preparation

This master's degree builds on a broad liberal arts (general education) foundation.

The required prerequisite course work provides students with foundation concepts and/or skills in each of the following:

Interviewing and counseling	(3)
Human growth and development	(3)
Cross-cultural issues	(3)
Introductory statistics	(3)

Unit values represent the quarter system of measurement.

### Admissions requirements

This program follows the admission requirements of the School of Science and Technology, including:

1. Applicants must demonstrate satisfactory performance on the Graduate Record Examination (GRE). For admission with regular status, satisfactory performance is defined as a minimum combined score for verbal and quantitative of 1000, and an analytical writing score of 4.0 for admission with regular status. Students submitting lower scores may be considered for provisional status.
2. Applicants must demonstrate satisfactory adherence with the minimum academic and professional compatibility criteria established by the program, which includes:
  - a. A cumulative grade-point average of 3.0 or above (on a 4.0 scale) (special consideration may be given to applicants with grade-point averages as low as 2.75 if the last part of their college work shows significant improvement).
  - b. Evidence of professional compatibility, personal qualifications, and motivation to complete a graduate program by obtaining a passing score on the admissions interview with the program's admissions committee. Evaluation criteria for the interview includes—
    - ~ verbal communication skills,
    - ~ critical-thinking ability,
    - ~ values congruent with the profession of gerontology,
    - ~ appreciation of human diversity,
    - ~ evidence of reflective learning, and
    - ~ comportment.
3. Submission of a completed application, including a personal statement, application fee, all college

and/or university transcripts, and three letters of recommendation (one from an academic source and one from a work supervisor preferred).

### CURRICULUM

The 48-unit curriculum of the Master of Science degree in gerontology provides the mix of academic, experiential, and research activities essential for M.S. degree students. Students must maintain a grade-point average of 3.0 (or a letter grade of B on a 4.0 scale); and meet the knowledge, skill, and professional performance competencies outlined by the program. Students must also maintain a B- (2.7) or better in all required (core) courses, and a minimum of a C (2.0) in all selective courses. Courses with grades falling below the standards set for required and selective courses must be repeated. Students are financially responsible for the cost of repeating courses when grades do not meet these minimum standards.

### General overview

The two-year, 48 unit program begins with core course work required for all students. Courses during the first year of study are divided into four professional areas: social science theory; practice; religion, philosophy, and ethics; and social research methods. At the end of the first year, the student selects a concentration area (administration or clinical services), requiring 13 units of concentration specific course work. Regardless of the concentration students choose, they are given the option of either a thesis or a professional practicum experience. Students who choose the thesis option complete 6 related units of research and 5 units of selectives. Students choosing the professional practicum option complete 9 units of professional practicum (requiring 540 hours of integrated practicum and seminar) and 11 eleven units of selectives.

### PROGRAM OF STUDY

<b>CORE COURSES</b>	<b>(24 units)</b>
<b>Social science theory</b>	<b>(8 units)</b>
GERO 617 Bio-psycho-social-spiritual Theories of Aging	(4)
SPOL 615 Economic Theory and Social Policy	(4)
<b>Practice</b>	<b>(6 units)</b>
GERO 515 Diversity and Aging	(3)
SOWK 682 Legal and Ethical Aspects in Health and Mental Health Services	(3)
<b>Religion, philosophy, and ethics</b>	<b>(4 units)</b>
RELE 524 Christian Bioethics	(4)
or	
RELR 568 Care of the Dying and Bereaved	(4)
<b>Social research methods</b>	<b>(6 units)</b>
SOWK 547 Research Methods I	(3)
SOWK 549 Research Methods II	(3)

**CONCENTRATIONS****Policy/Administrative option (13 units)**  
(required of all students) (6 units)

SOWK 673	Program Planning and Evaluation	(3)
SPOL 623	Older Adults Policies and Services	(3)

**Concentration selectives (select 7 units)**

SOWK 672	Theories of Organizations and Systems	(3)
SOWK 676A	Human Resources Planning and Development	(3)
SOWK 676B	Human Resources Planning and Development Seminar	(3)
SOWK 681	Health and Mental Health Policies and Services	(2)
SOWK 683	Advanced Policy Practice	(3)
SOWK 684	Advanced Policy Projects	(2)
PUAD 673	Public Administration Management	(3)
HPRO 584	Aging and Health	(3)

**Clinical services option (13 units)**  
(required of all students) (6 units)

SOWK 654A	Therapeutic Interventions with Older Adults	(3)
SOWK 654B	Therapeutic Interventions with Older Adults	(3)

**Concentration selectives (select 7 units)**

SOWK 648	Dual Diagnosis	(2)
SOWK 659	Interventions with the Chronically Mentally Ill	(2)
SOWK 681	Health and Mental Health Policies and Services	(2)
SOWK 684	Advanced Policy Projects	(2)
HPRO 584	Aging and Health	(3)
HPRO 548	Community and Domestic Violence	(2)
MFAM 638	Family Therapy and Chemical Abuse	(2)
NUTR 536	Nutrition and Aging	(2)
PSYC 685	Drug Addiction and Therapy	(2)
PSYC 686	Child, Partner, and Elder Abuse	(2)

**Thesis option (6 units)**

GERO 685	Thesis Seminar	(2)
GERO 697	Research	(4)
GERO 698	Thesis	(2)

**Internship option**

GERO 757A, B, C	Professional Practicum and S Seminar	(3, 3, 3)
	(Professional practicum and seminar units not calculated into degree units. Students pay program fees for professional practicum units instead of tuition.)	

**General selectives \***

Thesis option	(select 5 units)
Internship option	(select 11 units)
GERO 665	Gerontology and GIS (3)
SPOL 614	Social Science Concepts and Theories (4)

PSYC 501	Advanced Statistics	(4)
STAT 448	Analytical Applications of SAS	(3)
STAT 449	Analytical Applications of SPSS	(3)

\*Other courses may be approved for elective credits in consultation with the faculty adviser.

TOTAL UNITS	48
PRACTICUM AND SEMINAR HOURS	480 + 60

**Global Health—PH (M.P.H., Dr.P.H.)**

BARBARA A. ANDERSON, Program Coordinator

**FACULTY**

Barbara A. Anderson  
Eugene N. Anderson  
Juan Carlos Belliard  
Gilbert M. Burnham  
T. Allan Darnell  
David T. Dyjack  
P. William Dysinger  
Harvey A. Elder  
Lars Gustavsson  
Kenneth W. Hart  
Richard H. Hart  
Mark R. Janz  
Jayakaran S. Job  
Susanne B. Montgomery  
Mekebeb Negerie  
Martin Y. Polycarpe  
Rosanne M. Rushing  
Bruce E. Smith  
Larry L. Thomas  
Dennis D. Tidwell  
Lila M. Tidwell  
James M. Weidman  
Jerald W. Whitehouse

The Global Health Program leads to the Master of Public Health (M.P.H.), the Doctor of Public Health (Dr.P.H.), and the certificate in humanitarian assistance (CHA). These programs prepare international public health specialists capable of addressing the complexities of global health and development issues. Global health graduates are a diverse group who provide service in government, nongovernmental organizations (NGOs), educational institutions, and church-based programs internationally and locally.

**Department goal**

The primary goal of the Global Health Program is to contribute to an enhanced quality of life for all people through sustainable health and development programming. The program will:

1. Prepare competent global health specialists.
2. Conduct applied research that addresses global health and development problems.
3. Provide faculty consultation in the design, implementation, and evaluation of international

and local programs targeting vulnerable populations.

### Learner outcomes

The competency-based curriculum is built upon themes of maintaining a sustainable environment, supporting cultures and families, and advocating for vulnerable populations. By the end of the program, graduates are expected to demonstrate competency in seven areas of responsibility:

1. Assessing capacity, systems, and resources.
2. Planning comprehensive, integrated systems.
3. Managing programs.
4. Evaluating community-based programs.
5. Promoting collaborations between sectors.
6. Advocating for social justice.
7. Contributing to operational research.

### Other resources

The program maintains the Global Health Resource Room with library resources, computers, listings of international agencies, and program reports. It also contains texts and journals on topics of international development. The resource room is available as a study area as well as a resource center.

## PROGRAMS

The Global Health Program includes:

Master of Public Health degree with 400-clock-hour field practicum (M.P.H.)

Master of Public Health degree with 100-clock-hour field practicum (M.P.H.)

Peace Corps Master's International Program (M.P.H./MIP)

Peace Corps Fellows/USA Program

Master of Public Health degree within preventive medicine residency (M.P.H.)

Doctor of Public Health degree (Dr.P.H.)

Students must maintain current passport and travel documents. Academic course work is conducted at the University and in the field, regardless of prior experience.

### Peace Corps Master's International Program with Master of Public Health

Loma Linda University is one of eighty-two universities currently participating in the Master's International Program. As one of eleven institutions in the country offering this prestigious program, in conjunction with the Master of Public Health degree, the School of Public Health is proud to collaborate with the United States Peace Corps in this academic partnership.

### Master of Public Health degree with a 400-clock-hour field practicum

This program is designed for students with limited or no prior field experience in international health. The practicum must be fulfilled in a resource-scarce environment or through working with a vulnerable population locally or internationally. The culminating activity report is integrated with the practicum. The

culminating activity includes a written comprehensive examination (prior to the field experience), field experience (upon completion of essential major course work), professional portfolio (upon completion of the field experience), and an exit interview with the department chair (at the conclusion of the program).

### Master of Public Health with a 100-clock-hour field practicum

This program is designed for students with prior relevant field experience in an underserved area or with vulnerable populations, as determined by the global health faculty. Return Peace Corps volunteers (RPCV) usually are placed in this option and are required to submit the culminating activity report as a critical analysis of their Peace Corps experience.

### Preventive medicine residency with Master of Public Health degree

The Department of Global Health offers opportunity for students in the Medical and Dental Leadership Program and preventive medicine residents to pursue the M.P.H. degree. This may include participation in service and research projects in developing countries.

#### COREQUISITE

(may be taken concurrently during the first two quarters of program, in addition to units required for the degree)

Microbiology

Anatomy and physiology

## DEGREE REQUIREMENTS

### Public health core courses (20 units)

ENVH 509	Principles of Environmental Health	(3)
EPDM 509	Principles of Epidemiology I	(3)
HADM 509	Principles of Administration in Public Health	(3)
HPRO 509	Principles of Health Behavior	(3)
REL_ 5__	Religion	(3)
PHCJ 605	Philosophy of Public Health	(1)
STAT 509	General Statistics	(4)

### Global health core courses (23 units)

EPDM 568	Epidemiologic Methods in Developing Countries	(3)
*GLBH 545	Integrated Community Development	(4)
GLBH 564	Primary Health Care Programs I	(3)
GLBH 566	Primary Health Care Programs II	(3)
GLBH 568	Primary Health Care Programs III	(3)
GLBH 605	Seminar in Global Health/Development	(1)
HPRO 536	Program Planning and Evaluation	(3)
NUTR 585	Topics in International Nutrition	(3)
STAT 515	Grant- and Contract-Proposal Writing	(3)

### Approved electives, to be chosen in consultation with the academic adviser (15 units)

GLBH 516	HIV/AIDS: Implications for Public Health	(3)
GLBH 517	Cultural Issues in Health Care	(3)

GLBH 519	Principles of Disaster Management	(3)
GLBH 550	Women in Development	(3)
GLBH 544	Epidemiology of Infectious Disease	(3)
GLBH 548	Violence Issues: Global Public Health Perspective	(3)
GLBH 514	Health Disparities among At-Risk Populations	(3)
ENVH 522	Principles of GIS	(3)
ENVH 524	GIS Technology and Methods	(3)
HPRO 523	Maternal and Child Health: Policy and Programs	(3)
HPRO 567	Reproductive Health	(3)
HPRO 553	Addiction Theory and Program Development	(3)

**Culminating activity/field practicum:**

(100, 400 clock hours or six-to-twelve-month NGO internship or twenty-seven-month MIP internship)

**Field practicum options**

GLBH 699	Applied Research in Global Health	(2, 4 units)
GLBH 796	Internship	(6-12 months)
or		
GLBH 797	Master's International Peace Corps (MIP) Residency	(27 months)
or		
GLBH 798	Field Practicum	(100, 400 clock hours)

TOTAL UNITS 61

**Special fee and course requirements**

The required field-based course, GLBH 545 Integrated Community Development (which involves international travel), has a separate laboratory tuition fee that must be paid at least two quarters prior to enrollment in the course (that is, by mid-January). In order to fulfill prerequisite requirements for this course, it is strongly recommended that students enroll for the M.P.H. degree program in the Autumn Quarter.

**GLOBAL HEALTH—DR.P.H.**

The Doctor of Public Health (Dr.P.H.) degree is designed to provide advanced knowledge, skills, and competencies needed to plan, manage, and evaluate health and development programs both in the developing and developed world.

Building on earlier graduate work, public health professionals develop a broad base of advanced knowledge, skills, and competencies needed to plan, manage, and evaluate health and development programs both in developing and developed countries. Program emphases enable students to experientially learn leadership and administrative skills, cross-cultural communication techniques, and appropriate operational and evaluative research methodologies in order to address the multifaceted problems affecting health and development among resource-scarce, underserved populations.

Applicants possessing a master's degree in public health (or a master's or doctoral degree in a related

field) and relevant field experience are eligible to apply. Graduates of this program typically are employed in national and global organizations (government, private and voluntary), and in academic settings.

Following are the eligibility and degree requirements and additional information for the Dr.P.H. in global health.

**Learner outcomes**

Upon completion of this degree, the graduate should be able to:

1. Determine relevant demographic, sociocultural, economic, environmental, and other epidemiologic factors that relate to the health status of population groups.
2. Design, implement, and evaluate sustainable health and development programs in the context of local community, national, and global public health principles, practices, resources, and policies.
3. Develop, refine, and use professional leadership and administrative skills, communication techniques, and operational/evaluative methodologies in planning programs, assessing interventions, and conducting applied research in public health academic and practice settings.
4. Function independently as a qualified global public health academician, researcher, and/or practitioner.

**PREREQUISITE**

- Human anatomy and physiology (one course)
- Microbiology (one course)
- Master's or doctoral degree in related field
- Two years experience in professional public health practice

**COREQUISITE**

(advanced standing from previous degrees will be considered)

ENVH 509	Principles of Environmental Health	(3)
EPDM 509	Principles of Epidemiology I	(3)
EPDM 568	Epidemiologic Research Methods in Developing Countries	(3)
HADM 509	Principles of Administration in Public Health	(3)
HPRO 509	Principles of Health Behavior	(3)
GLBH 545	Integrated Community Development	(4)
GLBH 564	Primary Health Care Programs I	(3)
GLBH 566	Primary Health Care Programs II	(3)
GLBH 568	Primary Health Care Programs III	(3)
NUTR 585	Topics in Global Nutrition	(2)
PHCJ 605	Philosophy of Public Health	(1)
STAT 515	Grant- and Contract-Proposal Writing	(3)

**DEGREE REQUIREMENTS**

<b>Major field</b>		<b>(19 units)</b>
	<b>Required</b>	<b>(12 units)</b>
HPRO 589	Qualitative Research Methods	(3)
HPRO 590	Qualitative Research Analysis	(1)

GLBH 606	Advanced Seminar in International Health	(2, 2)
GLBH 695	Practicum in Field-Based Survey and Evaluation	(3)

**Recommended electives (9 units)**

GLBH 516	HIV/AIDS: Implications for Public Health	(3)
GLBH 517	Cultural Issues in Health Care	(3)
HPRO 550	Women in Development	(3)
GLBH 544	Epidemiology of Infectious Disease	(3)
GLBH 547	Refugee and Migrant Health	(3)
GLBH 514	Health Disparities among At-Risk Populations	(3)
GLBH 584	Special Topics in International Health	(1-3)
GLBH 696	Directed Study/Special Project	(1-6)

**Leadership (16 units)**

**Required (10 units)**

HADM 510	Public Health Policy	(3)
HADM 514	Health Care Economics	(3)
HPRO 588	Health Behavior Theory and Research	(4)

**Electives (6 units)**

Additional approved courses in the areas of communication and administration.

**Research and evaluation (28 units)**

EPDM 510	Principles of Epidemiology II	(3)
GLBH 685	Preliminary Research Experience	(2)
GLBH 692	Research Consultation	(2)
GLBH 694	Research	(1-4)
PHCJ 534	Research Methods	(3)
PHCJ 604	Research Seminar	(2)
STAT 521	Biostatistics I	(4)
STAT 548	Analytical Applications of SAS	(2)
STAT 549	Analytical Applications of SPSS	(2)
STAT 564	Survey and Advanced Research Methods	(3)
STAT 568	Data Analysis	(3)

**Dissertation (12 units)**

**Cognates (18 units)**

Chosen from area(s) related to dissertation, in consultation with adviser.

**Religion (3 units)**

REL_ 5__		(3)
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TOTAL UNITS 96-100

## Group Counseling—ST (PB certificate)

MARY E. MOLINE, Program Coordinator

### FACULTY

See Marital and Family Therapy (MFAM) Program.

The Group Counseling Program certificate is designed to prepare marital and family therapy graduate students to design and lead groups in a variety of settings (e.g., school, hospital, outpatient, inpatient, legal, public, and private). These courses are embedded in the master's and doctoral degree programs in marital and family therapy.

### The program

The Group Counseling Program certificate is offered by the School of Science and Technology's Department of Counseling and Family Sciences through the Marital and Family Therapy Program.

### Admission

Applicants to the Group Counseling Certificate Program must meet the School of Science and Technology's admission requirements outlined in this CATALOG and give evidence of academic ability, emotional stability, and maturity. Students who pursue group counseling as a track within their D.M.F.T. or Ph.D. degree program are required to take three courses: MFAM 525, 526, 527.

### Certificate requirements

#### PREREQUISITE

- MFAM 568
- Approval by the School of Science and Technology's Department of Counseling and Family Services
- A master's degree or concurrent enrollment in a master's or doctoral degree program at Loma Linda University. The graduate degree must be in marital and family therapy or a related field.

## COURSE REQUIREMENTS AND SCHEDULE

### Post-Summer Session

MFAM 525	Therapeutic Group	(2)
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### Fall Quarter

MFAM 569	Advanced Group Therapy	(3)
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### Winter Quarter

MFAM 526	Theory and Practice of Group Counseling	(3)
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### Spring Quarter

MFAM 527	Training/Supervision Workshop in Group Counseling	(3)
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### Summer Quarter

MFAM 568	Groups: Process and Practice	(3)
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### Quarter varies

Religion options		(3)
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## Health Administration—PH

(M.P.H. in health administration and in health-services research;

M.H.A., [closed to new admissions];

M.B.A.)—PH

JAMES L. KYLE, Interim Chair

### FACULTY

Jane E. Adams  
 Stewart R. Albertson  
 S. Eric Anderson  
 James Banta  
 Lynna S. Belin  
 Robert D. Blair, Jr.  
 Richard Bruno  
 John Carney  
 Bonnie I. Chi-Lum  
 James M. Crawford  
 Wayne S. Dysinger  
 Dwight C. Evans  
 Brent A. Fisher  
 Garry J. FitzGerald  
 Donn P. Gaede  
 Bradley P. Gilbert  
 Eugenia Giordano  
 Oscar A. Giordano  
 Albin H. Grohar  
 Ronald P. Hattis  
 Gordon E. Hewes  
 Renee L. Hills  
 Paul A. Hisada  
 Troy A. Holmes  
 David L. Holt  
 Michael H. Jackson  
 David J. Kinsey  
 Greg Kono  
 James L. Kyle  
 Karl J. McCleary  
 Donald G. Pursley  
 Paul Simms  
 Teri S. Tamayose  
 C. Torben Thomsen  
 Abel Torres SM  
 Lester N. Wright

The goals of the Health Administration Program are:

1. To equip its graduates within the context of the missions of the University and the School of Public Health—with universal administrative tools and problem-solving skills enabling them to effectively function in a rapidly changing environment. Graduates receive a broad interdisciplinary education that encourages analytical thinking and the application of theory to the solution of practical problems. As perceptive and effective health care leaders, they will learn how to marshal resources to improve not only their own organizations but also the health care system as a whole.
2. To engage in both basic and applied research to expand the body of knowledge relevant for effective health care management.
3. To expand its links with both individuals and institutions within the health care field to

encourage the bi-directional sharing of experiences, knowledge, and approaches to the solution of problems from an interdisciplinary perspective.

### Learner outcomes

Graduates of the programs in health administration will have the skills necessary to:

1. Analyze the structure, environment, and function of health care organizations.
2. Apply administrative skills to lead health care organizations.
3. Analyze complex organizational situations and develop viable alternatives.
4. Locate sources of information relevant to unfamiliar situations and integrate new information into an existing body of knowledge.
5. Evaluate alternative courses of action in a multidimensional value framework.

## HEALTH ADMINISTRATION—M.P.H.

The Health Administration Program, leading to the M.P.H. degree provides an understanding of health care-management issues and skills within the broad perspective provided by an introduction to the public health sciences. It is designed for health care professionals who expect to advance into administrative responsibilities and those without health care-professional degrees who plan a career in health care management.

The program offers considerable flexibility in course selection; and the courses have a strong emphasis on practical, real-life applications of theoretical concepts. The student will be prepared to enter either public- or private-sector health care management.

### Learner outcomes

Upon completion of this degree, the graduate should be able to:

1. Apply principles of administration and leadership in interdisciplinary environments.
2. Locate sources of information and integrate new information into an existing body of knowledge.
3. Evaluate alternative courses of action in a multidimensional values framework.
4. Assume leadership in program development, implementation, and evaluation in public health settings.

### COREQUISITE

(may be taken during first two quarters of program, in addition to units required for degree)

HADM 444 Financial Accounting for Health Care Organizations (3)  
 or  
 One course in accounting

## DEGREE REQUIREMENTS

**Public health core courses (20 units)**  
 ENVH 509 Principles of Environmental Health (3)  
 EPDM 509 Principles of Epidemiology I (3)

HADM 509	Principles of Administration in Public Health	(3)
HPRO 509	Principles of Health Behavior	(3)
REL_ 5__	Religion (RELE 534 recommended)	(3)
PHCJ 605	Philosophy of Public Health	(1)
STAT 509	General Statistics	(4)

**Health administration core courses (18 units)**

HADM 528	Organizational Behavior in Health Care	(3)
HADM 534	Legal and Regulatory Issues in Health Care	(3)
HADM 542	Managerial Accounting for Health Care Organizations	(3)
HADM 559	Health Care Marketing	(3)
HADM 574	Managing Human Resources in Health Care Organizations	(3)
HADM 604	Health-Systems Strategic Planning	(3)

**Recommended elective courses (12 units)**

EPDM 555	Epidemiologic Methods in Outcomes Research and Continuous Quality Improvement	(3)
HADM 505	Public Health Communication	(3)
HADM 510	Public Health Policy	(3)
HADM 514	Health Care Economics	(3)
HADM 516	Global Economic Policy	(3)
HADM 525	Special Topics in Health Administration	(3)
HADM 555	Managed Health Care Systems	(3)
HADM 564	Health Care Finance	(3)
HADM 575	Management-Information Systems in Health Care	(3)
HADM 601	Health-Systems Operations Management	(3)
HADM 605	Health Care Quality Management	(3)
HPRO 589	Qualitative Research Methods	(4)
STAT 557	Research-Data Management	(3)

**Other approved courses**

**Field experience**

HADM 798	Field Practicum	(400 clock hours)
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TOTAL UNITS 50

**Professional membership**

Students are required to secure and maintain membership in an approved professional society, such as the American College of Health Care Executives.

**Health administration colloquia**

Participation is required in a minimum of ten non-credit colloquia designed to acquaint students with various aspects of the health care industry. Attendance at these colloquia will be in addition to attendance at the public health seminars.

**Culminating activity**

The student is required to successfully demonstrate an understanding of and ability to apply all primary components of the program. This will be demonstrated by passing a comprehensive examination. The culminating activity shall include a written comprehensive examination (prior to the field experience), field experience (upon completion of essential major course work), professional portfolio (upon completion

of the field experience), and an exit interview with the department chair (at the conclusion of the program).

**HEALTH-SERVICES RESEARCH—M.P.H.**

This double major M.P.H. degree program is administered jointly by the School of Public Health's Department of Health Administration and the Department of Epidemiology and Biostatistics. It is designed for persons with interests that include assessment of health care organization and maintenance. Students gain the skills needed for health-services administration and epidemiologic research in the health-organization setting. See curriculum description under Epidemiology in Section IV of this CATALOG.

**BUSINESS ADMINISTRATION—M.B.A.**

The Master of Business Administration (M.B.A.) degree provides a broad understanding of health care management and hands-on experience in applying learned principles. The M.B.A. degree is designed for those whose professional objective is a career in health care management. The residency period provides experience in a health care organization. Graduates are prepared for careers at upper-administrative levels in health care organizations—including hospitals, public agencies, health care networks, group practices, long-term care, and managed care.

**Learner outcomes**

Upon completion of this degree, the graduate should be able to:

1. Analyze the structure, environment, and function of health care organizations.
2. Apply administrative skills to lead health care organizations.
3. Analyze complex organizational situations and develop viable alternatives.
4. Provide direction to the management of health services agencies through use of principles of finance, operations, information systems, and economics.

**COREQUISITE**

(may be taken during first two quarters of program, in addition to units required for degree)

HADM 444	Financial Accounting for Health Care Organizations	(3)
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or

One course in accounting

**DEGREE REQUIREMENTS**

HADM 510	Public Health Policy	(3)
HADM 514	Health Care Economic Policy	(3)
HADM 516	International Economic Policy	(3)
HADM 528	Organizational Behavior in Health Care	(3)
HADM 534	Legal and Regulatory Issues in Health Care	(3)
HADM 542	Managerial Accounting for Health Care Organizations	(3)

HADM 549	Investment and Portfolio Issues in Health Administration	(3)
or		
HADM 560	Asset Protection Planning for Health Professionals	(3)
HADM 555	Health Care Policy	(3)
HADM 559	Health Care Marketing	(3)
HADM 564	Health Care Finance	(3)
HADM 574	Managing Human Resources in Health Care Organizations	(3)
HADM 575	Management Information Systems in Health Care	(3)
HADM 601	Health Systems Operations Management	(3)
HADM 604	Health Systems Strategic Planning	(3)
HADM 605	Health Care-Quality Management	(3)
RELE 534	Ethical Issues in Public Health	(3)
HADM 695	Health Administration Field Practicum	(3)

### Culminating activity

The culminating activity shall include a written comprehensive examination (prior to the field experience), field experience (upon completion of essential major course work), professional portfolio (upon completion of the field experience), and an exit interview with the department chair (at the conclusion of the program).

### Professional membership

Students are required to secure and maintain membership in an approved professional society, such as the American College of Health Care Executives.

### Health administration colloquia

Participation is required in a minimum of ten noncredit colloquia designed to acquaint students with various aspects of the health care industry. Attendance at these colloquia will be in addition to attendance at the public health seminars.

## Health Care Administration—PH (B.S.P.H.)

The Health Care Administration Program leading to the B.S.P.H. degree prepares individuals to serve in midlevel administration. Settings include assisted living and skilled-nursing facilities; rehabilitation centers; private, public, and proprietary clinics; and medical centers.

Graduates will be skilled in assessment, developing strategic and marketing plans, personnel management, budget development and management, health care law, and operations management.

### Learner outcomes

Upon completion of this degree, the graduate should be able to:

1. Communicate effectively with the public, staff, and constituencies.
2. Develop and manage a multidepartmental budget.

3. Apply health care law to policy development.
4. Develop and operationalize a marketing plan.
5. Resolve personnel issues effectively.

### REQUIRED LOWER-DIVISION COURSES

#### Spiritual and Cultural Heritage

##### Includes:

4 units of religion for each year of attendance at a Seventh-day Adventist college

4 units of cultural heritage/diversity

16-20 units from at least 2 areas, such as civilization/ history, fine arts, literature, modern language, philosophy.

No more than 2 quarter units may be accepted in performing/visual arts.

#### Scientific Inquiry and Analysis

##### Includes:

12-16 units within the natural sciences (biology, chemistry, geology, mathematics, physics, and statistics) No more than 6 units in one area will be counted.

The remainder of units should be from: anthropology, economics, geography, political science, psychology, and sociology.

#### Communication

##### Includes:

Complete freshman English sequence (must meet transfer requirements to four-year college or university).

Computer-information systems, critical thinking, and public speaking may fulfill remaining units.

#### Health and Wellness

##### Includes:

A minimum of two different physical activities totaling a minimum of 1 credit unit, and one course in personal health or nutrition.

Additional credits may include other areas of health, nutrition, and physical fitness.

#### Elective courses

Electives from any of the four domains may be selected to complete the General Education minimum requirements of 68-quarter units and the total units required for a baccalaureate degree (192 quarter units).

### REQUIRED UPPER-DIVISION COURSES

<b>Public health core</b>		<b>(18)</b>
ENVH 414	Introduction to Environmental Health	(3)
EPDM 414	Introduction to Epidemiology	(3)
EPDM 414	Introduction to Epidemiology	(3)
HPRO 414	Personal Health and Fitness	(4)
PHCJ 401	Essentials of Public Health	(4)
STAT 414	Introduction to Biostatistics I	(3)
STAT 415	Computer Applications in Biostatistics	(1)
<b>Health care administration core (60)</b>		
HADM 305	Health Care Communication	(4)
HADM 314	Health Care Macroeconomics	(4)
HADM 315	Health Care Microeconomics	(4)
HADM 328	Organizational Behavior in Health Care	(4)

HADM 334	Health Care Law, I	(4)
HADM 335	Health Care Law, II	(4)
HADM 359	Health Care Marketing	(4)
HADM 374	Human Resources in Health Care	(4)
HADM 375	Introduction to Health Care Information Systems	(4)
HADM 401	Health Care Operations Management	(4)
HADM 409	Principles of Health Care Administration	(4)
HADM 444	Health Care Financial Accounting	(4)
HADM 445	Health Care Financial Accounting II	(4)
HADM 454	Investment and Portfolio Issues in Health Care	(4)
HADM 464	Fundamentals of Health Care Finance	(4)
<b>Senior project (4)</b>		
HADM 498	Health Care Policy and Strategy	(4)
TOTAL UNITS		192

## Health Care Practice—SM (Online PMD\* certificate)

CLIFFORD WALTERS, Program director

### FACULTY

Debby Craig  
Linda Ferry  
Dan Giang  
James Greek  
Doug Hegstad  
Marita Littauer  
Larry Loo  
Robert Orr  
Maher Roman  
Debra Stottlemyer  
Clifford Walters

The Health Care Practice Program certificate, offered by Loma Linda University School of Medicine and taught by experts in their fields, meets Accreditation Council for Graduate Medical Education requirements for post-M.D. training in the United States. The program qualifies the resident to be a leader in his or her practice group and to proactively exceed practice goals as a result of demonstrated competence in the following domains:

- Patient care
- Medical knowledge
- Communication and interpersonal skills
- Professionalism
- Medical-practice-based learning
- Systems-based practice
- Biomedical ethics
- General business management

Specifically, the certificate program prepares the resident to master evidence-based medicine; understand the arts of medicine, risk management, and professionalism; identify personality types and address

their emotional needs; demonstrate excellent communication skills; develop superb physician-patient relationships; and maintain high employee morale.

In addition, the resident will improve personal and medical-practice financial management through knowledge of coding and billing, informed reading of financial statements and insurance policies, and assessment of revenues and expenses.

### Certificate program features

The fully Internet-based core curriculum offers courses that are accessible around the clock from home or laptop computers. The resident completes the 18-unit certificate program on his or her own schedule during the three-to-four years of training.

The on-line assignments are self-contained, and the learning modules are graded on a pass/fail basis. Students read and respond on-line to assignments asynchronously, demonstrating mastery of the material by their written comments. Online discussion allows students to experience full, cross-specialty dialogue and to challenge colleagues from specialties other than their own.

### Tuition benefit

Loma Linda University Medical Center pays tuition for the core curriculum; and the employee-tuition benefit (ETB)—which requires a passing grade—covers the cost of elective courses.

### CERTIFICATE CURRICULUM

In order to complete the certificate program, the student must complete a total of 18 units of the following courses:

GMDE 504	General Communication in Health Care	(1)
GMDE 504A	The Resident as a Teacher, Leader, and Evaluator	(.5)
GMDE 504C	Communication in Difficult Clinical Situations	(.5)
GMDE 504D	Communication with Health Care Personnel	(.5)
GMDE 505	General Tools in Understanding Medical Professionalism	(1)
GMDE 505A	Physician Well-Being: Are You Always the Professional	(.5)
GMDE 505B	Being a Professional in the Community	(.5)
GMDE 505C	Understanding and Applying the Knowledge of Personalities in One's Practice	(.5)
GMDE 505D	Sex Essentials: What Health Professionals Need to Know About Sex	(.5)
GMDE 506	Getting Your Evidence-Based Medicine (EBM) Engine Started: The Anatomy of the EBM and Its Success	(.5)
GMDE 506A	On the Evidence-Based Medicine Road: Assessing the Medical Literature	(.5)
GMDE 506B	Fine Tuning Your Evidence-Based Engine: Appraising, Assessing, and Implementing Medical Knowledge	(.5)
GMDE 506C	Ethical Principles for Research Involving Human Subjects	(.5)
GMDE 507	Introduction to Biomedical Ethics	(.5)

GMDE 507A	Advanced Ethical Thinking in Health Care	(.5)
GMDE 508	Whole-Person Care: For the Patient or for the Doctor?	(.5)
GMDE 509	Career Planning for Residents—Thriving, Not Just Surviving the Transition from Residents to the Twenty-First Century	(1)
GMDE 510	Introduction to Managing the Delivery of Health Care	(.5)
GMDE 510A	Advocating for the Patient in the Health Care Maze	(.5)
GMDE 510B	Financial Reimbursement from a Conflicted Health Care System	(.5)
GMDE 511	Personal Finance	(1)
GMDE 512	Concepts in Personal Insurance	(.5)
GMDE 513	Introduction to Risk Management in the Health Care System	(.5)
GMDE 513A	Professional Liability: Insurers, the Courts, and You	(.5)
GMDE 513B	Advanced Concepts of Risk Management in the Health Care System	(.5)
GMDE 523	The Clinical System	(.5)
GMDE 523A	The Macrosystem (Organization System)	(.5)
GMDE 523B	The Megasytem (Community, Market, and Social Policy System)	(1)

\*Postdoctoral certificate. Open on-line to M.D. who is taking a residency and who has been accepted into the certificate program.

## Health Education—PH (M.P.H., Dr.P.H.)

BARBARA A. ANDERSON, Chair

### FACULTY

Barbara A. Anderson  
 Lisa M. Beardley  
 Cesar A. Galvez  
 Luis Carlos Grau  
 Linda G. Halstead  
 Mervyn G. Hardinge  
 R. Patricia Herring  
 Gary L. Hopkins  
 Joyce W. Hopp  
 Michele A. Jacknik  
 Renate I. Krause  
 Jerry W. Lee  
 Helen P. Hopp Marshak  
 Brooke McNight  
 Naomi N. Modeste  
 Susan B. Montgomery  
 Christine M. Neish  
 Stoy E. Proctor  
 Miguel A. Rodríguez

The Master of Public Health (M.P.H.) degree programs are built around 52-65-unit curricula. The number of required courses is based on the student's academic background, selected major, area of emphasis, and elective course work. The number of required units, culminating activity requirement, and length of

field practicum are specified upon acceptance. The student develops an appropriate curriculum in consultation with his/her faculty adviser.

### Department goals

- Promote the academic preparation of public health professionals.
- Provide course work for students desiring credentialing in selected areas, specifically, the alcohol and drug counselor-education certificate.
- Provide health-education consultation services in needs assessment, community-organization program planning and implementation, health counseling, evaluation, and research to public and private health agencies, including the Seventh-day Adventist Church.
- Independently or in collaboration with other organizations, develop and conduct research that addresses health-education issues and needs.

## HEALTH EDUCATION—M.P.H.

### Program formats

Course work for the Health Education Program may be pursued in the following formats:

- a traditional day program;
- an evening program; or
- intensive, nontraditional Spanish-language programs in Peru or Chile.

In the Health Education Program, emphasis is placed on educational, interpersonal, community, and legislative factors that promote positive health behaviors. The curriculum emphasizes interventions based on scientific data and established behavioral and learning theories that promote public health through the processes of education and community organization.

Graduates of this 61-unit degree program may function as community-health educators in a variety of settings, both public and private. They are academically prepared to conduct community assessments; design, implement, and evaluate health-education interventions; organize health-promotion efforts; and assist individuals and communities to better utilize techniques of health-behavior change.

Students select course work from each of several practice and content areas to enhance the applied portion of the curriculum. Professional practice is addressed during the laboratory and field-experience portions of the curriculum. Students may develop skills while working in community agencies and in medical-care, school, and workaday settings.

Students who are licensed health professionals with two or more years of experience in public health may request advanced standing for up to 9 units of elective course work. They also may apply to replace the standard 400-clock-hour field practicum with a 200-clock-hour field practicum or a 3-unit community practicum.

Graduates are eligible to sit for the credentialing examination in health education offered by the National Commission for Health Education Credentialing, Inc., 944 Macon Boulevard, Suite 310, Allentown, PA 18103.

**Learner outcomes**

Graduates of the program in health education will have the skills necessary to:

- Design, develop, implement, market, and evaluate health promotion and education programs utilizing appropriate principles from human learning, motivation, communication, organizational behavior, and health-behavior change theories.
- Collaborate with other professionals in using resources to educate the public about health.
- Evaluate and appropriately apply public health-research findings to the practice of health education.
- Serve as consultants to provide leadership or technical assistance for public health projects in selected settings.
- Meet didactic and professional-practice requirements for certification as health education specialists.

**PREREQUISITE**

Demonstrate college-level conceptualization and writing skills

Complete relevant community service or public health experience, as documented by record of employment

**COREQUISITE**

(may be taken during first two quarters of program, in addition to units required for degree)

Anatomy and physiology/Physiology (one course or course sequence)

Behavioral science (two courses, one of which is an introductory psychology course)

**DEGREE REQUIREMENTS**

**Public health core courses (20 units)**

ENVH 509	Principles of Environmental Health	(3)
EPDM 509	Principles of Epidemiology I	(3)
HADM 509	Principles of Administration in Public Health	(3)
HPRO 509	Principles of Health Behavior	(3)
REL_ 5__	Religion	(3)
PHCJ 605	Philosophy of Public Health	(1)
STAT 509	General Statistics	(4)

**Health education core courses (22 units)**

HPRO 535	Health Education Program Administration	(3)
HPRO 536	Program Planning and Evaluation	(3)
HPRO 537	Community Programs Laboratory	(1,2)
HPRO 538	Health Education Program Development	(3)
HPRO 539	Policy and Issues in Health Education	(3)
HPRO 589	Qualitative Research Methods	(4)
HPRO 590	Qualitative Data Analysis	(1)
NUTR 509	Public Health Nutrition	(3)
or		
NUTR 534	Maternal and Child Nutrition	(3)

**Selected electives (9–15 units)**

Licensed health professionals (D.D.S., M.D., RN, PT):  
9 units of electives from the list below.

Nonlicensed health professionals:  
15 units of electives from the list below.

HPRO 505	Public Health Communication	(3)
HPRO 514	Values, Culture, and Health	(3)
HPRO 523	Maternal and Child Health	(3)
HPRO 524	Adolescent Health	(3)
HPRO 525	Topics in Health Promotion (if approved by adviser)	(1-4)
HPRO 526	Lifestyle Diseases and Risk Reduction	(3)
HPRO 527	Obesity and Disordered Eating	(3)
HPRO 528	Controversial Health Practices	(3)
HPRO 542	Health and Dependency Counseling	(3)
HPRO 543	Writing for Health Professionals (with consent)	(3)
HPRO 544	Health Education Evaluation and Measurement	(3)
HPRO 548	Community and Domestic Violence	(3)
HPRO 553	Addiction Theory and Program Development	(3)
HPRO 555	Early-Age Parenthood	(3)
HPRO 556	Interventions for High-Risk Infants and Children	(3)
HPRO 564	Mental Health and Society	(3)
HPRO 567	Reproductive Health	(3)
HPRO 573	Exercise Physiology I	(3)
HPRO 578	Exercise Physiology II	(3)
HPRO 584	Aging and Health	(3)

Selected courses in environmental health, epidemiology, health administration, global health, nutrition, and statistics

**Field experience**

HPRO 797	MIP Internship in Health Education (U.S. Peace Corps)	
or		
HPRO 798A/B/C	Field Practicum (100-400 clock hours)	

TOTAL UNITS 52–58

**Culminating activity**

Students are required to demonstrate the ability to integrate the five core areas of public health: administration, epidemiology, statistics, environmental health, and health behavior during their culminating activity experiences. The culminating activity includes a written comprehensive examination (prior to field experience); field experience (upon completion of all required courses); professional portfolio (upon completion of field experience); and exit interview with the department chair (at the conclusion of the program).

Students who do not meet minimum standards of performance on the culminating activity are subject to academic review and/or remedial course work to address deficiencies in preparation; or they may be asked to withdraw from the program.

**MATERNAL-CHILD HEALTH/HEALTH EDUCATION—M.P.H.**

See Maternal and Child Health Program in this section).

**PEACE CORPS  
MASTER'S INTERNATIONAL PROGRAM  
with HEALTH EDUCATION—M.P.H**

For a description of the program, see Peace Corps in this section (Section IV).

**MEDICINE-PREPARATORY—M.P.H.**

**M.P.H.—before entering School of Medicine**

A 51-unit M.P.H. degree program is available for students who plan to enter medicine. The one-year program begins Summer Quarter and ends before the beginning of medical school the next year. It is an intensive program and is available to students who have taken the MCAT and who have definite plans to apply to medical school.

**HEALTH EDUCATION—DR.P.H.**

The Department of Health Promotion and Education offers the Doctor of Public Health (Dr.P.H.) degree with majors in health education and in preventive care. Emphasis is placed on teaching, research, and evaluative skills; and wellness-lifestyle intervention development, implementation, and evaluation, respectively.

**Preventive care program**

The Dr.P.H. degree program in preventive care is described in Section IV of this CATALOG

**Health education major**

The Dr.P.H. degree in health education is designed for individuals who desire to add depth to their health education specialization and develop research capabilities. The emphasis in health education offers advanced knowledge and competence in the health education process and includes planning and evaluation of health-behavior change. There is emphasis on the practice of healthful lifestyle behaviors and community-health education.

**Learner outcomes**

Upon completion of the Dr.P.H. degree program in health education, the graduate should be able to:

1. Conduct health education research and evaluation utilizing basic statistical concepts.
2. Generate health-related educational training/curricular materials and conduct professional seminars and training programs.
3. Promote and assist in the development of grant-writing proposals and applications for community-based health education research.
4. Creatively apply theoretical concepts and models to educational program design in the development of health education interventions.

5. Analyze methodologies and interventions for their effectiveness in reaching program objectives and outcomes.
6. Demonstrate educational leadership skills, policy development, and strategic planning for organizations and agencies.
7. Write and submit manuscripts to professional journals for publication.
8. Effectively communicate health education concerns and needs, including social marketing and other communication theories.

**HEALTH EDUCATION MAJOR—TRACK I**

**PREREQUISITE**

Anatomy and physiology

Quantitative proficiency

Master's or doctoral degree in appropriate field

Post-master's degree work experience, minimum two years

**COREQUISITE**

(may be taken during first two quarters, in addition to units required for degree)

Social sciences (two courses, which may include psychology, sociology, or cultural anthropology)

ENVH 509	Principles of Environmental Health	(3)
EPDM 509	Principles of Epidemiology I	(3)
HADM 509	Principles of Administration in Public Health	(3)
HPRO 509	Principles of Health Behavior	(3)
HPRO 695	Community Practicum	(2)
PHCJ 605	Philosophy of Public Health	(1)
STAT 509	General Statistics (or equivalent)	(4)

**DEGREE REQUIREMENTS**

**Health education (28 units)**

HPRO 536	Program Planning and Evaluation	(3)
HPRO 538	Health Education Program Development	(3)
HPRO 543	Writing for Health Professionals	(3)
HPRO 588	Health Behavior Theory and Research	(4)
HPRO 608	Advanced Seminar in Health Education	(2, 2, 2)
HPRO ___	Approved HPRO electives	(9)

**Administration and leadership (12 units)**

HADM ___	Courses chosen in consultation with adviser	(9)
HPRO 535	Health Education Program Administration	(3)

**Public health (6 units)**

EPDM ___	Advanced epidemiology course, chosen in consultation with adviser	(3)
NUTR 509	Public Health Nutrition	(3)

**Research and evaluation (30–31 units)**

HPRO 544	Health Education Evaluation and Measurement	(3)
HPRO 685	Preliminary Research Experience	(2)

PHCJ 534	Research Methods	(3)
PHCJ 604	Research Seminar	(2)
STAT 514	Intermediate Statistics for Health-Science Data	(3)
—	Additional statistics course, chosen in consultation with adviser	(3–4)
STAT 549	Analytical Applications of SPSS	(2)
STAT 568	Data Analysis	(3)
HPRO 692	Health Education Research Consultation	(3)
HPRO 694	Research	(6)
<b>Dissertation (12 units)</b>		
<b>Cognates (12 units)</b>		
<b>Religion (3 units)</b>		
REL_ 5__	Religion course, chosen in consultation with adviser	(3)

TOTAL UNITS 103–104

**HEALTH EDUCATION MAJOR—TRACK II**

**PREREQUISITE**

- Anatomy and physiology
- Quantitative proficiency
- Master's or doctoral degree in appropriate field

**COREQUISITE**

ENVH 509	Principles of Environmental Health	(3)
EPDM 509	Principles of Epidemiology I	(3)
HADM 509	Principles of Administration in Public Health	(3)
HPRO 509	Principles of Health Behavior	(3)
HPRO 695	Community Practicum	(2)
PHCJ 605	Philosophy of Public Health	(1)
STAT 509	General Statistics	(4)
or		
STAT ___	A statistics course	(4)

**DEGREE REQUIREMENTS**

<b>Health education (25 units)</b>	
HPRO 543	Writing for Health Professionals (3)
HPRO 588	Health Behavior Theory and Research (4)
HPRO 608	Advanced Seminar in Health Education (2, 2, 2)
HPRO ___	Health education electives (12)
<b>Administration and leadership (9 units)</b>	
HADM ___	Chosen in consultation with adviser (9)
<b>Public health (6 units)</b>	
EPDM ___	Advanced epidemiology course, chosen in consultation with adviser (3)
NUTR 509	Public Health Nutrition (3)
<b>Research and evaluation (24-27 units)</b>	
HPRO 544	Health Education Evaluation and Measurement (3)
HPRO 685	Preliminary Research Experience (2)
HPRO 694	Research (6)

PHCJ 534	Research Methods	(3)
PHCJ 604	Research Seminar	(2)
STAT 514	Intermediate Statistics	(3)
or		
STAT ___	An advanced statistics course	
STAT 549	Analytical Applications of SPSS	(2)
STAT 568	Data Analysis	(3)
<b>Religion (3 units)</b>		
REL_ 5__	Religion course, chosen in consultation with adviser	(3)
<b>Cognate (9)</b> (may be chosen from another department or school)		
<b>Dissertation (12 units)</b>		
TOTAL UNITS		88-91

**Health Geographics—PH (B.S.P.H.)**

The innovative, multidisciplinary Health Geographics Program leading to the B.S.P.H. degree combines courses in various departments and integrates public health methods and approaches with geographic information-science technologies. The curriculum meets a broad range of geographic information-systems (GIS) requirements both in the private and in the public sectors. The emphasis is designed to introduce students to geographic analysis and GIS technology with applications in public health. Graduates will have an understanding of the major public health disciplines and will develop the high-level skills required of the practicing GIS analyst. They will be able to work in multifunctional capacities providing spatially interpreted data on small groups of patients/populations or on entire communities, if desired.

**Learner outcomes**

Upon completion of this degree, the graduate should be able to:

1. State the basic principles of geographic information science as they relate to public health research and practice.
2. Use state-of-the-art desktop GIS software applications.
3. Describe and apply geographic data models used in GIS.
4. Employ GIS data-capture techniques, sources and formats of digital geographic health data, and spatial databases for public health.
5. Use geodatabase data types and functions to design strategies that will structure spatially defined public health information.
6. Use effective spatial data display while producing and publishing customized maps and other visual displays of health data.
7. Collaborate to improve public health practice through GIS technology.

8. Manage GIS projects in a variety of settings, including government, academic, and community.

### REQUIRED LOWER-DIVISION COURSES

(may meet some GE requirements)

College algebra  
 Biological sciences (one course beyond GE requirements; anatomy and physiology preferred)  
 Environmental science  
 Geoscience (geography preferred)  
 Computer/Information systems  
 Computer-language programming  
 Database systems

### REQUIRED UPPER-DIVISION COURSES

ENVH 421 Cartography (4)  
 ENVH 422 Principles of Geographic Information Systems (4)  
 ENVH 423 Practical Issues in GIS (4)  
 ENVH 424 Desktop GIS Applications (4)  
 ENVH 434 Advanced GIS Applications (3)  
 ENVH 435 Sources, Capture, and Integration of GIS Data (3)  
 ENVH 436 Spatial Analysis with GIS (4)  
 ENVH 437 GIS in Public and Environmental Health (4)  
 ENVH 498 Health Geographics Senior Project (4, 4, 4)

## Health Geoinformatics— PH (PB Certificate)

SETH WIAFE, Program Director

### FACULTY

Donn Gaede  
 William C. Hoffman  
 David L. Holt  
 Brooke McKnight  
 Samuel Soret  
 Seth A. Wiafe

The Health Geoinformatics Program certificate is designed primarily for health professionals and students who have completed a bachelor's degree (or equivalent) from an accredited college or university with a cumulative G.P.A. of at least 3.0. Qualified candidates must demonstrate computer proficiency, although no previous experience with Geographic Information Systems (GIS) software technology is required. Advanced placement can be considered for applicants with previous GIS experience/training. In addition, interested Loma Linda University students, staff, and faculty who would like to learn about GIS applications in health may also apply.

### CERTIFICATE REQUIREMENTS

To earn the certificate, students must successfully complete at least 23 academic units, as listed

below. Core requirements include courses in the two main areas of GIS fundamentals and techniques (16 units) and health geographics electives (at least 4 units). In addition, 3 units of ethical issues in public health are required.

### Core requirements (16)

ENVH 521 Cartography and Mapping (2)  
 ENVH 522 Principles of GIS (3)  
 ENVH 523 Practical Issues in GIS (3)  
 ENVH 524 GIS Software Applications and Methods (3)  
 ENVH 535 Integration of Geospatial Data with GIS (2)  
 ENVH 536 Spatial Analytical Techniques and GIS (3)

### Required

RELE 534 Ethical Issues in Public Health (2)

### Electives (4-9)

ENVH 537 Health Care Geographics (2)  
 ENVH 539 GIS for Environmental Health and Safety (2)  
 ENVH 546 Introduction to Spatial Epidemiology (3)  
 ENVH 547 GIS for Public Health Practice (2)

### Learner outcomes

Upon successful completion, participants will be able to:

1. Use knowledge in principles of geospatial information science as they relate to health research and practice
2. Use state-of-the-art GIS software applications and techniques for accessing the spatially defined health information for building related, useful geodatabases
3. Use effective geospatial data while producing and publishing customized maps and other visual displays of health data
4. Employ GIS-based methods and techniques of spatial analysis that support health research and decision-making in public health practice and policy
5. Competently apply geospatial technology and methods in at least one key area of health geographics, such as disease mapping, tracking and assessment of environmental hazards and exposure, health planning and policy, community health, health education and communication, analysis of access to health services, or health care geographics
6. Implement and manage health-GIS projects in government, nongovernment, and community settings

### Admission prerequisites

Applicants must have at least a bachelor's degree (or equivalent), with a cumulative G.P.A. of at least 3.0.

### ENROLLMENT INFORMATION

For those who meet the foregoing basic admission prerequisite, the program is open to health professionals, students, current Loma Linda University students enrolled in a master's or doctoral degree program, Loma Linda faculty and staff (tuition benefits

may apply), and anyone interested in GIS applications in the health field.

#### For credit

Students who desire to obtain the CHG may apply online at <<http://www.llu.edu/apply>. Click on: "Apply now" and, after successful login, select "Geoinformatics, PB CERT, on-campus" from the list of programs, then continue.

The cost per unit is US\$ 465 (subject to change).

#### Nondegree

Students may enroll in the program as non-degree. Nondegree students are allowed to take a maximum of 12 units prior to acceptance into a degree program. Download application forms at <<http://www.llu.edu/ssweb/forms/nondegree.pdf>>.

Instruction for nondegree registration can be found at <<http://www.llu.edu/ssweb/forms/non-degree-reg.pdf>>.

The cost per unit is US\$ 465 (subject to change).

#### Not for credit

Students may also register to take classes on a not-for-credit basis. Classes registered not for credit will not be reregistered for credit in the future. Not-for-credit registration forms can be obtained from—

Venice Brown at the School of Public Health,  
Nichol Hall Room 1706, Phone 909/558-4595,  
or  
e-mail: <[vbrown@sph.llu.edu](mailto:vbrown@sph.llu.edu)>.

The cost per unit is US\$ 232.5 (subject to change).

#### For additional information

Seth Wiafe, M.P.H., Assistant Professor, Health  
Geographics

Tel: 909/558-7596

E-mail: [swiafe@llu.edu](mailto:swiafe@llu.edu)

Web: <http://www.llu.edu/llu/sph/geoinformatics/index.html>

## Health Information Administration—AH (B.S., PB certificate)

MARILYN H. DAVIDIAN, Program Director

PAULINE CALLA, Clinical Coordinator

#### FACULTY

F. Faye Brown  
Kent Chow  
Jere E. Chrispens

Deborah Critchfield  
Noha S. Daher  
Marilyn H. Davidian  
Nicceta Davis  
Cynthia M. Doyon  
Intithar S. Elias  
Jennifer L. Guerrero  
Debra L. Hamada  
Melissa Hingula  
Craig R. Jackson\*  
Margaret B. Jackson  
Diana S. Medal

Linda M. Palmer  
Dulce L. Peña  
Barbara Pinkowitz  
Terri L. Rouse  
Audrey J. Shaffer  
Rita M. Stiffler  
Lian Somali  
Donna G. Thorpe  
Betty Ann Wagner  
Betty Ann Wagner  
Douglas F. Welebir

\*ex officio

Health care records are part of an integrated system of health information. The data provide a basis for patient care, quality assurance, legal defense, reimbursement, risk management, accreditation, planning, and decision making. The health information department has assumed increased importance with the advent of prospective-payment corporate compliance and the necessity for diagnostic and procedural information.

A career in health information management is likely to appeal to a person who has organizational and leadership abilities and who is interested in and has aptitude for medical science, but whose talents are suited for participation other than physical involvement in human illness. The health information administrator (formerly known as medical record administrator) designs, develops, and maintains systems for storage, retrieval, and dissemination of information in accordance with federal, state, and local statutes and regulations. This person works with the medical staff and other health professionals in research, administrative studies, functions relative to health information, and patient-care evaluation. The health information administrator in a health care facility will provide management leadership in planning and organizing the department, motivating and evaluating employees, and providing in-service programs for departmental employees or other personnel in the facility.

#### Opportunities

While many health information administrators are employed in various areas of acute-care facilities, others work in alternative-delivery health care systems, research facilities, quality assurance, data companies, industrial establishments, governmental agencies, medical departments of insurance companies, accounting firms, or as consultants to skilled-nursing and other facilities.

The multiplicity of new technologies, the advent of electronic health records, the demand for health information, the emphasis on evaluation of care, the surge in research, the emphasis on cost control, and other factors combine to require comprehensive knowledge and increased utilization of administrative talent and judgment.

## HEALTH INFORMATION ADMINISTRATION—PB certificate

#### Admission

To be eligible for admission, the applicant must have completed a minimum of 96 quarter units at an accredited college or university.

**PREREQUISITE**

Bachelor's degree from an accredited college or university  
 Human anatomy and physiology with laboratory, complete sequence  
 Medical terminology  
 Intermediate algebra  
 General psychology  
 Accounting  
 Introduction to computer applications  
 Computer spreadsheet (MS Excel recommended)  
 Word processing (MS Word recommended)  
 Research methods  
 Statistics  
 Personnel management  
 Business communications

**RECOMMENDED**

Speech

**Credit by examination or evaluation**

Applicants who have comparable education or experience may be able to gain credit toward the certificate by equivalency examination or evaluation of credit on an individual basis.

**Professional registration**

Upon completion of the program, and upon recommendation of the faculty, graduates are eligible to write the qualifying examination of the American Health Information Management Association (AHIMA), 233 North Michigan Avenue, Suite 2150, Chicago, IL 60611-5519, for the designation of RHIA (registered health information administrator).

**PROGRAM OF INSTRUCTION****FIRST YEAR**

HLIN 301	Introduction to Health Records Science	(4)
HLIN 303, 304	Basic Coding Principles and Techniques I, II	(3, 3)
HLIN 305	Hospital Census and Administrative Statistics	(2)
HLIN 325	Pharmacology for Health Information Administration	(2)
HLIN 395	Professional Practice Experience I—Junior Affiliation	(2)
HLIN 441	Legal Aspects of Health Information Administration	(4)
HLIN 461	Health Information Administration Laboratory	(1-5)
HLIN 483	Long-Term and Alternative Delivery Systems in Health Care	(4)
AHCJ 214	Fundamentals of Computer Systems	(2)
AHCJ 305	HIV/AIDS and the Health Provider	(1)
AHCJ 325	U. S. Health Care-Delivery Systems	(2)
AHCJ 402, 403	Pathology I, II	(4, 3)
AHCJ 408	Health Care Management	(4)
RELE 457	Christian Ethics and Health Care	(2-3)

**SECOND YEAR**

HLIN 306	E & M Coding for Billing and Reimbursement	(2)
HLIN 401	Survey of Health-Systems Management	(4)
HLIN 421	Survey of Health-Systems Management—Applied	(4)
HLIN 444	Corporate Compliance in Health Care	(3)
HLIN 445	Coding Seminar	(3)
HLIN 451	Quality Improvement in Health Care	(3)
HLIN 461	Health Information Administration Laboratory	(1-5)
HLIN 484	Current Topics in Health Information Administration	(3)
HLIN 494	Health Information Management	(5)
HLIN 495	Professional Practice Experience II—Senior Affiliation	(3)
AHCJ 407	Financial Management	(2)
AHCJ 432	Database Management	(2)
AHCJ 433	Special Projects in Computer Applications	(2)

An LLU G.P.A. of 2.5 must be maintained throughout the program.

A minimum grade of C (2.0) is required for all courses in the program.

A minimum of 50 units is required for completion.

**HEALTH INFORMATION ADMINISTRATION—B.S.**

The Health Information Administration Program, leading to the Bachelor of Science degree, begins with the Autumn Quarter. The freshman and sophomore years, which are taken at an accredited college or university, afford the fundamentals of a liberal education and provide background in science, humanities, social studies, and business. Concentration on health-information-administration subject matter begins at Loma Linda University in the junior year and continues through the senior year.

Students are advised to complete the curriculum in two years as scheduled. Those electing to study on a part-time basis because of a heavy work load or other reasons must complete all course work within a four-year period.

**Accreditation**

The Health Information Administration Program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP), 35 East Wacker Drive, Suite 1970, Chicago, IL 60601-2208; telephone: 312/553-9355; FAX: 312/553-9616; <[www.caahep.org](http://www.caahep.org)>—in cooperation with the American Health Information Management Association (AHIMA), Council on Accreditation, 233 North Michigan Avenue, Suite 2150, Chicago, IL 60611-5519.

**The program objectives**

Upon completion of the program, the graduate should be qualified to:

1. Perform assessment and management of information needs for a variety of health care settings.

2. Design, select, implement, and enhance health care information systems.
3. Protect confidential patient, employee, and administrative information.
4. Effectively manage personnel.
5. Understand financial-management requirements for institutions, and their relationship to clinical data.
6. Integrate financial and clinical databases in order to meet the information needs in various health care settings.
7. Produce written and verbal communication with peers, administrative officers, employees, and health care consumers.
8. Promote continuing education and expansion of professional knowledge.
9. Develop personal and professional ethics with a Christian emphasis.
10. Promote the health information-management profession—including professional memberships, recruitment, and mentoring.
11. Participate in research activities that aid in decision-making abilities and quality-outcomes management.

**Clinical experience**

Three complementary types of clinical experience are offered. The first is a variety of assignments in large and small hospitals and other facilities that will acquaint the student with managing information in all aspects of the health care environment. The majority of these assignments are either at Loma Linda University Medical Center or at hospitals located a short distance from the University.

The second type of clinical experience is a two-week practicum during the summer at the end of the junior year. The summer practicum is not required of graduates of an accredited health-information technology program. The third assignment is a three-week affiliation during the Spring Quarter of the senior year.

Arrangements for the summer practicum and affiliation sites are made through the department chair and the clinical coordinator. Students are responsible for their own transportation to those facilities not within walking distance of the University, as well as for food and lodging during the two- and four-week assignments.

**Professional registration**

Upon completion of the program, and on the recommendation of the faculty, graduates are eligible to write the qualifying examination of the American Health Information Management Association for the designation of RHIA (registered health information administrator).

**Professional association**

Students and graduates are eligible to become members of the American Health Information Management Association and the California Health Information Association. The purpose of these associations is to promote the art and science of health information management. They grant student membership at a nominal cost to undergraduates of approved schools. The student is expected to become a member of these associations, pay the nominal dues, read the

journals, and become familiar with their professional activities.

**Admission**

To be eligible for admission to the B.S. degree program in health information administration, the applicant must have completed a minimum of 96 quarter units at an accredited college or university.

**PREREQUISITE**

20 units minimum in humanities (choose minimum of two areas from: history, literature, philosophy, foreign language, art/music appreciation/history)

Included in this minimum, 4 units of religion per year of attendance at a Seventh-day Adventist college or university

Human anatomy and physiology laboratory, complete sequence

Medical terminology

Select 6 quarter units from chemistry, geology, mathematics, astronomy, physics, statistics

Two years high school mathematics with grades of C, or intermediate algebra in college

General psychology

Cultural anthropology or an approved course dealing with cultural diversity

Select 4 units from: sociology, economics, geography, political science

Business communications

English composition, complete sequence

Introduction to computers

Word processing

Computer spreadsheets (Excel recommended)

Personal health or nutrition

Two physical activity courses

Introductory accounting (one quarter or semester)

Electives to meet the minimum total requirement of 96 quarter units

For total unit requirements for graduation, see Division of General Studies, Section II.

**PROGRAM OF INSTRUCTION**

**JUNIOR YEAR**

HLIN	301	Introduction to Health-Records Science	(4)
HLIN	303, 304	Basic Coding Principles and Techniques I, II	3, 3
HLIN	305	Hospital Census and Administrative Statistics	(2)
HLIN	325	Pharmacology for Health Information Administration	(2)
HLIN	361-363	Health Information Administration Laboratory I, II, III	(1, 1, 1)
HLIN	395	Professional Practice Experience I—Junior Affiliation	(2)
HLIN	441	Legal Aspects of Health Information Administration	(4)
HLIN	483	Long-Term and Alternative Delivery Systems in Health Care	(4)
AHCJ	214	Fundamentals of Computer Systems	(2)
AHCJ	305	HIV/AIDS and the Health Provider	(1)

AHCJ 325	U.S. Health Care-Delivery Systems	(2)
AHCJ 328	Portfolio Practicum I	(1)
AHCJ 331	Human-Resource Management	(3)
AHCJ 351	Statistics for the Health Professions	(3)
AHCJ 402, 403	Pathology I, II	(4, 3)
AHCJ 408	Health Care Management	(4)
AHCJ 432	Database Management	(2)
REL_ ___	Religion studies	(3)

Courses within the senior year may be taken only after completion of the junior year and the summer practicum, with an LLU G.P.A. of 2.5; or by permission of the department chair.

#### SENIOR YEAR

HLIN 306	E & M Coding for Billing and Reimbursement	(2)
HLIN 401	Survey of Health-Systems Management	(4)
HLIN 421	Survey of Health-Systems Management—Applied	(4)
HLIN 444	Corporate Compliance in Health Care	(3)
HLIN 445	Coding Seminar	(3)
HLIN 451	Quality Improvement in Health Care	(3)
HLIN 462, 463	Health Information Administration Laboratory, IV, V	(1, 1)
HLIN 484	Current Topics in Health Information Administration	(3)
HLIN 494	Health Information Management	(5)
HLIN 495	Professional Practice Experience II—Senior Affiliation	(3)
AHCJ 407	Financial Management	(2)
AHCJ 432	Database Management	(2)
AHCJ 433	Special Projects in Computer Applications	(2)
AHCJ 461	Research Methods	(2)
AHCJ 498	Portfolio Practicum II	(1)
RELE 457	Christian Ethics and Health Care	(3)
RELT 423	Loma Linda Perspectives	(2)

A minimum grade of C (2.0) is required for all courses in the program.

## HEALTH INFORMATION ADMINISTRATION—[HIT] B.S.

### Admission

To be eligible for admission to the Health Information Technology (HIT) Progression B.S. degree program, the applicant must be a graduate of an accredited health information technology program or hold a current RHIT credential.

### Subject requirements

A maximum of 70 semester units or 105 quarter units of transfer credit is accepted from accredited junior colleges.

#### PREREQUISITE

(a minimum of 52 units must be taken at a four-year college or university)

General education requirements of Domains I through IV; see Division of General Studies, Section II of this CATALOG.

#### ADDITIONAL REQUIRED COURSES

Human anatomy and physiology,\* complete sequence  
 Pathology\*  
 Pharmacology\*  
 Medical terminology\*  
 College algebra (intermediate algebra accepted)  
 General psychology  
 Introduction to computer applications  
 Fundamentals of computer systems\*  
 Word processing (Microsoft Word preferred)  
 U.S. Health Care-Delivery Systems\*  
 Spreadsheet applications\* (Microsoft Excel preferred)  
 Database applications\* (Microsoft Access preferred)  
 Professional communications\* (business communications accepted)  
 Introductory accounting  
 Research statistics\*  
 Research methods\*

#### REQUIRED CORE PROFESSIONAL COURSES FROM THE HIT PROGRAM

Introduction to health-record science\*  
 Basic [ICD-9-CM] coding principles and techniques\* (taken within two years, or current work experience; equivalency examination may be required)\*  
 Hospital census and administrative statistics\*  
 Human-resources management\*  
 Principles of management\*  
 Legal aspects of health care\* (taken within two years, or current work experience, or evidence of ten hours of recent training in HIPAA legislation; equivalency examination may be required)  
 Quality improvement in health care\*  
 Professional practice experience (160 hours)\*

\*available at LLU

#### PROGRAM OF INSTRUCTION

##### HIT PROGRESSION B.S. IN HEALTH INFORMATION ADMINISTRATION

HLIN 306	E & M Coding for Billing and Reimbursement	(2)
HLIN 401	Survey of Health Systems Management	(4)
HLIN 421	Survey of Health Systems Management—Applied	(4)
HLIN 444	Corporate Compliance in Health Care	(3)
HLIN 445	Coding Seminar	(3)
HLIN 462, 463	Health Information Administration Laboratory IV, V	(1, 1)
HLIN 483	Long-Term and Alternative Delivery System in Health Care	(4)
HLIN 484	Current Topics in Health Information Administration	(3)
HLIN 494	Health Information Management	(5)
HLIN 495	Professional Practice Experience II—Senior Affiliation	(3)

AHCJ 305	HIV/AIDS and the Health Provider	(1)
AHCJ 328	Portfolio Practicum I	(1)
AHCJ 407	Financial Management	(2)
AHCJ 433	Special Projects in Computer Applications	(2)
AHCJ 498	Portfolio Practicum II	(1)
RELE 457	Christian Ethics and Health Care	(2)
RELF 423	Loma Linda Perspectives	(2)

## Health Information Systems—AH (M.H.I.S., PM certificate)

MARILYN H. DAVIDIAN, Program Director,  
M.H.I.S., certificate, HIT

DIANA S. MEDAL, Program Coordinator,  
Certificate

PAULINE CALLA, Clinical Coordinator

### FACULTY

Arthur Kroetz  
Jerrold Petrofsky  
Donna Thorpe  
Ardis Wazdatskey

### ADVISORY COMMITTEE, M.H.I.S.

Arthur W. Kroetz, Interim Chair  
Jere E. Chrispens  
Padmini Davamony  
David Holt  
Craig R. Jackson\*  
Kristin Krug-Schmidt  
Damon Needleman  
Betty Ann Wagner  
Grenith J. Zimmerman

\*ex officio

Currently there is a strong need for expertise in information systems in the health care setting. According to the U.S. Bureau of Labor Statistics, the two strongest areas of career growth are computer science and health care. Current research indicates that a limited number of graduate programs are available in information systems with a health care emphasis.

The role of the graduate is to facilitate the flow of information throughout a health care facility to enhance administrative and management decision making, financial systems, medical record department functions, and strategic planning; and to interface with health care information systems, when appropriate.

## HEALTH INFORMATION SYSTEMS— M.H.I.S.

The Health Information Systems Program leads to a Master of Health Information Systems (M.H.I.S.) degree. The degree may be completed in five quarters (fifteen months).

Evening courses are offered twice a week for four quarters (twelve months). The internship follows completion of all course work.

Completion of the course work in two years (twenty-four months) is possible by special arrangement.

### Admission

To be eligible for admission to the M.H.I.S degree program in health information systems, the applicant must have completed a baccalaureate degree with a G.P.A. of 3.0 or higher.

### PREREQUISITE

Baccalaureate degree with a G.P.A. of 3.0 or higher

Principles of accounting

Introduction to computer applications

Foundations of health information systems

**NOTE: Students enrolled in this program are expected to have a computer with on-line access to the Internet.**

### The program objectives

Upon completion of the program, the graduate should be qualified to:

1. Plan, develop, implement, monitor, and maintain information systems in the health care setting.
2. Design and evaluate information/security systems.
3. Evaluate and modify existing health information systems.
4. Implement and evaluate data-communication systems, including local-area and wide-area networks.
5. Use organizational theory and behavioral and management principles.
6. Participate in strategic management.
7. Demonstrate a knowledge of human-resources management, including the human-computer interaction systems.
8. Demonstrate awareness of current issues affecting health care, and their implications for health information systems.
9. Demonstrate knowledge of research and statistical methods.
10. Demonstrate knowledge of the legal and ethical issues of health information systems.

### PROGRAM OF INSTRUCTION

MHIS 501	Information Systems in Health Organizations	(3)
MHIS 504	Database Concepts	(3)
MHIS 508	Managing Information Resources	(3)
MHIS 511	Security and Data Communications	(3)
MHIS 515	Maintenance and Operation of Information Systems	(3)
MHIS 574	Project-Management Skills	(3)
MHIS 575	Market Research Methods in Health Care	(3)
MHIS 595	Seminar in Health Information Systems	(3)
MHIS 602	Health Systems Operations Management	(3)

MHIS 604	Strategic Health Information-Systems Management	(3)
MHIS 605	Health Information-Systems Internship	(5)
AHCJ 511	Biostatistics I	(3)
AHCJ 519	Graduate Portfolio	(1)
AHCJ 536	Health Care Financial Management	(3)
AHCJ 537	Organizational Structure and Behavior	(3)
AHCJ 539	Technology and Health Care Organizations	(3)
AHCJ 545	Legal and Ethical Issues in the Health Professions	(3)
REL_ ___	Religion electives	(3)

**HEALTH INFORMATION SYSTEMS—  
PM CERTIFICATE**

The post-master’s certificate program in management of health information systems provides essential skills for administrative, clinical, and financial workers in a variety of health care settings. With the rapid increase of technology in health care, facilitation of the flow of information and the integration of systems is increasingly important to the overall management of health care facilities and to the clinicians who provide patient care.

The post-master’s certificate in health information systems is a flexible program available to physicians, dentists, administrators, and others interested in acquiring additional skills in this area.

**THE CERTIFICATE PROGRAM**

The post-master’s certificate program requires completion of a minimum of 18 units chosen from the program courses specified. The program begins in Autumn Quarter and may be completed in four quarters or less, depending on the courses the applicant is required to complete.

Evening courses are offered twice a week for four quarters (twelve months). Completion of the course work in two years (twenty-four months) is possible by special arrangement.

**Admission**

To be eligible for admission to the post-master’s certificate in health information systems, the applicant must have completed a master’s degree or the equivalent. Applicants must submit the following:

- a statement of professional goals
- a current resume
- transcripts
- a proposed program of study selected from the specified courses
- M.H.I.S.degree program-committee preapproval required before starting the program.

**PREREQUISITE**

Master’s or doctoral degree from an accredited institution

If deemed necessary, students may be asked to complete one or more of the following prerequisite courses:

accounting, foundations of health information systems, introduction to computers.

**PROGRAM OF INSTRUCTION**

The program of instruction outlined as follows suggests courses from which applicants will choose a minimum of 18 units, based on their previous education and professional experience.

MHIS 501	Information Systems in Health Organizations	(3)
MHIS 504	Database Concepts	(3)
MHIS 508	Managing Information Resources	(3)
MHIS 511	Security and Data Communications	(3)
MHIS 515	Maintenance and Operation of Information Systems	(3)
MHIS 574	Project Management Skills	(3)
MHIS 575	Market Research Methods in Health Care	(3)
MHIS 602	Health Systems Operations Management	(3)
MHIS 604	Strategic Health Information-Systems Management	(3)
AHCJ 536	Health Care Financial Management	(3)
AHCJ 537	Organizational Structure and Behavior	(3)
AHCJ 539	Technology and Health Care Organizations	(3)
AHCJ 545	Legal and Ethical Issues in the Health Professions	(3)

**Health Professions  
Education—ST, IS  
(PB certificate, M.S.)**

W. WILLIAM HUGHES, Program Coordinator

The Health Professions Education Program’s 18-quarter unit certificate and 48-quarter unit Master of Science degree are designed for faculty who want to enhance the effectiveness and efficiency of student learning in the classroom and clinic. Upon completion, graduates will be able to plan for effective learning experiences; improve assessment and evaluation of learning and instruction; and evaluate clinical performance with confidence, improve classroom performance, enhance academic administration skills, and develop expertise in health professions education.

**REQUIRED COURSES**

EDCI 504	Philosophy of Christian Education	(3)
AHCJ 505	Educational Psychology for Health Professionals	(3)
AHCJ 506	Educational Evaluation and Clinical Assessment	(3)
AHCJ 600	Active On-line Learning	(3)
REL 555	The Adventist Experience	(3-4)

Courses to complete the Master of Science degree include:

Electives from Domains I and II, with a minimum of 25 units selected from Domain I

Units to complete graduate certificate:

An additional 2 units must be selected from Domains I or II

#### DOMAIN I

##### (Teaching, learning, assessment, and evaluation)

EDCI	512	Faith and Learning	(3)
AHCJ	509	Teaching and Learning Styles	(3)
AHCJ	515	Curriculum Development in Higher Education	(3)
AHCJ	564	Group Process and Dynamics	(3)
AHCJ	599	Directed Teaching	(3)
NRSG	544	Teaching and Learning Theory	(3)
NRSG	545	Teaching Practicum	(3)
NRSG	546	Curriculum Development in Higher Education	(3)
PSYC	544	Foundations of Learning and Behavior	(4)
PSYC	545	Cognitive Psychology	(4)
PSYC	675	Cognitive Development	(2)
RELR	586	Psychology of Moral and Faith Development	(3-4)

#### DOMAIN II

##### (Leadership electives)

AHCJ	536	Health Care Financial Management in Information Systems	(3)
AHCJ	537	Organized Structure and Behavior in Information Systems	(3)
AHCJ	556	Administration in Higher Education	(3)
AHCJ	699	Directed Study	(1-6)
HPRO	543	Writing for Health Professionals	(2-3)
GLBH	517	Cross-cultural Health Care	(3)
PSYC	566	Cross-cultural Psychology	(2)
PSYC	681	Clinical Supervision: Concepts, Principles, and Functions	(2)
PSYC	682	Psychotherapy Supervision Practicum	(2)
RELE	524	Christian Bioethics	(3-4)
RELE	525	Ethics for Scientists	(3-4)
RELE	589	Biblical Ethics	(3-4)
RELF	525	Health Care and Dynamics of Christian Leadership	(3-4)
RELR	575	The Art of Integrative Care	(3-4)
RELR	584	Culture, Psychology and Religion	(3-4)
SOWK	675	Supervision	(2)

## Health Science—IS (B.S., Japan, off-campus)

KEIKO KHOO, Program Director

#### FACULTY

Naoki Ando  
Shigenobu Arakaki  
Yuji Asai  
Edd J. Ashley  
Masahiro Hashimoto  
Liane H. Hewitt  
Esther M. Huecke  
Fusae Ishibashi  
Takeo Itoh  
Craig R. Jackson  
Eric G. Johnson  
Yoshinori Koide  
Everett Lohman III  
Diana S. Medal  
Miyako Murase  
Paige Shaughnessy  
Naohito Shingu  
Tsuyoshi Soji  
Shigeyuki Suzuki  
Chiharu Tanaka  
Akira Tsushima  
Antonio Valenzuela  
Grenith Zimmerman

The Health Science Program leading to the B.S. degree requires completion of the General Education requirements and a major area of emphasis in occupational therapy or physical therapy. A minimum of 192 quarter units must be completed. A maximum of 105 quarter units are transferred from Humanitec Rehabilitation College. Instruction is in the Japanese language or with interpretation, as needed.

#### The program objectives

Upon completion of the B.S. degree in health science, the graduate will be qualified to:

1. Support the University's mission in entry level health-science careers in government, hospitals, and private and voluntary health agencies.
2. Effectively communicate orally and in writing with health care professionals.
3. Pursue postbaccalaureate education in fields such as public health, health care administration, or health education.
4. Facilitate voluntary changes in health behaviors, as well as advocate for social change that leads to higher levels of wellness or rehabilitation.

#### Distance education

The Health Science Program utilizes technology-supported distance education in cooperation with Humanitec Rehabilitation College in Yokkaichi, Japan.

#### Admission

A minimum G.P.A. of 3.0 in the freshman year and two letters of recommendation from the Humanitec program where student is concurrently enrolled are required.

## Humanitarian Assistance— PH (PB certificate)

BARBARA A. ANDERSON, Global Health  
Department Chair

### FACULTY

Barbara A. Anderson  
Eugene N. Anderson  
Juan Carlos Belliard  
Gilbert M. Burnham  
T. Allan Darnell  
David T. Dyjack  
P. William Dysinger  
Harvey A. Elder  
Lars Gustavsson  
Kenneth W. Hart  
Richard H. Hart  
Mark R. Janz  
Jayakaran S. Job  
Susanne B. Montgomery  
Mekebeb Negerie  
Martine Y. Polycarpe  
Rosanne M. Rushing  
Bruce E. Smith  
Larry L. Thomas  
Dennis D. Tidwell  
Lila M. Tidwell  
James M. Weidman  
Jerald W. Whitehouse

The Humanitarian Assistance Program certificate is offered through the School of Public Health's Department of Global Health. The purpose of this certificate program is to familiarize participants with the complex issues and problems associated with the planning, organization, and management of disaster-relief services nationally and globally.

### Learner outcomes

Upon the completion of this certificate program, participants will be able to:

1. Plan the public health aspects of a refugee camp—including triage systems, health care, environmental control, and legal issues.
2. Analyze the socioeconomic, political, and public health implications of violence in order to develop appropriate prevention and intervention strategies.
  - Discuss the current world health programs, with a focus on ecological, demographic, developmental, and sociocultural determinants of health and delivery of primary health care services.
  - Write a competitive proposal for grants and contracts.

### PREREQUISITE

U.S. baccalaureate degree or its equivalent

### REQUIREMENTS

GLBH 519	Principles of Disaster Management	(3)
GLBH 547	Refugee Health	(3)
GLBH 548	Violence Issues: Global Public Health Perspectives	(3)

GLBH 564	Primary Health Care Programs I	(3)
GLBH 566	Primary Health Care Programs II	(3)
GLBH 568	Primary Health Care Programs III	(3)
"REL_ ___	Religion	(3)
PHCJ 605	Philosophy of Public Health	(1)
STAT 515	Grant- and Contract-Proposal Writing	(3)
TOTAL UNITS		25

## Implant Dentistry, Advanced—SD (M.S., PD certificate)

JAIME L. LOZADA, Program Director

### FACULTY

Joseph Y. K. Kan  
Matthew Kattadiyil  
Alejandro A. Kleinman  
Jaime Lozada

The advanced dental education Implant Dentistry Program leads to a certificate. The resident may also obtain a Master of Science degree. The program is designed to prepare the resident for the practice of implant dentistry and to provide the foundation for the continued acquisition of knowledge and clinical skills in this demanding area.

Implant dentistry interfaces with the dental specialties of oral and maxillofacial surgery, prosthodontics, and periodontics. The implant dentistry student will be expected to achieve advanced knowledge and skills in certain aspects of all these dental specialties and to be proficient in implant prosthodontics and implant surgery. The content of the program is designed to prepare the student for certification by the American Board of Implant Dentistry, and upon application s/he may be qualified as an associate fellow of The American Academy of Implant Dentistry.

The required time in residence for the certificate is thirty-three months. The beginning date is March, and the first quarter will be spent in dental anesthesiology rotation.

Following enrollment into the program, residents may apply for acceptance to the Master of Science (M.S.) degree track in addition to the specialty certificate. The application should be submitted before the end of the first year and must be supported by a letter of recommendation from the program director. Acceptance into the M.S. degree program may extend the length of study to complete a research project and a thesis. The additional time must be in residence.

### Application deadline

Application for admission should reach the program by September 15 of the year prior to the summer of intended enrollment.

### Tuition

The Implant Dentistry Program commences with a residency in anesthesiology in the Spring Quarter before the program's academic year begins Summer

Quarter. During the Spring Quarter residency (the first quarter of the program), students do not pay tuition; instead, only insurance and fees are charged. The 2005-2006 Spring Quarter charge for insurance and fees is \$543. A separate fee of \$1,400 is charged for GRDN 632 Basic Microsurgery Technique, taken by residents during the first quarter (Spring). This fee does not include instruments and textbooks.

Tuition for the 2005-2006 academic year is \$8,300 per quarter. The tuition rate for subsequent years is expected to increase about 5 percent per year. During quarters two through nine, first- and second-year residents pay regular tuition, which includes insurance and fees. During quarters ten through twelve, third-year residents pay only insurance and fees.

#### DEPARTMENTAL REQUIRED COURSES

IMPD 505	Patient-Presentation Seminar	(1)
IMPD 533	Applied Radiology for Implant Dentistry	(1.5)
IMPD 561	Dental Bioengineering	(2)
IMPD 585	Implant Prosthodontics	(2)
IMPD 601	Literature Review in Implant Dentistry	(1-2)
IMPD 604	Current Literature Review in Implant Dentistry	(2)
IMPD 611	Introduction to Implant Dentistry	(2)
IMPD 612	Advanced Implant Dentistry	(2)
IMPD 625	Clinical Practice in Implant Dentistry	(1065 clock hours)
IMPD 626	Clinical Practice of Periodontics in Implant Dentistry	(88 clock hours)
IMPD 627	Clinical Practice of Prosthodontics in Implant Dentistry	(440 clock hours)
IMPD 631	Oral Implant Surgery	(1)
IMPD 634	Diagnosis and Treatment Planning in Implant Dentistry	(1)
IMPD 637	Peri-Implant Histopathology	(1)
IMPD 654	Practice Teaching in Implant Dentistry	(3)
IMPD 697A	Research	(1)
IMPD 697B	Research	(1)
IMPD 698	Thesis (M.S. track only)	(1)

#### INTERDISCIPLINARY AND NON-DEPARTMENTAL REQUIRED COURSES

ANES 546	General Anesthesia (section II)	(9)
ANES 547	Anesthesia Grand Rounds (section II)	(1)
ANES 604	Anesthesia Literature Review (section II)	(1)
GRDN 514	Introduction to Biomedical Research	(4)
GRDN 531	Applied Surgical Anatomy	(2)
GRDN 604	Topics in Medicine and Hospital Protocol	(2)
GRDN 609	Professional Ethics	(2)
GRDN 622	Biomedical Science I	(4)
GRDN 623	Biomedical Science II	(4)
GRDN 632	Basic Microsurgery Technique	(2)
OMFS 604	Selected Topics in Oral and Maxillofacial Surgery	(11)

PROS 500	Current Prosthodontic Literature Review	(6)
PROS 546	Occlusion and Morphology	(2)
PROS 547	Occlusion: Principles and Instrumentation	(2)
PROS 555	Removable Partial Prosthodontics	(2)
PROS 565	Complete Denture Prosthodontics	(2)
PROS 566	Advanced Complete Denture Prosthodontics	(2)
PROS 575	Fixed Partial Prosthodontics	(2)
PROS 576	Advanced Fixed Partial Prosthodontics I (MC esthetics)	(2)
PROS 595	Maxillofacial Prosthodontics	(2)
RELE ___	Religion elective	(3)

## Lifestyle Intervention—PH (Certificate)

The Lifestyle Intervention Program Certificate, offered by the School of Public Health's Department of Health Promotion and Education, prepares participants to accurately assess the health-related lifestyle conditions, practices, and motivation of individuals and community groups in order to help them improve their health through implementation of health-related lifestyle intervention approaches.

#### Learner outcomes

Upon completion of this program, participants should be able to:

1. Accurately assess lifestyle practices and conditions.
2. Identify and apply appropriate dietary, fitness, and other lifestyle-based interventions.
3. Apply principles and methods to help individuals change their lifestyle-related health behaviors.
4. Decide when and how to refer individuals to various health care professionals.
5. Provide leadership for community-based health promotion projects in selected settings.

Following the successful completion of the program, each participant will be awarded a certificate in lifestyle intervention from Loma Linda University School of Public Health.

#### People who may benefit from earning the certificate

- Practicing health professionals who desire more training in lifestyle intervention.
- Loma Linda University School of Public Health students who can add this certificate to their M.P.H. degree training by adding a few more classes.
- Loma Linda University students from other schools who desire competence in lifestyle intervention.
- Loma Linda University alumni.
- Other individuals who wish to provide lifestyle education in their communities.

**PREREQUISITE**

- U.S. baccalaureate degree or its equivalent
- Two recommendation letters
- Interview with departmental faculty member
- Computer literacy or STAT 439
- Anatomy and physiology

## Marital and Family Therapy—ST (M.S., D.M.F.T., Ph.D.)

MARY E. MOLINE, Program Coordinator

DIANNA LYNNE CONNORS, Program Coordinator,  
Canadian University College campus

CARMEN KNUDSON-MARTIN, Coordinator Ph. D.  
Program

DOUGLAS HUENERGARDT, Coordinator D.M.F.T.

**FACULTY**

Jennifer Andrews

Ian P. Chand

Gerald Corey

Lolita Domingue

Curtis Fox

Suzanne Hanna

Doris Hubbard

Douglas Huenergardt

Carmen Knudson-Martin

Craig Lambdin

Randall Lee Roberts

Cheryl Simpson

Randall Walker

Colwick Wilson

Recognizing its influence through teaching, research, supervised practice, and service, the mission of the Department of Counseling and Family Sciences in the School of Science and Technology is to address relational needs and concerns of individuals and families over the life course in the contexts of communities and global society; encourage spirited wholeness by attending to the physical, mental, and social dimensions of human experience; create understanding about humans as relating beings; advance appreciation for human diversity as modeled; advocate for the rights for all humans, for the protection of human dignity, and the value of respect in all human interactions; collaborate with community in the training, service, and scholarship in our field; and influence our immediate environment as well as the whole world.

**Degree and certificate options**

The Department of Counseling and Family Sciences, through the Marital and Family Therapy Program, offers quality clinical training and an academic education that leads to a variety of degree options. Students in this program may obtain one of the following degrees: M.S., Ph.D., or D.M.F.T. degree in marital and family therapy (Loma Linda University campus); M.S. degree in marital and family therapy

(Canada campus). Students may also select an emphasis within their degree or obtain a certificate in one (or more) of the following areas: clinical mediation, drug and alcohol counseling, family counseling, family-life education, group counseling, child-life specialist, and school counseling. Combined degrees are offered in marital and family therapy with clinical ministry (M.S./M.A.); and in marital and family therapy with public health (M.S./M.P.H.).

A postbaccalaureate interim master's and doctoral degree program allows students to finish in approximately four or five years, complete the hours required for California state license in marital and family therapy, and obtain their AAMFT-approved supervisor status.

**MARITAL AND FAMILY THERAPY—M.S.****Purpose**

The Master of Science degree in marital and family therapy is designed to give students a broad academic background as well as professional practice for working with individuals, couples, and families in a variety of settings. These include, but are not limited to, medical, legal, educational, mental health, managed care/HMO, private practice, and church settings.

**Licensure and program accreditation**

Marriage and family therapy is established in California by law as a profession requiring state licensure. Persons who desire to enter the profession must have the proper academic and clinical preparation and must pass written and oral licensing examinations. The master's degree program at Loma Linda University provides the academic requirements to meet the California licensing standards according to Business and Professions Code 4980.38, and has the following objectives:

1. Develop skilled professionals in marriage and family therapy.
2. Expose students to available content material in the field.
3. Provide supervised clinical training toward the development of clinical skills and competence.
4. Provide specialized training in one of the family therapy modalities that will qualify graduates for licensure as marriage and family therapists.
5. Prepare students to be familiar with sociocultural issues.
6. Prepare marital and family therapy students for professional practice, with specialized training in the delivery of services in private-practice and institutional settings.

The American Association for Marriage and Family Therapy (AAMFT) functions on a national basis to ensure that academic and clinical training programs adhere to the standards of the profession. The program offered by Loma Linda University is fully accredited by the Commission on Accreditation for Marriage and Family Therapy Education (COAMFTE), the accrediting body for AAMFT. Clinical license requirements vary by state and will require additional hours of supervised clinical practice.

### Admission

Applicants to the M.S. degree in marital and family therapy program—which may be pursued at Loma Linda University or at Canadian University College—must meet the School of Science and Technology admission requirements outlined in this CATALOG and give evidence of academic ability, emotional stability, and maturity.

### Prerequisites

Students are required to take theories of personality or theories of counseling, abnormal psychology, and statistics before applying to the program. Students may challenge or request a waiver of a prerequisite by petition to the department Admissions Committee. Students wishing to apply master's degree-level course work completed at a regionally accredited school prior to application must provide applicable transcripts and/or syllabi. In addition to completing the required application forms, students should provide character and academic references and take the critical-essay examination.

### General admission information

Students are admitted in Autumn and Winter quarters. With special permission, a student may be permitted to enter Spring or Summer quarter. Program requirements for admission are as follows:

1. Applicants must have a bachelor's degree from a regionally accredited institution in any field. Candidates must have a minimum 3.00 G.P.A. for the last 45 quarter credits (30 semester units) of course work completed before applying for admission, or in all undergraduate work, whichever is greater.
2. Applicants must submit three letters of recommendation—  
At least two from persons professionally qualified to recommend for a field of this nature, and  
At least one from a person qualified to evaluate the applicant's ability. Letters will not be accepted from friends or relatives.
3. Applicants will submit a typed personal statement that addresses—  
Career objectives,  
Personal interest in marriage and family therapy,  
Rationale for choosing to attend Loma Linda University,  
How life experiences have influenced applicant's choice to enter the field of marriage and family therapy, and  
Additional thoughts the applicant deems important.
4. Those for whom English is not their first language must present a minimum score of 213 for the computer test and 550 for the pencil test on the Test of English as a Foreign Language (TOEFL).
5. Those who are not citizens or permanent residents of the U.S. must provide a valid student visa.

### Admission procedures

The Marital and Family Therapy Admissions Committee will screen application materials submitted, and then will invite selected applicants to an individual or group interview. Under special circumstances a phone interview will suffice.

Upon completion of 18 quarter units, each student will be evaluated by all teaching faculty to determine if the student can continue the program and/or be permitted to enter the clinical phase of the program. The clinical phase includes a six-quarter practicum sequence and supervision as a trainee at a clinical site.

### Degree completion

The M.S. degree in marital and family therapy may be completed in either a two-year (full-time) or three-year (part-time) sequence; but in exceptional circumstances students have up to five years to complete the degree. In order to maintain full-time status, students must take a minimum of 8 units during the Fall, Winter, Spring, and Summer quarters. Courses are held during afternoon or evening hours. Typically, first-year courses are held on Tuesday and Thursday, and second-year courses on Monday and Wednesday. Full-time employment is discouraged when a student is enrolled for full-time study.

### Degree requirements

Requirements for the Master of Science degree at both Loma Linda University and Canadian University College campuses include the following:

1. Residence of at least two academic years.
2. A minimum of 78 quarter units of graduate work, which includes credit received for core courses, electives, and a 3-unit religion course.
3. Practicum in marriage and family counseling. A minimum of 500 direct client-contact hours and 100 direct-supervision hours are required. Of the direct client-contact hours, at least 250 hours must be with couples and families. Of the direct-supervision hours, at least 50 hours must be with raw data (video, audio, and live supervision). For every week in which clients are seen, the student must have at least one hour of individual supervision. The ratio of supervision hours to treatment hours must not be less than one hour of supervision to five hours of clinical contact. Clinical training, as defined by the Commission on Accreditation for Marriage and Family Therapy, includes a minimum of twelve continuous months in a clinical traineeship. Students enrolled in the program should consult the clinical training manual regarding clinical training requirements.
4. Successful completion of a written comprehensive examination (taken before advancement to candidacy) and an oral examination (taken at the end of the program).

### Clinical services

The program operates a community marriage and family therapy clinic to provide counseling services to individuals, couples, and families; and to give opportunity for clinical practice for student trainees and interns. The student's field experience and traineeship may be taken at other clinics in the Riverside, San Bernardino, and Orange County areas. Paid traineeships are available.

### Financial aid

The Marital and Family Therapy Program students are eligible for federal, state, and private loans and grants. The Department of Counseling and Family Sciences offers financial aid on a limited basis.

Research assistantships and other paid opportunities in the department are also available on a limited basis.

## MARITAL AND FAMILY THERAPY—M.S.

### CANADIAN CAMPUS PROGRAM

(This program is not accredited by the Commission on Accreditation for Marriage and Family Therapy Education [COAMFTE], the accrediting body for the AAMFT)

The Canadian campus program is an innovative venture that combines the teaching expertise of the Loma Linda University California campus faculty, the Canadian campus program faculty, and adjunct instructors and guest lecturers from the local professional community. A clinically based program, courses are taught on campus utilizing two methods of instruction. Approximately half the courses are taught on an intensive basis. Typically, 2-unit intensives run for three days, Monday through Wednesday; and 3-unit intensives run for four days, Monday through Thursday. Generally, there is one intensive scheduled per month. The remainder of the courses meet once a week (except during intensive weeks) for the full quarter. Courses are taught three quarters per year, mid-September through mid-June. It should be noted that certain courses cannot be offered on an intensive basis and require weekly attendance.

Loma Linda University is accredited by the Western Association of Schools and Colleges (WASC) in the United States, and the Canadian campus program is recognized by Alberta Advanced Education (Private Institutions) as a graduate degree-granting program. The Canadian campus program is officially directed by the California campus and meets the WASC accreditation requirements.

Depending on undergraduate preparation and the course work selected, students graduating from this program may be qualified to become provisionally chartered as psychologists in the province of Alberta, or registered social workers with the Alberta College of Social Workers. Marriage and family therapy is an unregulated profession in Alberta. However, we do encourage students to become concurrent members of the American Association for Marriage and Family Therapy. This organization has collegial benefits to the student, long-term legislative initiatives, as well as a local chapter, the Alberta Association for Marriage and Family Therapy.

### CURRICULUM (M.S.—on and off campus)

The following are the major areas of study and the required and elective courses for each, totaling 78 quarter units.

THE MAJOR AREAS OF STUDY	(78)
<b>Theoretical foundations</b>	(12)
MFAM 551 Family Therapy I: Theory and Practice	(3)
MFAM 553 Family Systems Theory	(3)
MFAM 564 Family Therapy II: Theory and Practice	(3)
<b>Clinical knowledge</b>	(21)
MFAM 515 Crisis-Intervention Counseling	(3)

MFAM 524 Psychopharmacology and Medical Issues	
MFAM 552 Couples Therapy: Theory and Practice	(3)
MFAM 556 Psychopathology and Diagnostic Procedures	(3)
MFAM 624 Individual and Systems Assessment	(3)
MFAM 638 Family Therapy and Chemical Abuse	(3)
MFAM 644 Child Abuse and Family Violence	(3)
FMST 514 Cross-cultural Counseling and Family Values	(2)
MFAM 545 Gender Perspectives	(2)
MFAM 674 Human Sexual Behavior	(3)

### Individual development and family relations

MFAM 547 Social Ecology of Individual and Family Development	(3)
MFAM 584 Advanced Child and Adolescent Development	(3)

### Professional identity and ethics

MFAM 535 Case Presentation and Professional Studies	(4)
MFAM 614 Law and Ethics	(3)

### Research

MFAM 501 Research Tools and Methodology I	(3)
MFAM 502 Research Tools and Methodology II	(3)

### ADDITIONAL LEARNING

#### Supervised clinical practice (10)

MFAM 536, 537 Case Presentation	(2, 2)
MFAM 635, 636, 637 Case Presentation	(2, 2, 2)
MFAM 534 Clinical Training	(200 hours total)
MFAM 634 Advanced Clinical Training	(300 hours total)

#### Religion

RELR 564 Religion, Marriage, and the Family	(3)
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#### Group

MFAM 568 Groups: Process and Practice	(3)
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#### Electives (one course in theory required) (6)

FMST 524 Family-Resource Management	(2)
FMST 528 Parenting	(2)
FMST 529 Family-Life Education	(2)
COUN 574 Psychological Foundations of Education	(4)
COUN 575 Counseling Theory and Applications	(3)
#COUN 576 Exceptional Learners	(3)
COUN 577 Assessment in Counseling	(3)
COUN 578 College and Career Counseling	(3)
COUN 678 Consultation and Leadership	(3)
COUN 679 School Counseling: History and Practice	(3)
COUN 680 Field Experience and Supervision in School Counseling (600 clock hours)	(4)
MFAM 516 Play Therapy	(2)
MFAM 525 Therapeutic Group	(2)
MFAM 526 Theory and Practice of Group Counseling	(3)
MFAM 527 Training/Supervision Workshop in Group Counseling	(3)

MFAM 538	Theory and Practice of Conflict Resolution	(2)
MFAM 539	Solution-Focused Family Therapy	(2)
MFAM 544	Family and Divorce Mediation	(4)
MFAM 548	Men and Families	(2)
MFAM 549	Christian Counseling and Family Therapy	(2)
MFAM 555	Narrative Family Therapy	(2)
MFAM 557	Object-Relations Family Therapy	(2)
MFAM 559	Cognitive Behavioral Couples Therapy	(2)
MFAM 565	Advanced Bowen: Theory and Practice	(2)
MFAM 566	Psychopathology and Diagnostic Procedures II	(2)
MFAM 569	Advanced Group Therapy	(2)
MFAM 585	Internship in Family Mediation	(1-4)
MFAM 605	Gestalt Family Therapy	(2)
MFAM 606	Emotionally Focused Couples Therapy	(2)
MFAM 615	Reflective Practice	(2)
MFAM 659	Current Trends in the Field of Family Therapy	(2)
MFAM 664	Experiential Family Therapy	(2)
MFAM 665	Structural Family Therapy	(2)
MFAM 670	Seminar in Sex Therapy	(2)
MFAM 675	Clinical Problems in Marriage and Family Therapy	(1-2)
MFAM 694	Directed Study: Marriage and Family	(1-4)
MFAM 695	Research Problems: Marriage and Family	(1-4)
<b>Post-master's</b>		
MFAM 651	AAMFT-Approved Supervisor Training	(3)
MFAM 704	MFAM State Board Written Examination Review	(2)
MFAM 705	MFAM State Board Oral Examination Review	(2)
MFAM 744	Clinical Internship	(1)

## MARITAL AND FAMILY THERAPY— (PH.D.,D.M.F.T.)

Loma Linda University Department of Counseling and Family Sciences offers the Ph.D. and the D.M.F.T. degrees in marital and family therapy.

### Ph.D. degree in marital and family therapy

The Ph.D. degree in marital and family therapy (MFT) follows the scientist-practitioner model, in which students are expected to develop expertise both in empirical research methods and clinical practice for careers in teaching and research. The Ph.D. degree in marital and family therapy is a 108-unit program requiring three-to-four years for completion—including two-to-three years of course work, a dissertation, and clinical internship.

### D.M.F.T. degree in marriage and family therapy

The D.M.F.T. degree follows the practitioner-evaluator model and focuses on applied-skill development for use in clinical practice and administrative positions. The D.M.F.T. degree is a 108-unit program,

requiring three to four years for completion—including doctoral project and clinical internship.

### Interim master's degree

The Ph.D. degree with interim master's degree or the D.M.F.T. degree with interim master's degree requires 168 and 160 units, respectively. These programs are for selected advanced students who have a bachelor's degree, or for students whose master's degree is not in marital and family therapy (or equivalent). They take approximately five years to complete.

### Concentrations

All doctoral students must complete a 12-unit concentration in a special area of focus of their choice. Examples include, but are not limited to:

- Families, systems, and health
- Family studies
- Professional consultation and systems relations
- Clinical mediation
- School counseling

### MFT licensure track

(for students who have not previously met academic requirements for MFT licensure)

Marriage and family therapy is established in California by law as a profession requiring state licensure. Persons who desire to enter the profession must have the proper academic and clinical preparation and must pass the written and oral licensing examinations. The doctoral degree programs at Loma Linda University are designed to provide the academic requirements to meet the California licensing standards according to Business and Professions Code 4980.38.

The Ph.D. degree in marital and family therapy and the D.M.F.T. degree offered by Loma Linda University were awarded candidacy status in 2003 by the Commission on Accreditation of Marriage and Family Therapy Education (COAMFTE), the accrediting body associated with the American Association for Marriage and Family Therapy.

### Purpose and mission

The purpose of the doctoral programs in marital and family therapy is to develop family therapy scholars who will advance theory, research, clinical practice, community involvement and teaching in the field of marital and family therapy. Students will be prepared for research, teaching, supervision, administration, and clinical training positions in health-care settings, in training institutes, and in institutions offering graduate degrees. The D.M.F.T. degree program offers the opportunity to expand clinical skills and prepares students with expertise in program-evaluation research methods. Ph.D. degree students develop expertise in conducting original research from both quantitative and qualitative approaches.

### Knowledge and skills promoted

Students study the work of the original thinkers in marital and family therapy, as well as the most recent developments in the field—such as social constructionism, narrative and solution-oriented therapies, and reflecting teams. They will develop a critical understanding of the theoretical and philosophical foundations of MFT; critically examine the interrelationships between sociohistorical factors, family structures and

relationships and clinical approaches; be conversant in the current issues in the field; and contribute to the discourse regarding them.

### Personal development

The program encourages students to develop a clear understanding of themselves and to consider reflectively the impact of their personal values, social positions, and contexts on their clinical and scholarly practices. Students are supported in the development of their strengths as they create an epistemological framework and ethical consciousness to guide their work.

### Practice and supervisory skills

Students will apply a critical understanding of the theory to the practice of marital and family therapy at the family, community, and societal levels, drawing on the core modalities of the field. They will develop sophistication in their personal clinical skills, supervisory skills, and skills for active multisystemic involvement.

### Research and evaluation skills

Students will develop skills and a critical understanding of the process of research and evaluation related to families and marital and family therapy. This includes the ability to apply research findings to clinical practice and to utilize research findings in creative ways for the benefit of the general population.

Students in the Ph.D. degree program will develop expertise in both qualitative and quantitative research methods, leading to publication in scholarly journals and presentations at professional conferences. D.M.F.T. degree students will focus on evaluation of program performance and outcomes in practice-based settings.

### Core ideas guiding the MFT doctoral programs

**Relational systems:** People are best understood within the cultural, spiritual, and relational systems in which they are embedded. Change, therefore, occurs in the context of family, community, and interpersonal relationships. These programs focus on both the structured relational patterns of communication and interaction and on the systems of meaning that define and shape these patterns.

**Wholeness:** These programs encourage wholeness by attending to the physical, mental, social, and spiritual dimensions of human experience. These dimensions reciprocally interact at every level.

**Social forces:** The programs are guided by a belief that social contexts and processes influence meanings, values, and people's understandings of self, family, and others. Particular emphasis is placed on

- research focusing on social forces relevant to the distinctive multicultural mix of families in the southern California region,
- the interrelationship between faith and family relationships throughout the world,
- the effects of the changing health care system and of medical technology; and
- collaboration among education, family, work, and legal systems.

**Healing power of relationships:** As people become more connected to each other and their communities, the potential for growth and healing are enhanced, and the opportunities for making positive contributions are maximized. Students are encouraged to develop their therapeutic relationship and community-involvement skills so that they can cocreate an environment of

safety, respect, compassion, openness, and community participation.

**Diversity:** An appreciation of the importance of social forces requires interest in and respect for the diverse experiences and perceptions of human beings. Different social contexts such as race, ethnicity, religion, gender, and socioeconomic status result in a wide variety of meanings and behavior patterns in marriages, families, and intimate relationships. The programs seek to create a diverse mix of students and faculty, and to challenge all who are involved to learn from the richness of multiple perspectives.

**Empirical process:** The programs encourage clinical work and theory development grounded in an empirical understanding of human experience. Students are offered the opportunity to develop their capacities to utilize inductive and deductive reasoning; as well as objectivity, subjectivity, and intersubjectivity in research and therapy.

**Education and prevention:** Connections at family, school, and community levels are important components of resilience. The programs emphasize helping individuals and families access their relational competencies as an important part of prevention, as well as the resolution of their current difficulties.

**Spirituality:** These programs view spirituality as central to wholeness and healing. Students are encouraged to integrate their practices of faith with their professional work. The programs place strong emphasis on active demonstration of moral and ethical principles as exemplified by, but not limited to, Judeo-Christian teachings.

**Worldwide focus:** The missions of the programs reach beyond the local and national community to the international community. This includes our collaboration with people from other nations and cultures to promote mutual understanding, resolve problems, and strengthen families.

### Admissions

The doctoral programs in marital and family therapy represent advanced study beyond the master's degree in the field. Acceptance into these programs is based on an integrated evaluation of the following criteria:

1. Autobiographical/personal statement, including personal goals and writing sample.
2. Course work prerequisites for M.S. degree in marital and family therapy degree or equivalent (individual equivalency review).
3. M.S. degree in marital and family therapy, M.A. degree in family studies, or a graduate degree in a related field (i.e., sociology or anthropology), unless applying for bachelor's entry level.
4. Grade-point average of 3.3 or above.
5. Oral interviews with department (one day).
6. Three letters of reference (academic and/or professional).
7. Resumé (preferred but not required).
8. Minimum test scores GRE, (test must have been taken within the past 5 years) 1000 (combined verbal and quantitative) and 4.0 on analytical writing for Ph.D. degree only); TOEFL, 550 (pencil test) or 213 (computer score) (English as a second language only).

9. Official transcripts for all college and graduate study.
10. According to COAMFTE guidelines, 500 hours of direct client contact required prior to entering the program (or 1,000 clinical hours required while in program).
11. Critical-essay examination (D.M.F.T. degree only).

**PREREQUISITE**

**MASTER'S DEGREE-LEVEL STUDY**

Student transcripts will be evaluated on a course-by-course basis for the following areas of prerequisite study. A plan of study incorporating these standard master's degree-level courses is available for students who have not completed these prerequisites:

**Quarter units**

- Theoretical knowledge in family systems/relational therapy (8)
- Clinical knowledge in marital and family therapy (16)
- Individual development and family relations (8)
- Additional study in areas (4)**
  - Professional issues and ethics in marital and family therapy (4)
  - Research (4)
  - Additional related study (4)

MINIMUM TOTAL APPROVED PREREQUISITE STUDY (48)

**Financial assistance**

Students who are accepted into the marital and family therapy doctoral programs may apply for a variety of research, teaching, and administrative assistantships awarded by the Department of Counseling and Family Sciences; or through need-based financial aid, such as a loan or the University's work-study program. Departmental awards are contingent on the availability of funds.

**PROGRAM COURSE OUTLINE**

**CORE COURSES  
FOR PH.D. IN MARITAL AND FAMILY THERAPY  
AND D.M.F.T. DEGREES**

- Theory and practice (12 quarter units)**
  - MFTH 506 Clinical 1—Cybernetics (Systemic Strategic, Milan) (3)
  - MFTH 507 Clinical 2—Meaning (Narrative, Milan) (3)
  - MFTH 508 Clinical 3—Natural Systems (Bowen, et al) (3)
  - MFTH 509 Clinical 4—Clinical Issues (Ericksonian, emotionally focused) (3)
- Individual development and family relations (4)**
  - MFTH 505 Advanced Family Studies (4)
- Supervision (4)**
  - MFTH 501 Supervision in MFT (2)
  - MFTH 502 Advanced Supervision in MFT (2)

- Research (17)**
  - MFTH 601 Statistics I (4)
  - MFTH 604 Advanced Qualitative Methods (4)
  - MFTH 605 Advanced Quantitative Methods (4)
  - MFTH 606 Overview and Critique of Research in MFT (4)
  - MFTH 607 Computer (1)

- Spirituality (9)**
  - RELT 615 Seminar in Philosophy of Religion (3)
  - RELR 535 Spirituality and Mental Health (3)
  - RELE 505 Clinical Ethics (3)
  - or
  - RELE \_\_\_\_ Selective 500 level or above (3)

- Clinical practicum (6)**
  - MFTH 634 Practicum (prerequisite 200 clinical hours) (2, 2, 2)

**Direct client contact Required:**  
Systems/relational therapy supervised by an AAMFT-approved supervisor (or equivalent) (1000 hours)  
Some or all of these hours may be completed prior to doctoral study.

**Doctoral internship**  
Full-time work under a senior marital and family therapist following completion of course work (nine months)

TOTAL SHARED CORE (52)

**REQUIRED FOR PH.D. DEGREE**

- MFTH 504 Advanced Theory in MFT (4)
- MFTH 602 Statistics II (4)
- MFTH 603 Statistics III (4)
- MFTH 608 Analysis and Presentation of Research (3)
- MFTH 668 Practicum in Qualitative Research (2)
- MFTH 694 Doctoral Seminar (1)
- MFTH 697 Research (towards dissertation) (17)
- MFTH 698 Dissertation (3)

**UNIT SUBTOTALS, PH.D. DEGREE**

- Doctoral core 52
- Required Ph.D. degree units 18
- Concentration 12
- Additional electives 6
- Dissertation 20
- TOTAL PH.D. DEGREE UNITS 108

**REQUIRED FOR D.M.F.T. DEGREE**

- MFTH 525 Advanced MFT Assessment (3)
- MFTH 527 Advanced Legal and Ethical Issues (3)
- MFTH 524 Administration in MFT (3)
- MFTH 624 Program Development for Families and Communities (3)
- MFTH 625 Grant Writing (3)
- MFTH 626 Program Evaluation and Monitoring (3)

MFTH 627	Advanced Program Development and Evaluation	(2, 2)
MFTH 695	Doctoral Project	(3)
MFTH 697	Research (toward doctoral project)	(8)

UNIT SUBTOTALS, D.M.F.T. DEGREE

Doctoral core	52
Required D.M.F.T. degree units	22
Concentration	12
Additional electives	3
Doctoral project	11
<b>TOTAL D.M.F.T. DEGREE UNITS</b>	<b>100</b>

**ADDITIONAL COURSES  
REQUIRED FOR INTERIM MASTER'S DEGREE**

The interim master's degree is for students who do not hold the Master of Science degree in family therapy prior to admission.

Courses for the interim master's degree program must be taken prior to doctoral courses.

**Required standard master's degree courses (59)**

MFAM 535	Case Presentation and Professional Studies	(4)
MFAM 515	Crisis-Intervention Counseling	(3)
MFTH 538	Introduction to Relational Practice	(2)
MFAM 551	Family Therapy I: Theory and Practice	(3)
MFAM 556	Psychopathology and Diagnostic Procedures I	(3)
MFAM 614	Law and Ethics	(3)
MFAM 624	Individual and Systems Assessment	(3)
MFAM 547	Social Ecology of Individual and Family Development	(3)
MFAM 553	Family-Systems Theory	(3)
MFAM 644	Child Abuse and Family Violence	(3)
MFAM 552	Couples Therapy: Theory and Practice	(3)
FMST 514	Cross-cultural Counseling and Family Values	(2)
MFAM 501	Research Tools and Methodology I (Quantitative)	(3)
MFAM 545	Gender Perspectives	(2)
MFAM 674	Human Sexual Behavior	(3)
or		
MFAM 670	Seminar in Sex Therapy	(2-3)
MFAM 564	Family Therapy II: Theory and Practice	(3)
MFAM 584	Advanced Child and Adolescent Development	(3)
MFAM 536	Case-Presentation Seminar	(2)
MFAM 537	Case-Presentation Seminar	(2)
MFAM 635	Case-Presentation Seminar	(2)
MFAM 638	Family Therapy and Chemical Abuse	(3)
MFAM 734	Professional Clinical Training (200 client-contact hours)	(1.5-3)
MFAM 568	Groups: Process and Practice	(3)

An interim master's degree will be awarded after students

have completed

- 90 units, including all required master's level units,
- 30 doctoral level units,
- an objective comprehensive examination, and
- 500 hours of direct client contact under an AAMFT- approved supervisor.

All doctoral requirements remain the same.

**ADDITIONAL REQUIRED UNITS**

MFTH 526	Psychopharmacology and Medical Issues	(3)
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**MFT LICENSURE TRACK (PH.D.)**

This track is for students who have not previously met academic requirements for MFT licensure. These courses must be taken in addition to other required courses, but may serve as the concentration.

MFTH 525	Advanced Marital and Family Therapy Assessment	(3)
MFTH 526	Psychopharmacology and Medical Issues	(3)
MFTH 527	Advanced Legal and Ethical Issues	(3)
MFAM 556	Psychopathology and Diagnostic Procedures I	(3)
FMST 514	Cross-cultural Counseling and Family Values	(2)
MFTH 515	Couples and Sex Therapy	(2)
or		
MFAM 674	Human Sexual Behavior	(3)
MFAM 638	Family Therapy and Chemical Abuse	(3)
MFAM 644	Child Abuse and Family Violence	(3)
MFTH 634	Practicum	(2, 2, 2)

**MFT LICENSURE TRACK (D.M.F.T.)**

For students who have not previously met academic requirements for MFT licensure. These courses must be taken in addition to other required courses, but may serve as the concentration:

MFTH 526	Psychopharmacology and Medical Issues	(3)
MFTH 529	Advanced Psychopathology and Diagnosis	(2)
or		
MFAM 556	Psychopathology and Diagnostic Procedures I	(3)
FMST 514	Cross-cultural Counseling and Family Values	(2)
MFTH 515	Couples and Sex Therapy	(2)
or		
MFAM 674	Human Sexual Behavior	(3)
MFAM 638	Family Therapy and Chemical Abuse	(3)
MFAM 644	Child Abuse and Family Violence	(3)

# Maternal and Child Health—PH (M.P.H.)

The Maternal and Child Health Program leading to the M.P.H. degree will prepare graduates to demonstrate the competencies identified by the Association of Teachers of Maternal and Child Health and the Association of Schools of Public Health.

Course work toward the M.P.H. degree in maternal and child health may be pursued in the following formats:

- a traditional day program;
- an evening program; or
- intensive, nontraditional Spanish-language programs in Peru or Chile.

The major in maternal and child health builds on health education, epidemiology, cross-cultural, and nutrition theory and practice. Family-health issues are addressed using a broad array of public health strategies.

The program requires completion of a minimum of 50 units, with culminating activity and a 400-clock-hour field practicum.

Licensed health professionals with experience in public health may apply to the 50-unit program in maternal and child health. Those without a health profession and/or public health experience may apply to the 65-unit dual-major program. Students who complete the dual major will be eligible to sit for the examination leading to certification as a health education specialist (CHES).

## Learner Outcomes

Graduates of this program in maternal and child health will have the skills necessary to:

1. Apply public health research and management tools to the organization, design, implementation, and evaluation of maternal-child health programs in public health settings.
2. Contribute to the development of public health policy and action agendas in maternal and child health.
3. Communicate health and nutrition issues affecting mothers and children to a wide variety of stakeholders in varying cultural settings.

## MATERNAL- AND CHILD-HEALTH—M.P.H.

### PREREQUISITE

Demonstrate college-level conceptualization and writing skills

Professional license in a medical or health-related discipline (dentistry, medicine, social work, nursing, dietetics)

Relevant professional or public health experience in the field of maternal and child health

## DEGREE REQUIREMENTS

### Public health core courses (20 units)

ENVH 509	Principles of Environmental Health	(3)
EPDM 509	Principles of Epidemiology I	(3)
HADM 509	Principles of Administration in Public Health	(3)
HPRO 509	Principles of Health Behavior	(3)
±REL_5__	Religion	(3)
PHCJ 605	Philosophy of Public Health	(1)
STAT 509	General Statistics	(4)

### Maternal and child health core courses (21 units)

EPDM 534	Epidemiology of Maternal and Child Health	(3)
HPRO 523	Maternal and Child Health: Policy and Programs	(3)
HPRO 536	Program Planning and Evaluation	(3)
HPRO 550	Women in Development	(3)
HPRO 556	Interventions for High-Risk Infants and Children: Policy and Programs	(3)
HPRO 589	Qualitative Research Methods	(4)
HPRO 590	Qualitative Data Analysis	(1)
HPRO 614	Seminar in Maternal- and Child-Health Practice	(2, 2)
NUTR 534	Maternal and Child Nutrition	(3)

### Recommended electives (9 units)

HADM 510	Public Health Policy	(3)
HPRO 524	Adolescent Health	(3)
HPRO 553	Addiction Theory and Program Development	(3)
HPRO 555	Early-Age Parenthood	(3)
HPRO 559	Lactation Management	(3)
HPRO 567	Reproductive Health	(3)
INTH 518	Women in Development	(3)
NUTR 534	Maternal and Child Nutrition	(3)
NUTR 585	Topics in International Nutrition	(3)
STAT 515	Grant- and Contract-Proposal Writing	(3)
STAT 564	Survey and Advanced Research Methods	(3)
HPRO 696	Directed Study	(3)

### Field experience

HPRO 797 MIP Internship in Health Education (U.S. Peace Corps)

or

HPRO 798A/B Field Practicum (100 clock hours)

### Culminating activity

Students are required to demonstrate the ability to integrate the five areas of public health: administration, epidemiology, statistics, environmental health, and health behavior. The culminating activity is comprised of field experience, professional portfolio, and exit interview.

Students who do not meet minimum standards of performance on the culminating activity are subject to academic review or remedial course work to address

deficiencies in preparation; or they may be asked to withdraw from the program.

**M.P.H. IN MATERNAL AND CHILD HEALTH with HEALTH EDUCATION**  
(DUAL MAJOR—CHES ELIGIBLE)

**PREREQUISITE**

Demonstrate college-level conceptualization and writing skills

**DEGREE REQUIREMENTS**

**Public health core courses (20 units)**

ENVH 509	Principles of Environmental Health	(3)
EPDM 509	Principles of Epidemiology I	(3)
HADM 509	Principles of Administration in Public Health	(3)
HPRO 509	Principles of Health Behavior	(3)
REL_ 5__	Religion	(3)
PHCJ 605	Philosophy of Public Health	(1)
STAT 509	General Statistics	(4)

**Core courses (39 units)**

EPDM 534	Epidemiology of Maternal and Child Health	(3)
HPRO 523	Maternal and Child Health: Policy and Programs	(3)
HPRO 535	Health Education Program Administration	(3)
HPRO 536	Program Planning and Evaluation	(3)
HPRO 537	Community Programs Laboratory	(2, 1)
HPRO 538	Health Education Program Development	(3)
HPRO 555	Early-Age Parenthood	(3)
HPRO 556	Interventions for High-Risk Infants and Children: Policy and Programs	(3)
HPRO 567	Reproductive Health	(3)

HPRO 589	Qualitative Research Methods	(4)
HPRO 590	Qualitative Data Analysis	(1)
HPRO 609	Seminar in Maternal and Perinatal Health	(1)
NUTR 534	Maternal and Child Nutrition	(3)
or		
NUTR 585	Topics in Global Nutrition	(3)

**Recommended electives (6 units)**

HADM 510	Public Health Policy	(3)
HPRO 524	Adolescent Health	(3)
HPRO 543	Writing for Health Professionals	(3)
HPRO 550	Women in Development	(3)
HPRO 553	Addiction Theory and Program Development	(3)
HPRO 559	Lactation Management	(3)
STAT 515	Grant- and Contract-Proposal Writing	(3)

**Field experience**

HPRO 797 MIP Internship in Health Education (U.S. Peace Corps)

or

HPRO 798C Field Practicum (400 clock hours)

TOTAL UNITS 65

**Culminating activity**

Students are required to demonstrate the ability to integrate the five areas of public health: administration, epidemiology, statistics, environmental health, and health behavior. The culminating activity is comprised of field experience, professional portfolio, and exit interview.

Students who do not meet minimum standards of performance on the culminating activity are subject to academic review or remedial course work to address deficiencies in preparation; or they may be asked to withdraw from the program with more advanced classroom topics. The schedule extends through vacation periods and may involve some evening assignments.

# Medical Radiography—AH (A.S.)

MARK J. CLEMENTS, Program Director  
STEVEN L. LEBER, Clinical Coordinator  
GREGORY E. WATKINS, Medical Adviser

## FACULTY

Laura L. Alipoun  
Kelly A. Burk  
Mark J. Clements  
Noha S. Daher  
Carol A. Davis  
Marie M. DeLange  
Intithar S. Elias  
Erma P. Ezpeleta  
Brenda S. Holden  
Barbara S. Holshouser  
Helen J. King  
Noriece R. Kisinger  
Arthur W. Kroetz  
Steven L. Leber  
Renee N. S. Mercado  
Terese R. Pfeiffer  
Glenn A. Rouse

The medical radiographer, or radiologic technologist, is responsible for the accurate imaging of body structures on a radiograph or other image receptor. The technologist determines proper exposure factors, manipulates medical imaging equipment, evaluates the radiographic image for quality, and provides for patient protection and comfort.

The technologist frequently assists the physician team member in specialized procedures. These often require the administration of chemical mixtures to the patient for enhanced viewing of the function of body systems.

## The program

The Medical Radiography Program begins with the Autumn Quarter and is based on the completion of one year of prerequisite course work at any accredited college or university. The first quarter at Loma Linda University primarily emphasizes the theoretical aspects of radiography, with one day per week in clinical orientation. The remaining five quarters combine clinical training on a two-to-five-days-per-week basis, with more advanced classroom topics. The schedule extends through vacation periods and may involve some evening assignments.

## Affiliations

For the clinical portion of the program, students are assigned to one of the affiliated medical centers: Loma Linda University Medical Center, Loma Linda University Community Medical Center, Inland Valley Regional Medical Center, Hemet Valley Medical Center, Eisenhower Medical Center, Desert Hospital, Redlands Community Hospital, Menifee Valley Medical Center, Pioneer Memorial Hospital, El Centro Regional Medical Center, White Memorial Medical Center, or St. Mary Regional Medical Center.

## Accreditation

The program is accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT), 20 North Wacker Drive, Suite 900, Chicago, IL 60606-2901; telephone 312/704-5300. The program is also approved by the State of California Department of Health Services.

## CPR certification

Students are required to have current cardiopulmonary resuscitation (CPR) certification (adult and child) for all scheduled clinical experience. Classes are available on campus at Life Support Education, University Arts building, 24887 Taylor Street, Suite 102.

## Professional registration and certification

Upon completion of the requirements for the Associate in Science degree, the graduate is eligible to write the qualifying examination of The American Registry of Radiologic Technologists (ARRT). They are encouraged to become members of The California Society of Radiologic Technologists (CSRT).

## The program objectives

Upon completion of the program, the graduate should be qualified to:

1. Complete all certification requirements of the state of California and the American Registry of Radiologic Technologists.
2. Anticipate and provide basic patient care, comfort, and education, as needed.
3. Practice radiation protection by utilizing principles of basic x-ray production and interactions to limit radiation exposure to the patient, self, and other members of the health care team.
4. Understand the limits of equipment operation, including the recognition of equipment malfunctions and problem-reporting procedures.
5. Obtain optimum images by properly utilizing equipment, accessories, techniques, and procedures; and apply knowledge of human structure, function, and pathology to varying patient situations.
6. Demonstrate knowledge and skills relating to quality-assurance activities.
7. Provide services to humanity, with full respect for the dignity of all persons.
8. Communicate appropriately with patients, colleagues, and others with whom s/he comes in contact.
9. Behave in a professional manner in all interactions.
10. Demonstrate teamwork in the clinical setting and other situations where this concept leads to completion of goals that an individual could not easily meet alone.
11. Support the profession's code of ethics and comply with the profession's scope of practice.
12. Continue to improve knowledge and skills by participating in educational and professional activities, sharing knowledge with colleagues, and investigating new and innovative aspects of professional practice.

**Admission**

To be eligible for admission, the applicant must have completed high school from an accredited institution or passed the GED and completed a minimum of 42 quarter units (or 28 semester units) at an accredited college or university.

**PREREQUISITE**

Religion required, 4 units per year of attendance at a Seventh-day Adventist college or university

Human anatomy and physiology with laboratory, complete sequence

Two years high school mathematics at algebra level or above, with grades of C or above; or algebra in college

Medical terminology

One year high school chemistry or physics or physical science; or introductory chemistry, introductory physics, or physical science in college (one quarter/semester)

General psychology or sociology

English composition, complete sequence

Speech

Computers, one year high school computer course; or one quarter/semester college computer course

Electives to meet the minimum total requirements of 42 units

**Observation experience**

A minimum of twelve hours of observation in a radiology department is required. Contact the department to obtain the appropriate form.

**PROGRAM OF INSTRUCTION**

Certain aspects of the curriculum require individual scheduling. Time arrangements may be subject to change. Entrance to the clinical year is contingent upon the completion of all prior requirements.

**SOPHOMORE YEAR**

RTMR 202	Orientation Laboratory	(1)
RTMR 221	Radiologic Patient Care	(2)
RTMR 253, 254	Medical Radiography Procedures I, II	(3, 3)
RTMR 253L-254L	Medical Radiography Procedures Laboratory I, II	(1, 1)
RTMR 283	Radiologic Physics	(3)
RTMR 284	Radiation Protection and Biology	(2)
RTMR 285, 286	Principles of Radiography I, II	(3, 4)
RTMR 371	Medical Radiography Affiliation I	(1)
AHCJ 326	Patient-Care Methods	(2)
RELE 457	Christian Ethics and Health Care	(2)
REL_ ___	Religion elective	(2)

**CLINICAL YEAR**

RTMR 255	Medical Radiography Procedures III	(2)
RTMR 287	Principles of Radiography III	(2)
RTMR 314	Research/Writing for Radiologic Technologists	(1)
RTMR 321	Radiographic Film Critique	(1)

RTMR 331	Special Technical Procedures	(2)
RTMR 334	CT and Cross-sectional Anatomy	(2)
RTMR 342	Computer Applications in Radiology	(1)
RTMR 345	Radiologic Pathology	(2)
RTMR 363	Comprehensive Review	(1)
RTMR 372-375	Medical Radiography Affiliation II, III, IV, V	(2, 3, 2, 2)
AHCJ 305	HIV/AIDS and the Health Provider	(1)
AHCJ 328	Portfolio Practicum I	(1)

A minimum grade of C (2.0) is required for all courses in the program.

**Medical Scientist—SM****(M.D. with Ph.D.)**

ANTHONY J. ZUCCARELLI, Program Director

**FACULTY**

The Faculty participation in this program come from the biomedical science programs of the School of Medicine, from the clinical departments of the School of Medicine at Loma Linda University, and from research laboratories outside of Loma Linda University.

Loma Linda University is committed to fostering the investigative skills of its medical students. Students interested in pursuing careers in academic medicine and medical research may wish to enroll in one of the combined-degrees programs.

The Medical Scientist Program is designed to develop a student's independence and competence as an investigative scientist and clinician. It provides students with a broad educational base for the practice of medicine and medically related research. The program is administered by the School of Medicine. During the first three years of the program, students follow an integrated curriculum that includes medical courses, graduate education, and research training.

The Medical Scientist Program integrates the educational tracks leading to the Ph.D. and M.D. degrees.

The first-year curriculum includes a course sequence, taught by interdisciplinary faculty, that integrates all the disciplines of the biomedical basic science areas—moving from molecules, through cellular mechanisms to integrated systems. In addition, a supplemental course covers research-related topics—such as scientific communication and integrity, information handling, and statistics; as well as successful grant writing. Students learn of new developments in the biomedical sciences through weekly seminars. Students gain presentation skills of their own in a weekly student presentation-seminar series. During the subsequent years, formal courses continue to broaden and integrate into a meaningful whole an understanding of the clinical consequences of cellular events.

Beginning in the fourth year and continuing for two or more years, students pursue full-time research on a project of their own design within the graduate programs of human anatomy, biochemistry, microbiol-

ogy and molecular genetics, physiology, or pharmacology. Subsequent courses in the curriculum include specialized areas of biomedical and clinical sciences. Research and dissertation are supervised by graduate faculty of the basic biomedical sciences. Research training within these programs is available in nationally recognized research laboratories in the School of Medicine.

After the Ph.D. degree, students return to the medical curriculum for the two years of clinical training required to obtain the Doctor of Medicine degree.

#### **Admission to Ph.D./M.D. Medical Scientist Program**

An application to the School of Medicine, processed through the American Medical College Application Service (AMCAS), should be completed by November prior to the year admission is desired. The Medical Scientist Program admissions committee bases its recommendations upon academic criteria; personal interviews; scores from the GRE General Test and MCAT; and other measures of analytical potential, creativity, compassion, and initiative. Accepted applicants are invited to participate in ongoing research in one of the biomedical science departments during the summer preceding their matriculation.

#### **Curriculum**

The curriculum is innovative in content and sequence. It includes courses that provide a pervasive research perspective, as well as those that provide basic instruction in clinical sciences. A three-quarter course sequence in biochemistry, molecular biology, cell biology, and immunology taken during the first year emphasizes analytical thinking and problem solving as a foundation for a research-oriented approach to biomedical science and clinical medicine. Seminar sessions merge research and clinical approaches to medical problems and expand the perspective of the program to include organ systems and disease processes.

#### **Curriculum sequence**

The typical sequence of courses in the curriculum is outlined below, though several variations are possible, with approval of the program director and curriculum committee.

#### **FIRST YEAR**

Biochemistry  
Molecular biology  
Cell biology  
Immunology  
Biomedical science seminar  
Introduction to research  
Research rotations

#### **FIRST SUMMER**

Research

#### **SECOND YEAR**

School of Medicine freshman year  
Biomedical science seminar

#### **SECOND SUMMER**

Research

#### **THIRD YEAR**

School of Medicine sophomore year  
Biomedical science seminar  
National board examination (USMLE Step I)

#### **RESEARCH YEARS**

Two or more years to complete research, graduate course work, and dissertations for Ph.D. degree

#### **JUNIOR YEAR**

School of Medicine

#### **SENIOR YEAR**

School of Medicine

#### **Advisement**

Admitted students are advised by the Medical Scientist Program director. During the second year, students select a basic science program (anatomy, biochemistry, microbiology and molecular genetics, pharmacology, or physiology) in which they will pursue their subsequent research and graduate course work. After making that selection, they will be guided by the coordinator for that graduate program and by a research guidance committee.

#### **Time limits**

Limits apply to the time allotted for the completion of graduate degrees. Four years (between the sophomore and junior years of the School of Medicine curriculum) are allowed for the completion of a Ph.D. degree; two years are allowed for completion of the M.S. degree. Completion within these limits is required to retain eligibility for further tuition waivers for M.D. degree course work.

Students are expected to complete their graduate degree prior to resuming the M.D. degree in the junior year. No additional financial aid will be provided for medical school tuition until the graduate degree is completed.

#### **Financial assistance**

Financial assistance to students in the Medical Scientist Program may provide:

1. Stipends during those periods in which students are most directly involved in graduate education the first year and the research years. The amount of the stipend is equivalent to that available to Ph.D. degree students in the basic science graduate programs.
2. Tuition waivers for all graduate program course work.
3. Tuition deferment for the freshman and sophomore years of the M.D. degree curriculum. When a student completes an M.S. or Ph.D. degree, tuition deferred from the freshman and sophomore years is canceled.
4. A tuition waiver for two quarters of tuition during the junior or senior years in the M.D. degree curriculum, upon completion of an M.S. degree.
5. Tuition waiver for both the junior and senior years of the M.D. curriculum, upon completion of a Ph.D. degree.

Completion of the M.D. degree terminates the student's participation in the Medical Scientist Program and ends the availability of tuition waiver. Any tuition deferments then in force will convert to loan obligations at that time.

## Medicine—SM (M.D.)

H. ROGER HADLEY, Dean, School of Medicine

### CURRICULUM

The curriculum in medicine consists of four academic years. Instruction is on the quarter system. The first six quarters are oriented to the sciences basic to the practice of medicine; the remaining two academic years are made up of clinically oriented core instruction and up to eighteen weeks of clinical electives.

THE FRESHMAN YEAR consists of the study of anatomy/embryology, biochemistry/molecular biology/genetics, cell structure and function, understanding your patient, fundamental principles of physical diagnosis, evidence-based medicine and information sciences, and neuroscience.

THE SOPHOMORE YEAR includes microbiology, preventive medicine, pharmacology, physiology, and organ-systems pathology. Both pathophysiology and applied physical diagnosis provide the transition between the basic and clinical sciences. Course work in psychopathology builds upon the first-year content.

THE JUNIOR YEAR is fifty-two weeks in length and focuses on internal medicine, pediatrics, gynecology and obstetrics, family medicine or neurology, psychiatry, surgery, medical ethics, and orientation to clinical medicine. Didactic work is integrated with ward and clinical assignments.

THE SENIOR YEAR is forty weeks in length. Required clinical clerkships include subinternships in internal medicine or surgery or family medicine or pediatrics; intensive care/emergency medicine, ambulatory care, and neurology; and up to eighteen weeks of electives.

### WHOLE-PERSON FORMATION

Personal and professional growth for the student in medicine is the focus of the disciplines in the school, the faculty in the School of Medicine, and the Faculty of Religion. Courses and content are offered to emphasize biblical, ethical, and relational aspects of the practice of medicine. The core for whole-person formation—ten quarter hours of religion and ethics—is provided during the first two years of the medicine curriculum.

## CURRICULUM OUTLINE

### Year 1

#### FIRST QUARTER (SUMMER)

Gross Anatomy  
Orientation to Medicine  
Medical Physiology  
Evidence-Based Medicine and Information Science  
Cell Structure and Function I  
Physical Diagnosis and Interviewing I  
Medical Biochemistry/Molecular Biology/Genetics I  
Religion

#### SECOND QUARTER (FALL)

Gross Anatomy  
Medical Physiology  
Medical Neuroscience I  
Physical Diagnosis and Interviewing  
Cell Structure and Function II  
Medical Biochemistry/Molecular Biology/Genetics II  
Religion II  
Evidence-Based Medicine: Information Science II

#### THIRD QUARTER (WINTER)

Evidence-Based Medicine: Information Science  
Gross Anatomy  
Physical Diagnosis and Interviewing  
Cell Structure and Function  
Medical Physiology  
Medical Biochemistry/Molecular Biology/Genetics III  
Religion  
Understanding Your Patient

#### FOURTH QUARTER (SPRING)

Orientation to Medicine  
Medical Biochemistry/Molecular Biology/Genetics  
Understanding Your Patient  
Cell Structure and Function  
Gross Anatomy  
Evidence-Based Medicine  
Medical Physiology  
Physical Diagnosis  
Medical Neuroscience  
Religion

**Year 2****FIRST QUARTER (SUMMER)**

Medical Microbiology  
 Psychopathology  
 Physiology I  
 Pathophysiology and Applied Physical Diagnosis I  
 Pathology I

**SECOND QUARTER (FALL)**

Medical Physiology II  
 Medical Microbiology  
 Pathophysiology and Applied Physical Diagnosis II  
 Psychopathology  
 Pathology II  
 Religion II  
 Clinical Preventive Medicine

**THIRD QUARTER (WINTER)**

Medical Physiology III  
 Pathophysiology and Applied Physical Diagnosis III  
 Psychopathology  
 Pharmacology I  
 Pathology III  
 Religion III  
 Clinical Preventive Medicine

**FOURTH QUARTER (SPRING)**

Clinical Preventive Medicine  
 Pathophysiology and Applied Physical Diagnosis IV  
 Pathology IV  
 Medical Physiology IV  
 Pharmacology II

**Year 3****CLINICAL CLERKSHIPS (REQUIRED)**

Surgery	(12 weeks)
Medicine	(12 weeks)
Pediatrics	(8 weeks)
Obstetrics/Gynecology	(6 weeks)
Family Medicine or Neurology	(4 weeks)
Psychiatry	(6 weeks)
Electives	(2 weeks)

**Year 4****CLINICAL CLERKSHIPS (REQUIRED)**

Emergency Medicine	(2 weeks)
Ambulatory and Community Clerkship	(4 weeks)
Family Medicine or Neurology	(4 weeks)
Electives	(18 weeks)
Subinternships:	(4 weeks)
Internal Medicine or Surgery or Pediatrics or Family Medicine	
Intensive Care	(2 weeks)
Pediatrics Internal Medicine Surgery	

## CONJOINT COURSES FOR THE SCHOOL OF MEDICINE

MDCJ 501	Introduction to Medicine SM	(2)
MDCJ 502	Introduction to Medicine II	(2)
MDCJ 553, 554, 555, 556	Cell Structure and Function	(2.5)
MDCJ 561, 562, 563, 564	Physical Diagnosis	(1, 2, 3, 1)
MDCJ 524, 525, 526	Pathophysiology and Applied Physical Diagnosis	(4, 3, 2)
MDCJ 515, 516, 517, 518	Medical Biochemistry, Molecular Biology, and Genetics	(1, 2, 1, 2)
MDCJ 543, 544	Medical Neuroscience SM	(1)
MDCJ 566, 567, 568, 569	Evidence-Based Medicine and Information Sciences	(1, 2, 1, 1)
MDCJ 599	Medicine Conjoint Directed Study	(arranged)
MDCJ 821	Ambulatory Care Clerkship	(6)
MDCJ 891	Whole-Person Care	(7.2)
MDCJ 899	Practice of Medicine	(1.8-3.6)

**Residency programs**

Loma Linda University Medical Center and other hospitals affiliated with Loma Linda University School of Medicine provide a variety of graduate medical-education programs. These include residencies in anesthesiology, combined medicine/pediatrics, dermatology, emergency medicine, family practice, internal medicine, neurology, neurological surgery, obstetrics and gynecology, occupational medicine, ophthalmology, oral surgery, orthopaedic surgery, otolaryngology, pathology, pediatrics, physical medicine/rehabilitation, plastic surgery, preventive medicine, psychiatry, radiation oncology, diagnostic radiology, general surgery, thoracic surgery, urology, and general vascular surgery.

Subspecialty residencies are offered in cardiovascular disease, gastroenterology, rheumatology, pulmonary disease/critical care medicine, neonatal-perinatal medicine, orthopaedics (hand surgery), pediatric anesthesiology, pediatric critical care medicine, pediatric emergency medicine, vascular/interventional radiology, neuroradiology, pediatric radiology, emergency medicine/pediatrics, pain-management anesthesiology, and child neurology.

Graduate physicians wishing to apply for entrance into these programs should apply to the director of the specialty program.

Graduate dentists who seek residencies in dental anesthesia, endodontics, oral implantology, orthodontics, pediatric dentistry, periodontics, and prosthodontics should apply directly to the School of Dentistry.

**Continuing medical education**

Recognizing the imperative of life-long learning for professionals, the School of Medicine supports a program of continuing medical education for physicians beyond their formal postgraduate years. The Office of Continuing Medical Education is accredited by the Accreditation Council for Continuing Medical Education to provide Category I continuing medical-education credit for physicians. Course offerings

include weekly, bi-weekly and monthly School of Medicine departmental grand rounds and a large number of one-day and multiday conferences and workshops that are presented locally and nationally for School of Medicine faculty, alumni, and practicing physicians within the geographic area in which the conferences are presented.

For more information please write to:  
Thomas Zirkle, M.D., Assistant Dean for  
Continuing Medical Education  
Loma Linda University Medical Center, Room A505  
Loma Linda, CA 92350;  
or telephone (909) 558-4963.

**THE DEPARTMENTS OF THE SCHOOL OF MEDICINE**

The eighteen departments of the School of Medicine, are:

- *Anesthesiology*
- *Biochemistry and Microbiology*
- *Emergency Medicine*
- *Family Medicine*
- *Gynecology and Obstetrics*
- *Medicine*
- *Neurology*
- *Ophthalmology*
- *Orthopaedic Surgery*
- *Pathology and Human Anatomy*
- *Pediatrics*
- *Physical Medicine and Rehabilitation*
- *Physiology and Pharmacology*
- *Psychiatry*
- *Preventive Medicine*
- *Radiation Medicine*
- *Radiology*
- *Surgery*

**ANESTHESIOLOGY**

ROBERT D. MARTIN, Chair

RICHARD L. APPLGATE, Vice Chair

**DIVISIONS****CRITICAL CARE**

GARY STIER, Head

**PAIN CONTROL**

LOWELL W. REYNOLDS, Head

**PEDIATRICS**

LINDA MASON, Head

**CARDIAC**

STANLEY BRAUER, Head

**FACULTY**

Martin W. Allard  
 Roland C. Aloia  
 Donald Lynn Anderson  
 Richard L. Applegate II  
 Sherif A. Azer  
 Bernard J. Brandstater  
 Allen L. Brandt  
 Floyd S. Brauer  
 Stanley D. Brauer  
 Bernard D. Briggs  
 Burton A. Briggs  
 Maureen H. Bull  
 Deborah M. Chung  
 Anne T. Cipta  
 Carl E. Collier  
 Ihab Dorotta  
 Michael W. Eby  
 Jothi Gangolly  
 Elizabeth Ghazal  
 Erlinda Guzon-Castro  
 Richard K. Hamamura  
 Penny L. Kimball-Jones  
 Carol A. Lau  
 Charles Lee  
 Sandra H. Lee  
 John Lenart  
 Marina J. Liu  
 Robert D. Martin  
 Linda J. Mason  
 Deborah McIvor  
 James A. Meyer  
 Phebe E. Mosaad  
 Monica M. Neumann  
 Thomas Rasmussen  
 Lowell W. Reynolds  
 B. B. Roberson  
 Abdul R. Samady  
 Michelle L. Schlunt  
 Bonnie Song  
 James E. Spitler  
 Jean E. Sprengel  
 Gary R. Stier  
 Shirley Tan  
 Teresa L. Thompson  
 Sidney E. Torres  
 Edward W. Verde  
 Linda I. Wat  
 John H. Zhang

The goals of the Department of Anesthesiology are to:

1. Provide necessary anesthesia, analgesia, pain control, and intensive care of the highest caliber and with Christian empathy to patients of Loma Linda University Medical Center and its affiliated facilities.
2. Educate medical students, dentists, and anesthesiology residents in the fields of anesthesia, critical care, and pain control.
3. Increase knowledge of the use of anesthetic and analgesic agents.

**BIOCHEMISTRY AND MICROBIOLOGY**

LAWRENCE C. SOWERS, Chair

**DIVISIONS****BIOCHEMISTRY**

PENELOPE J. DUERKSEN-HUGHES,  
Associate Chair

**MICROBIOLOGY**

HANSEL H. FLETCHER, Associate Chair

**FACULTY****BIOCHEMISTRY DIVISION**

Danilo Boskovic  
 Shin Tai Chen  
 Penelope J. Duerksen-Hughes  
 John R. Farley  
 Aileen Gonzales  
 Daila S. Gridley  
 E. Clifford Herrmann  
 David A. Hessinger  
 Richard W. Hubbard  
 George T. Javor  
 Wolff M. Kirsch  
 William Langridge  
 Kin-Hing W. Lau  
 John Leonora  
 George M. Lessard  
 Thomas A. Linkhart  
 Subburaman Mohan  
 Jonathan W. Neidigh  
 William J. Pearce  
 John J. Rossi  
 Charles W. Slattery  
 Satish M. Sood  
 Lawrence C. Sowers  
 Donna D. Strong  
 Barry L. Taylor  
 Jon E. Wergedal  
 R. Bruce Wilcox  
 Anthony J. Zuccarelli

**MICROBIOLOGY DIVISION**

Leonard R. Bullas  
 Edouard Cantin  
 Carlos A. Casiano  
 Daniela Castanotto  
 Alan P. Escher  
 Hansel M. Fletcher  
 Istvan Fodor  
 Lora M. Green  
 Daila S. Gridley  
 Sandra Hilliker  
 George T. Javor  
 Mark Johnson  
 James D. Kettering  
 William Langridge  
 Benjamin H. S. Lau  
 John E. Lewis  
 Yiming Li  
 Michael B. Lilly  
 Ren Jang Lin

John J. Rossi  
 Raymond E. Ryckman  
 Junichi Ryu  
 Ubaldo Soto  
 Lawrence C. Sowers  
 Donna D. Strong  
 Barry L. Taylor  
 Edward D. Wagner  
 Anthony J. Zuccarelli

The goals of the Department of Biochemistry and Microbiology are to:

1. Offer relevant course work for the various professional curricula that will provide essential foundational content, an understanding of the current state of the field, and the skills required to maintain currency.
2. Offer a graduate curriculum leading to M.S. and Ph.D. degrees that is designed to provide graduate students with the information and tools needed to succeed as independent educators and investigators.
3. Conduct and publish peer-reviewed research in biochemistry that contributes to knowledge in the biomedical sciences.
4. Support Loma Linda University colleagues through collaborations and consultations that will assist in research and instruction.

## ***EMERGENCY MEDICINE***

WILLIAM A. WITTLAKE, Chair  
 STEPHEN W. CORBETT, Vice Chair

### **DIVISION**

#### **PEDIATRIC EMERGENCY MEDICINE**

LANCE A. BROWN, Head

### **FACULTY**

Shamel A. Abd-Allah  
 Besh R. Barcega  
 Lance A. Brown  
 Sean P. Bush  
 Richard D. Catalano  
 Tony Chow  
 Samuel C. Chua  
 Stephen W. Corbett  
 Heather A. Crane  
 Linda Daniel-Underwood  
 T. Kent Denmark  
 David M. Englander  
 Michelle R. Gill  
 Jaime E. Gonzalez  
 Michelle R. Gill  
 Jeffrey T. Grange  
 Steven M. Green  
 Gregory T. Guldner  
 Melvyn L. Harris  
 Korbin N. Haycock  
 Jonathan M. Hayden  
 Kevin G. Hegewald  
 Thomas L. Hurt

Patricia L. James  
 John S. Jones  
 Aqeel S. Khan  
 Grace J. Kim  
 Tae E. Kim  
 Tommy Y. H. Kim  
 R. David Kovacik  
 Victor D. Levine  
 Michael Lowe  
 R. Daniel Luther  
 E. Lea Lynch  
 Guison Mahmoud  
 Timothy J. McNaughton  
 James A. Moynihan  
 John C. Naftel  
 Timothy P. Nesper  
 H. Bryant Nguyen  
 Humberto R. Ochoa  
 Kevin J. Parkes  
 David G. Reiley  
 W. Ahmad Salih  
 Thomas S. Sherwin  
 Dustin D. Smith  
 Robert Steele  
 Gail Stewart  
 David H. Tang  
 Tamara L. Thomas  
 Mark E. Thomas  
 Louis P. Tran  
 Reza Vaezazizi  
 Edward J. Vargas  
 Kelly J. D. Westcott  
 Samuel G. Wilson  
 William A. Wittlake  
 Hubert E. Wong  
 Kimberly R. Zimmerman

The philosophy of the Department of Emergency Medicine centers on a commitment to quality in its service, teaching, and research missions. This department functions as a crossroads interface between the community and the medical center services—providing a point of access to medical care for many people who are seriously and unexpectedly ill, and whose condition may be compromised by geographic isolation and socioeconomic disadvantage.

The objectives of the department are to:

1. Provide and coordinate cost-effective, empathic, and compassionate prehospital, emergency, and trauma services of excellent quality.
2. Support and contribute to the achievement of medical-education competency for all categories of emergency-care professionals.
3. Develop initiatives that promote increased understanding of and improved techniques and skills in emergency-care practice, heighten positive perception of this specialty, and contribute to quality research in this area.
4. Promote teamwork skills among the various services and professionals comprising the emergency medical system.

**FAMILY MEDICINE**

JOHN K. TESTERMAN, Chair

**FACULTY**

Wil Alexander  
 Y. Paul Aoyagi  
 James Appel  
 Javier A. Armijo  
 Robert L. Avina  
 Ronald P. Bangasser  
 Andre V. Blaylock  
 Lisa Bolla  
 Warren B. Churg  
 Andrea M. Clarke  
 Debra D. Craig  
 F. Daniel Cruz  
 Janet A. Cunningham  
 Linda Deppe  
 Dai Vien Du  
 Wayne Dysinger  
 Allen C. Felix  
 Linda H. Ferry  
 John Fleming  
 Michael E. Frederick  
 Herbert N. Giebel  
 Cynthia J. Glasgow  
 Patricia Guevara-Channell  
 Jean-Claude Hage  
 Calvin Hagglov  
 Tina M. Haller-Wade  
 Kevin R. Herrick  
 Jonathan Horstmann  
 Ming Chang Isinhue  
 William W. Jih  
 Mark T. Keidel  
 Marina Khubesrian  
 Richard Kim  
 Claire H. Koga  
 Rosarin Kriengprarthana  
 James S. Ku  
 Anissa Y. LaCount  
 Gilbert H. Lee  
 Joan Haynes-Lee  
 Tony B. Lee  
 Margaret H. Lester  
 Yi Lieu  
 Herbert H. Lim  
 Gerald Lofthouse  
 Jason L. Lohr  
 Maria B. Lohr  
 Tarek Z. Mahdi  
 Manoucher Manoucheri  
 Gary E. Marais  
 Kenneth D. McCarty  
 Laurie P. McNaughton  
 Elliot A. Meltzer  
 Richard L. Milholm  
 Renu Mittal  
 Gina J. Mohr  
 Walter C. Morgan  
 Kelly Morton  
 Timothy E. Neufeld  
 Michael R. Oliverio  
 Mark W. Olson  
 Michelle T. Opsahl  
 Robert D. Orr  
 Barbara J. Orr

Jamie S. Osborn  
 Shantharam R. Pai  
 Raul Pardave  
 Lien T. Pham  
 Gordon D. Philipps  
 R. Steven Pulverman  
 Earl B. Quijada  
 Ivan L. Reeve  
 Michelle E. Reeves  
 Lois A. Ritchie  
 Jorge L. Rivera  
 Magda L. Robinson  
 Ann M. Ronan  
 Steve Salzman  
 Alane M. Samarza  
 Katherine R. Schlaerth  
 Kendall G. Scott  
 Audrey F. Shank  
 Michael D. Shepherd  
 Khwaja A. Siddiqui  
 Lauren M. Simon  
 Grace E. Song  
 Ruth Stanhiser  
 John K. Testerman  
 Nancy Testerman  
 Jeffrey R. Unger  
 Erik G. Walsh  
 Leonard S. Werner  
 Raymond O. West  
 John D. Wilson  
 Robert K. Yamada  
 Jack Yu

The objectives of the Department of Family Medicine are to:

1. Provide medical students and residents with education and training in that exemplifies excellence, compassion, and wholeness in the specialty of family medicine.
2. Educate students and residents to provide evidence-based, best-practice, chronic-disease care that spans the arc of care—from prevention to management to palliative care.
3. Teach students to evaluate and manage common problems at the primary-care level, providing continuing and comprehensive health care for individuals of both genders and all ages.
4. Teach students and residents the skills necessary to take a spiritual history and incorporate the spiritual and psychosocial into the biomedical aspects of clinical care.
5. Introduce students and residents to the use of a systems approach and quality-improvement techniques to improve patient safety and assure the delivery of best-practice, evidence-based care to a population of patients.
6. Introduce students to family-physician role models so that students will be able to make informed choices regarding family medicine as a career option.

**GYNECOLOGY AND OBSTETRICS**

WILLIAM C. PATTON, Chair

**FACULTY**

Teresa P. Avants  
 Kevin C. Balli  
 Barry S. Block  
 Philip J. Chan  
 Chul Choi  
 Johannah Corselli  
 Bert J. Davidson  
 Michael W. Eby  
 Miguelito M. Fernando  
 E. Dolores Gibson  
 Yvonne G. Gollin  
 Wilbert Gonzalez  
 Robert H. Gregg  
 Young-il H. Hahn  
 Jeffrey S. Hardesty  
 Elaine E. Hart  
 Marilyn Herber  
 John D. Jacobson  
 Ronald B. Johnson  
 Elden D. Keeney  
 Melissa Y. Kidder  
 John J. Kim  
 J. Dee Lansing  
 Kathleen M. Lau  
 Elisa M. Lindley  
 Lawrence D. Longo  
 Kenneth J. McGill  
 Laurel J. Munson  
 Rick D. Murray  
 Masao Nakamoto  
 Bryan T. Oshiro  
 Karen N. Oshiro  
 William C. Patton  
 Gordon G. Power  
 Harold V. Racine  
 Leroy A. Reese  
 Elmar P. Sakala  
 Herminia S. Salvador  
 Hyun S. Shvartsman  
 Kathryn Shaw  
 E. Laurence Spencer-Smith  
 Darrell L. Vaughan  
 Robert J. Wagner  
 Clifford A. Walters  
 Kim Warner  
 Cinna T. Wohlmuth  
 Ronald S. Wu

The purpose of the Department of Gynecology and Obstetrics is to provide an academic environment that encourages learning, teaching, and research. The objectives of the department are to:

1. Provide medical students with a broad base of knowledge in obstetrics and gynecology for entrance into a primary-care specialty.
2. Instill a standard of medical excellence that will lead to a continuing program of medical education, reaching through and beyond the residency years.
3. Provide faculty who function as role models for the students and residents.

**MEDICINE**

JAMES J. COUPERUS, Chair  
 PHILIP M. GOLD, Executive Vice Chair,  
 Department of Medicine  
 PHILIP J. ROOS, Vice Chair, Jerry L. Pettis  
 Memorial Veterans Medical Center  
 DOUGLAS R. HEGSTAD, Vice Chair, Riverside  
 County Medical Center  
 RAYMOND Y. WONG, Associate Chair for Student  
 Education  
 LAWRENCE K. LOO, Associate Chair for Resident  
 Education  
 TERENCE D. LEWIS, Associate Chair for Resident  
 Education  
 JULIE ULLOA-MICHAELIS, Associate Chair for  
 Continuing Medical Education  
 MICHAEL H. WALTER, Associate Chair for  
 Finance and Development  
 KEITH K. COLBURN, Associate Chair for  
 Research

**DIVISIONS****CARDIOLOGY**

KENNETH R. JUTZY, Head

**DERMATOLOGY**

ABEL TORRES, Head

**ENDOCRINOLOGY**

J. LAMONT MURDOCH, Head

**GASTROENTEROLOGY**

TERENCE D. LEWIS, Head

**GENERAL INTERNAL MEDICINE AND  
GERIATRIC MEDICINE**

RAYMOND Y. WONG, Head

**INFECTIOUS DISEASE**

JAMES J. COUPERUS, Head

**NEPHROLOGY**

SIEGMUND TEICHMAN, Head

**ONCOLOGY-HEMATOLOGY**

FRANK D. HOWARD IV, Head

**PULMONARY AND CRITICAL CARE MEDICINE**

PHILIP M. GOLD, Head

**RHEUMATOLOGY AND IMMUNOLOGY**

KEITH K. COLBURN, Head

## FACULTY

Ramadas Abboy  
 Imdad Ahmad  
 Shobha S. Aiyar  
 James D. Anholm  
 Patricia J. Applegate  
 Siavash Arani  
 Mihran H. Ask  
 H. Helen Baek  
 Kumaravelu Balasubramaniam  
 Ramesh C. Bansal  
 Daljeet B. Bansal  
 Rebekah Bartos  
 David J. Baylink  
 David M. Bee  
 Jesus G. Berdeja  
 Diane J. Berriman  
 Sofia Bhaskerrao  
 Joann K. Bischoff  
 Michael F. Bishara  
 Donald M. Blackman  
 Cyril D. Blaine  
 Patricia S. Blakely  
 David Bland  
 Ingrid K. Blomquist  
 Eugene P. Boling  
 Reiner Bonnet  
 Daniel L. Bouland  
 Charles H. Brinegar, Jr.  
 Gary W. Brown  
 Vickie D. Brown-Harrell  
 Evert A. Bruckner  
 John M. Byrne  
 Elber S. Camacho  
 Cynthia R. Canga-Siao  
 Kenneth A. Cantos  
 Moises R. Carpio  
 Ethelred E. Carter  
 Carlos Casiano  
 Daniel Castro  
 Robert B. Chadwick  
 Bobby S. Chan  
 Francis D. W. Chan  
 Suzanne E. Chang  
 Richard M. Chang  
 Zeno L. Charles-Marcel  
 Gregory Cheek  
 Chien-Shing Chen  
 Morteza Chitsazan  
 C. Joan Coggin  
 Keith K. Colburn  
 Martin J. Collen  
 Ken A. Collinsworth  
 Stanley C. Condon  
 David S. Condon  
 Dilrukshie Cooray  
 Adrian N. Cotton  
 Alfred C. Cottrell  
 James J. Couperus  
 Debra D. Craig  
 Milton G. Crane  
 Raymond B. Crawford  
 Ralph E. Cutler  
 Nagamani Dandamudi  
 Vishvanath V. Date  
 Lino J. DeGuzman  
 Zemin Deng

Thomas K. Denmark  
 Titus Devendra  
 James R. Dexter  
 Kenneth D. Doran  
 Ralph Downey III  
 James P. Drinkard  
 Christine A. Duong  
 Bertram H. Eckmann  
 Laila M. Elkeeb  
 Harvey A. Elder  
 Dwight C. Evans  
 J. Robert Evans  
 Ramiz A. Fargo  
 John R. Farley  
 Marian A. Fedak  
 Ronald S. Fernando  
 David R. Ferry  
 J. Michael Finley  
 Anthony F. Firek  
 Franz P. Fisher  
 Mary A. Flowers  
 Steven C. Forland  
 Glenn L. Foster  
 Gary E. Fraser  
 Gerald S. Friedman  
 Helmuth F. Fritz  
 Geir P. Frivold  
 Juanito Garlitos  
 Roger C. Garrison  
 Marla G. Giem  
 Thomas E. Godfrey  
 Philip M. Gold  
 Linda Golkar  
 Marshall E. Gomes  
 Alma A. Gonzaga  
 Eduardo J. Gonzaga  
 Daniel Gorenberg  
 Alan Gorenberg  
 Walter S. Graf  
 George M. Grames  
 Lora M. Green  
 Daila Gridley  
 Margaret A. Griffin  
 Ronald Griffin  
 Joseph Gropen  
 Jocelyn Gunnarsson  
 Reinhard Gysin  
 Mouna E. Haddad-Wilson  
 Susan L. Hall  
 Paul G. S. J. Hammond  
 Steven B. Hardin  
 William H. Hardt, Jr.  
 John J. Harris  
 L. Julian Haywood  
 Douglas R. Hegstad  
 Vickie V. Height  
 Nancy J. Heine  
 Raymond Herber  
 Jan M. Herrmann  
 Kathy A. Herzberger  
 J. Thomas Heywood  
 Donald J. Hillebrand  
 Dennis A. Hilliard  
 Andrew T. Ho  
 Frank D. Howard IV  
 Russell E. Hoxie  
 Patricia C. Hsia  
 Galen C. L. Huang

James J. Huang  
 Arnando J. Huarínga  
 Enacio G. Hunt  
 Waleed A. Ibrahim  
 Joshua A. Imperio  
 Michael B. Ing  
 George M. Isaac  
 Dale M. Isaeff  
 Alan K. Jacobson  
 Mehdi S. Jahromi  
 G. David Jang  
 Geun C. Jang  
 John C. Jennings  
 Donald L. John  
 Robert L. Johnson  
 Torbjorn I. Jorteg  
 Roy V. Jutzy  
 Kenneth R. Jutzy  
 Vikram V. Kamdar  
 Emmanuel P. Katsaros  
 Jeffery M. Katz  
 Brent W. Kay  
 Zeid Kayali  
 Kenneth L. Kelln  
 Robert S. Keenan  
 Catherine M. Kennedy  
 Todd S. Kessler  
 Sherif F. Khalil  
 Balram S. Khehra  
 Daniel I. S. Kim  
 Dennis Y. Kim  
 Mi Ye Kim  
 Henry J. Klamut  
 Faher Koteira  
 Edwin H. Krick  
 Rajagopal Krishnan  
 Irvin N. Kuhn  
 Ashok Kumar  
 Mei Y. Lai  
 Trang Lam  
 Victor K. Lamin  
 Euly M. Langga-Sharifi  
 Wilson D. Lao  
 James P. Larsen  
 Steven E. Larsen  
 Francis Y. K. Lau  
 Kin-Hing W. Lau  
 Alan C. K. Lau  
 Susie H. Lau  
 Cary w. Lee  
 Scott W. Lee  
 Joseph Lee  
 Sonny C. Y. Lee  
 John Leonora  
 Carmela M. Leonora  
 Duncan Leung  
 Paul A. Levine  
 Terence D. Lewis  
 Cesar Libanati  
 Michael B. Lilly  
 Ju-an Lin  
 Takkin Lo  
 Lawrence K. Loo  
 Barbara E. Loughman  
 Imtiaz A. Malik  
 Priya Malik  
 Ramesh K. Manchanda  
 Krish J. Manchandia  
 Ravi Mandapati  
 Gary E. Marais  
 H. John Marais  
 Robert J. Marsa  
 J. Todd Martell  
 Axa I. Newball Martell  
 Godfred Masinde  
 Kenneth L. Maxwell  
 John D. McCracken  
 David D. McFadden  
 James I. McMillan  
 Sukh S. R. Mehta  
 Chandrakant V. Mehta  
 Karen S. Miller  
 Robert D. Mitchell  
 Subburaman Mohan  
 Ioana Moldovan  
 Patrick M. Moloney  
 Ashis Mukherjee  
 Malwinder K. Multani  
 J. Lamont Murdoch  
 Jerald C. Nelson  
 Sherlene Ng  
 Agnieszka Niemeyer  
 Annette T. Nitta  
 Pushpa Nowrangí  
 Snorri Olafsson  
 Suma Oommen  
 Sudha Pai  
 Keshab D. Pant  
 Seekook Park  
 Jigar D. Patel  
 Prashant V. Phatak  
 Gordon G. Power  
 Gilbert J. Putnoký  
 Xue Zhong Qin  
 Victoria Rains  
 John A. Rambharose  
 Syed J. Raza  
 Robert E. Rentschler  
 Maher A. Rezkalla  
 Paulo A. Ribeiro  
 Herman H. Ricketts  
 Sergio R. Riffel  
 Rhodes L. Rigsby  
 Suzanne S. Rizkalla  
 Maher A. Roman  
 Philip J. Roos  
 Carolann R. Rosario  
 Katja Ruh  
 Cynthia C. Ruiz  
 Bruce A. Runyon  
 Tisha L. Salary  
 Seyed-Ali Sadjadi  
 John W. Samples  
 Lawrence B. Sandberg  
 Allen L. Schwandt  
 Elaine B. Schwartz  
 Lawrence J. Segal  
 Roger D. Seheult  
 Ruchir Sehra  
 Cynthia L. Serabyn  
 Stewart W. Shankel  
 Tamara M. Shankel  
 Tahseen N. Shareef  
 Richard L. Sheldon  
 Terence H. C. Shum  
 Vasthi V. Silva

Ajeet R. Singhvi  
 Lynnetta S. Skoretz  
 Chauncey L. Smith  
 Robert E. Soderblom  
 Lawrence C. Sowers  
 Dale B. Sparks  
 N. Lennard Specht  
 Apurva Srivastava  
 Khushal A. Stanisai  
 Betty Stepien  
 Liset N. Stoletniy  
 Debra D. Stottlemeyer  
 Donna D. Strong  
 Richard M. Strong  
 Chao H. Sun  
 Weiyong Sun  
 Richard J. Swabb  
 Linda Giles Tan  
 Shirley M. Tan  
 Stanley A. Tan  
 Siegmund Teichman  
 Douglas W. Teller  
 Kim M. Thomas  
 Gary J. Thompson  
 Gordon W. Thompson  
 Bhoodev Tiwari  
 Vilma Torres  
 Charles R. Tourtellotte  
 Denise L. Jackson Townsend  
 Leah A. Tuddud-Hans  
 Julie A. Ulloa-Michaelis  
 Branavan Umakanthan  
 Bertrand H. Vipond  
 Michael H. Walter  
 Jon E. Wergedal  
 Leonard S. Werner  
 David W. Wilbur  
 Raymond Y. Wong  
 Sammy S. Wong  
 Michael K. Woo  
 Sidney S. C. Wu  
 Wilson J. Yap  
 Yasmin A. Yusufaly

#### DERMATOLOGY DIVISION

Nancy J. Anderson  
 John H. Bocachica  
 Theodore M. Cohen  
 Desmond D. Gibson  
 Jane M. Hirokane  
 Kenneth D. Macknet, Jr.  
 David Opai-Tetteh  
 Wendy E. Roberts  
 Fred F. Soeprono  
 Abel Torres  
 Ingrid E. Trenkle  
 Hubert C. Watkins  
 J. Robert West  
 Edwin T. Wright

The motto of Loma Linda University, "To make man whole," is central to achieving the objectives of the Department of Medicine. These objectives include progressing in the science of medicine while maintaining the art of medicine—the caring attitude that is so important to the well-being of physicians and of patients.

The objectives of the department are to:

1. Train medical students in the highest tradition of medical education—both the art and the science of medicine.
2. Train resident physicians in the art, science, and practice of internal medicine consistent with the high ideals of this school and of the American College of Physicians.
3. Disseminate to our colleagues new and recent discoveries in the science of medicine.
4. Be actively involved in the study of basic pathophysiology of disease processes.
5. Care for our patients with expertise and compassion in the highest Christian tradition.

#### NEUROLOGY

DANIEL W. GIANG, Chair

#### FACULTY

Thomas W. Bohr  
 Jeffrey A. Bounds  
 Mary E. Brandstater  
 Jack J. Chen  
 Bradley A. Cole  
 Dorothee Cole  
 Ralph Downey  
 Rodolfo O. Escutin  
 Daniel W. Giang  
 Perin D. Gomer  
 Isabela Isaac  
 Robert A. Klein  
 Gerald T.H. Lim  
 Antonio K. Liu  
 Chalmers D. McClure III  
 Donald Miller  
 Laura H. Nist  
 Donald I. Peterson  
 Gordon W. Peterson  
 Sarah M. Roddy  
 Michael T. Ropaeki  
 Lori A. Shutter  
 R. Richard Sloop  
 David M. Swope  
 Lori D. Uber-Zak  
 Sarah Uffindell  
 Paul J. Zak

Neurologic disorders are common, and it is essential that students learn to recognize and treat them. The objective of the four-week course is for the student to further God's work of restoring wholeness to people through excellence in neuroscientific education, investigation, and clinical care.

#### OPHTHALMOLOGY

HOWARD V. GIMBEL, Chair  
 ERNEST S. ZANE, Vice Chair

## FACULTY

Madhu Agarwal  
 Sandra M. Akamine  
 Marco Barrera  
 Pamela Y. Bekendam  
 Paul A. Blacharski  
 Christopher L. Blanton  
 Leslie A. Bruce-Lyle  
 John P. Carlson  
 Clement K. Chan  
 David Choi  
 Paul Y. Chung  
 William R. Clegg  
 Denis J. Cline  
 Jan L. Cooper  
 Carlindo da Reitz Pereira  
 James L. Davidian  
 Loren L. Denler  
 Robert M. Duffin  
 Jennifer A. Dunbar  
 Joseph Fan  
 Christina J. Flaxel  
 Eric J. Friedrichsen  
 Arthur W. Giebel  
 Howard V. Gimbel  
 James Guzek  
 Kenneth Houchin  
 Gary G. Huffaker  
 Jeffrey J. Ing  
 Wayne B. Isaeff  
 Shyun Jeng  
 Gary M. Levin  
 Glenville M. March  
 David R. McGrew  
 James I. McNeill  
 Julio Narvaez  
 Young-Hyun Oh  
 Richard D. Pesavento  
 Barratt L. Phillips  
 Michael E. Rauser  
 Steven O. Rimmer  
 Robert C. Rosenquist, Jr.  
 Kimber L. Schneider  
 Mark D. Sherman  
 Jodi O. Smith  
 Alice Song  
 Julia Song  
 Charles M. Stephenson, Sr.  
 Kris J. Storkersen  
 Tom Tooma  
 P. Harold Wallar  
 Izak F. Wessels  
 David L. Wilkins  
 Brian R. Will  
 Robert R. Wresch  
 Jeanine N. Yamanaka  
 Patricia S. Yoon  
 Ernest S. Zane  
 Steven E. Zane

The Department of Ophthalmology is committed to:

1. Provide an academic environment that will foster an in-depth understanding of the specialty of ophthalmology.

2. Provide education for students, residents, and fellows that prepares them for an academic, community, or mission practice.
3. Encourage and support clinical research.
4. Inspire students and residents to promote preventive ophthalmology.

*ORTHOPAEDIC SURGERY*

CHRISTOPHER M. JOBE, Chair

## FACULTY

Karim Abdollahi  
 David V. Anderson  
 William S. Beal  
 Darren L. Bergey  
 Eduardo A. Bestard  
 William E. Brown  
 William P. Bunnell  
 Paul D. Burton  
 Wayne K. Cheng  
 Gurbir Chhabra  
 John M. Chrisler  
 Ian C. Clarke  
 Michael J. Coen  
 Qiang G. Dai  
 Terry J. Dietrich  
 Vincent J. Devlin  
 Thomas K. Donaldson  
 Brian S. Doyle  
 David G. Erickson  
 Ray L. Foster  
 Gary K. Frykman  
 Navid Ghalambor  
 Ronny G. Ghazal  
 Barry S. Grames  
 G. Allen Gustafson  
 Gail E. Hopkins  
 Bradley R. Hotchner  
 Mary E. Hurley  
 Claran H. Jesse  
 Christopher M. Jobe  
 D. Robert Johnson  
 Martin Koffman  
 Satish K. Lal  
 Paul C. W. Liu  
 D. Allan MacKenzie  
 James D. Matiko  
 Thomas W. McIndoe  
 Clifford D. Merkel  
 Kenneth Mudge  
 Walter C. Nash  
 Scott C. Nelson  
 Matilala C. Patel  
 Timothy A. Peppers  
 Giuseppe Pezzotti  
 Wesley P. Phipanatakul  
 Marilyn M. Pink  
 Eskild A. Reinhold  
 Philip H. Reiswig  
 Kenneth R. Roth  
 Roy M. Rusch  
 Herman R. Schoene  
 Hiromu Shoji  
 James E. Shook

John C. Steinman  
 Gurvinder S. Uppal  
 G. Carleton Wallace  
 Barry E. Watkins  
 James R. Watson  
 George J. Wisseman  
 Paul Williams  
 M. Daniel Wongworawat  
 Virchel E. Wood  
 David L. Wood  
 Steven R. Yegge  
 Leisure Yu

The Department of Orthopaedic Surgery provides a lecture series to junior medical students. The objectives of the series are to:

1. Introduce the specialty of orthopaedic surgery.
2. Teach physical diagnosis of the musculoskeletal system.
3. Review care of common orthopaedic conditions.
4. Survey orthopaedic subspecialties and orthopaedic surgery.
5. Stimulate students to consider a career in orthopaedic surgery.

## ***PATHOLOGY AND HUMAN ANATOMY***

BRIAN S. BULL, Chair

### **ANATOMY DIVISION**

#### **HUMAN ANATOMY**

PEDRO B. NAVA, JR., Head

### **PATHOLOGY DIVISION**

#### **ANATOMIC PATHOLOGY**

WILLIAM G. SANKEL, Head

#### **PEDIATRIC PATHOLOGY**

CRAIG W. ZUPPAN, Head

#### **LABORATORY MEDICINE**

JAMES M. PAPPAS, Head

### **FACULTY**

#### **ANATOMY DIVISION**

Denise Bellinger  
 Bradley A. Cole  
 Bertha C. Escobar-Poni  
 William H. Fletcher  
 Raymond Gilbert  
 William M. Hooker  
 Michael A. Kirby  
 Paul J. McMillan  
 Kenneth P. Moses  
 Pedro B. Nava  
 Kerby C. Oberg  
 Walter H. B. Roberts  
 Robert L. Schultz

Srinivasan ThyagaRajan  
 William Wagner  
 Kenneth R. Wright

#### **PATHOLOGY DIVISION**

M. Rose Akin  
 Denise Bellinger  
 Lee Berk  
 Albert F. Brown  
 Brian S. Bull  
 Weldon J. Bullock  
 Kenneth A. Cantos  
 Jeffrey D. Cao  
 Donald R. Chase  
 Resa L. Chase  
 Wilson K. W. Chick  
 Evelyn B. Choo  
 Joseph I. Cohen  
 Joy I. Fridey  
 G. Gordon Hadley  
 Arthur J. Hauck  
 Darryl G. Heustis  
 Ronald H. Hillock  
 Richard W. Hubbard  
 W. William Hughes III  
 Christopher M. Jobe  
 Michael A. Kirby  
 Dick H. Koobs  
 Ralph A. Korpman  
 John E. Lewis  
 Robert E. Moncrieff  
 Jerald C. Nelson  
 Thomas T. Noguchi  
 Kerby C. Oberg  
 Albert Olson  
 James M. Pappas  
 Norman H. Peckham  
 Mia C. N. Perez  
 Ravi Raghavan  
 Anwar S. S. Raza  
 Edward H. Rowsell  
 Lawrence B. Sandberg  
 George W. Saukel  
 Frank R. Sheridan  
 Fred F. Soeprono  
 Mildred L. Stilson  
 Kevin S. Thompson  
 Srinivasan Thyagarajan  
 Steven J. Trenkle  
 Jun Wang  
 Bo Ying Wat  
 Pamela J. Wat  
 Rodney E. Willard  
 Edwin T. Wright  
 Craig W. Zuppan

The primary goal of the Department of Pathology and Human Anatomy is to educate capable, compassionate, scientifically minded physicians dedicated to the mission and objectives of Loma Linda University School of Medicine. The courses offered by the department provide a bridge to the clinical sciences, spanning the entire two years of the preclinical curriculum—from foundational principles of gross, microscopic, and developmental anatomy to modern pathophysiologic concepts. Progressive emphasis is placed on cultivating the student's ability to integrate basic knowledge of structure, function, and dysfunction of

the human body with analytical skills in solving clinical problems.

The department is strongly committed to facilitating the development of both teaching and investigative skills on the part of faculty, graduate students, and residents.

## **PEDIATRICS**

RICHARD E. CHINNOCK, Chair

## **DIVISIONS**

### **ALLERGY/PULMONARY**

YVONNE FANOUS, Head

### **CARDIOLOGY**

RANAE L. LARSEN, Head

### **CRITICAL CARE**

SHAMEL A. ABD-ALLAH, Head

### **ENDOCRINOLOGY**

EBA H. HATHOUT, Head

### **FORENSIC MEDICINE**

CLARE M. SHERIDAN, Head

### **GASTROENTEROLOGY**

MANOJ C. SHAH, Head

### **GENERAL PEDIATRICS**

RAVINDRA RAO, Head

### **GENETICS**

ROBIN CLARK, Head

### **HEMATOLOGY/ONCOLOGY**

ANTRANIK A. BEDROS, Head

### **INFECTIOUS DISEASE**

JANE BROOK, Head

### **NEONATOLOGY**

RICARDO L. PEVERINI, Head

### **NEPHROLOGY**

SHOBHA SAHNEY, Head

### **NEUROLOGY**

STEPHEN ASHWAL, Head

## **FACULTY**

Shamel A. Abd-Allah  
Borhaan S. Ahmad  
Leyla Akanli  
Daniel H. Aldana

D. Jeanne Andrews  
Stephen Ashwal  
Joanne E. Baerg  
Freddie B. Balguma  
Besh R. Barcega  
Marti Baum  
Antranik A. Bedros  
B. Lyn Behrens  
Bruck Beckwith  
James H. Belote  
Dilip R. Bhatt  
Jane Bork  
Danielle L. Borut  
Harbinder S. Brar  
Lance E. Brown  
Samuel A. Bruttomesso  
Hong D. Bui  
William P. Bunnell  
Heather A. Carriedo  
Samuel R. Catalan  
Chul C. Cha  
Francis D. W. Chan  
Terry W. Chin  
Richard E. Chinnock  
Alexandra M. Clark  
Robin D. Clark  
Susan A. Clark  
William M. Clover  
Marlene M. Coleman  
Stephen W. Corbett  
Ernesto Cruz  
Drew Cutler  
Vo Minh Dai  
Anthony Dajnowicz  
Althea P. Daniel  
Douglas Deming  
Thomas K. Denmark  
George D. Doroshov  
H. Todd Eachus  
David W. Egger  
Janeth C. Ejike  
Edward Elmendorf  
Rolanda R. Everett  
Yvonne Fanous  
Wise M. Fargo  
Elba E. S. Fayard  
Nancy R. Fernando  
Ross Fisher  
Mary -Catherin Freier  
David Fox  
George Fox  
Laura Funkhouser  
Mary L. Gandy  
Maria C. Garberoglio  
Herbert A. Giese  
Kelly W. George  
Gerald Gollin  
Steven M. Green  
Bruce B. Grill  
Matthew F. Gross  
Agnes S. Gugan  
Gregory T. Guldner  
Ernie Guzman  
Janet E. Halverson  
Yong Y. Han  
Eba H. Hathout  
Aihaz Hashmi  
Joya Heart

Joseph K. Hindman  
 Andrew O. Hopper  
 Wen-Hsiung L. Huang  
 Charles J. Hyman  
 Rauof A. Ibrahim  
 Carol Y. Im  
 Donald L. Janner  
 Madhangi Jayanan  
 Leo C. Jeng  
 Leela Job  
 John L. Johnson  
 Olga Kalbermatter  
 Thomas A. Kaleita  
 Aqeel S. Khan  
 Albert Kheradpour  
 Grace Jee-Eun Kim  
 Soo Youn Kim  
 Tommy Y. H. Kim  
 Michael A. Kirby  
 Marquelle J. Klooster  
 Michael Kuhn  
 Mary Lam  
 Ranae L. Larsen  
 Caroline H. Lee  
 Sonny C. Y. Lee  
 Guillermo E. Leow  
 Thomas A. Linkhart  
 Michelle H. Loh  
 M. Eliana Lois-Wenzel  
 Lawrence D. Longo  
 John W. Mace  
 Fataneh F. Majlessipour  
 Ravi Mandapati  
 Julie Patricia Mann  
 Jeffrey N. Mar  
 Hilario A. Marilao  
 Frederick J. Martin  
 Linda J. Mason  
 Liesl A. Mathias  
 Mudith Mathur  
 Jorge R. Mazlumian  
 Chalmers D. McClure III  
 Robert E. Meyer, Jr.  
 David J. Michelson  
 Farrukh Mirza  
 Donald C. Moores  
 Joan Morris  
 Christopher L. Morris  
 John P. Morris  
 James A. Moynihan  
 Jonathan J. Mthombeni  
 Neda F. Mulla  
 James L. Munsor  
 Cinda L. Nauez  
 Jennifer L. Neufeld-Trujillo  
 Madeleine N. Ngo  
 Janet Ninnis  
 Pushpa Nowrang  
 Inger L. Olson  
 Olusola A. Oyemad  
 Ronald G. Pearce  
 Ricardo L. Peverini  
 Rebeca E. Piantini  
 Jonnel W. Pomeroy  
 Emmeline Pulido  
 Charles D. Pumphrey  
 Michael S. Racine  
 Deepak K. Rajpoot

Ravindra Rao  
 Sharon K. Riesen  
 Martha E. Rivera  
 Mark R. Rowe  
 Sarah M. Roddy  
 Israel Rubenstein  
 Shobha Sahney  
 Gerald Saks  
 Constance J. Sandlin  
 Phisit Saphyakhajon  
 Laura J. Schilling  
 George A. Segura  
 Ruchir Sehra  
 Manoj C. Shah  
 Praful C. Shah  
 Tamara M. Shankel  
 Lawrence D. Sharpe  
 Clare M. Sheridan  
 Thomas S. Sherwin  
 Stanford K. Shu  
 Gail M. Stewart  
 James D. Swift  
 Catherine A. Tan  
 Kenneth C. Tan  
 Devanie S. Teel  
 Andrea W. Thorp  
 Cynthia H. Tinsley  
 Stephen Treiman  
 Diana L. Trupp  
 Pranee Tulyathan  
 Richard P. Tyler  
 Edward J. Vargas  
 Daved W. van Stralen  
 Huu Dinh Vo  
 Vasanti Voleti  
 Nidia R. Vyhmeister  
 Hansen Wang  
 Traci H. Williams  
 Karen A. Winston  
 William A. Wittlake  
 Valerie Y. Wong  
 Sidney S. C. Wu  
 George S. Yanni  
 Kim Yee  
 Steven M. Yellon  
 Sherri E. Yhip  
 Lionel W. Young  
 Darlene M. Zaft  
 Merlin R. Zaske  
 Kimberly R. Zimmerman

The mission of the Department of Pediatrics is to provide patient services, educational programs, research endeavors, child advocacy, and community service in a manner consistent not only with state-of-the-art science but also with Judeo-Christian values.

### *PHYSICAL MEDICINE AND REHABILITATION*

MURRAY E. BRANDSTATER, Chair

#### FACULTY

Margie T. Anacaya  
 Moon S. Bae

John A. Benjamin  
 Murray E. Brandstater  
 Beryl H. Bull  
 Anne T. Cipta  
 Kevan Z. Craig  
 Michael J. Davidson  
 Keith L. Drieberg  
 Bradley A. Eli  
 Travis G. Fogel  
 Gerald R. Goodlow  
 Yvette A. Holness  
 Ionela O. Hubbard  
 Cheryl L. Imes  
 Divakara Kedlaya  
 Jien Sup Kim  
 Robertus H. Kounang  
 Ann Y. Lee  
 Esther C. Lee  
 Jonathan C. Lee  
 Felice L. Loverso  
 Artemio R. Martin  
 Craig A. Muir  
 Anita M. Pai  
 Gordon W. Peterson  
 Lowell W. Reynolds  
 Lori A. Shutter  
 Stephen T. Sparks  
 Scott R. Strum

The Department of Physical Medicine and Rehabilitation was established to develop clinical services in rehabilitation medicine and to offer resources for teaching and research in the field of rehabilitation. These clinical and academic activities cover a wide spectrum of clinical medicine but have as a central basis the notion that rehabilitation is a complex process involving not only multiple disciplines but also consideration of the patient in the broader context of the family and community. The psycho-social-spiritual aspects of rehabilitation complete the whole-person focus, thus providing an opportunity for faculty and students to observe and experience patient care while meeting the goals and objectives of the School of Medicine.

### ***PHYSIOLOGY AND PHARMACOLOGY***

LAWRENCE C. SOWERS, Acting Chair

#### **FACULTY**

##### **PHARMACOLOGY DIVISION**

JOHN BUCHHOLZ, Associate Chair

##### **PHARMACOLOGY**

John Buchholz  
 C. Raymond Cress  
 Lincoln P. Edwards  
 David A. Hessinger  
 Zhice Xu  
 Lubo Zhang

##### **PHYSIOLOGY DIVISION**

Danilyn Angeles  
 Philip J. Chan  
 Daisy D. DeLeon  
 Marino A. DeLeon  
 Charles A. Ducsay  
 William H. Fletcher  
 Raymond D. Gilbert  
 Ramon R. Gonzalez, Jr.  
 Raymond G. Hall, Jr.  
 David A. Hessinger  
 Lawrence D. Longo  
 George Maeda  
 Subbaraman Mohan  
 William J. Pearce  
 Gordon G. Power  
 Philip J. Roos  
 Asher R. Sheppard  
 Jiping Tang  
 Robert W. Teel  
 Glyne U. Thorington  
 Leonard S. Werner  
 Steven M. Yellon  
 John H. Zhang

The goals of the Department of Physiology and Pharmacology are to:

1. Provide relevant course work for the various professional curricula that will provide essential foundational content, an understanding of the current state of the field, and the skills required to maintain currency.
2. Offer a graduate curriculum leading to M.S. and Ph.D. degrees that is designed to provide graduate students with the information and tools needed to succeed as independent educators and investigators.
3. Conduct and publish peer-reviewed research in physiology and pharmacology that contributes to knowledge in the medical sciences.
4. Support Loma Linda University colleagues through collaborations and consultations that will assist in research and instruction.

### ***PSYCHIATRY***

ALAN A. NELSON, Chair

WILLIAM H. MCGHEE, Vice Chair

#### **FACULTY**

Julie C. Albert  
 Leslie H. Alhadeff  
 Louis R. Alvarez  
 Donald L. Anderson  
 Karole S. Avila  
 Nenita Belen  
 Venkatesh G. Bhat  
 Andrew C. Blaine  
 Louis P. Bozzetti, Jr.  
 William. G. Britt III  
 Daniel A. Brooks  
 Roger J. Cabansag  
 Lorna S. Carlin  
 Clarence Carnahan, Jr.  
 Anca Chiritescu

George W. Christison  
 Caron S. I. Christison  
 Herman R. Clements  
 Richard T. Cranston  
 Michael A. Cummings  
 Scott M. Davis  
 John A. Dorsey  
 Ramila Duwal  
 James F. Dyer, Jr.  
 Kari M. Enge  
 Nabil S. Faltas  
 Mubashir A. Farooqi  
 Carlos R. Fayard  
 Ron Foo  
 Teresa Frausto  
 Ihor Galarnyk  
 Monika Gierz  
 Raafat W. Girgis  
 George T. Harding IV  
 Mark G. Haviland  
 Joshua L. Horsley  
 Jerry D. Hoyle  
 Durand F. Jacobs  
 Cameron J. Johnson  
 James P. Johnson  
 Y. William Kim  
 Marilyn H. Kimura  
 Kevin M. Kinback  
 Winifred L. Klop  
 George Kopiloff  
 Benjamin Kovitz  
 Maher S. Kozman  
 Donald J. Kurth  
 Henry L. Lamberton  
 Larry C. Lawrence  
 William A. Lawrence  
 Anne E. Linton  
 Regina G. Liwnicz  
 Jeffrey N. Mar  
 Michael B. Maskin  
 James S. Maurer  
 William H. McGhee  
 Charles Merideth  
 Magdi Mikhael  
 William G. Murdoch  
 Alan A. Nelson  
 Jay M. Otero  
 Faye D. Owen  
 Bipin L. Patel  
 George J. Proctor  
 Bonnie S. Quinton  
 John P. Riesenman  
 William G. Roth  
 Patricia J. D. Roth  
 Melvin L. Sajid  
 Mary Ann Schaepper  
 David E. Schultz  
 Gregg A. Sentenn  
 Conrado C. Sevilla  
 Anthony S. Shin  
 Diana Simon  
 William R. Simpson  
 Daniel Skenderian  
 John C. Stockdale  
 Ahmad K. Tarar  
 John D. F. Tarr  
 John T. Thiel  
 Sul R. O. Thorward

Mary E. Tysor-Tetley  
 Khushro Unwalla  
 Nicholaas-John Van Nieuwenhuysen  
 E. Ray Verde  
 Ronald Warnell  
 Deane L. Wolcott  
 April Wursten  
 Eugene Y. Young

The Department of Psychiatry provides educational programs that include clinical training and research for medical students, psychiatry residents, and psychiatry fellows.

During the first and second years, the Department of Psychiatry directs the teaching of the behavioral sciences courses. In these interdisciplinary courses, lectures and demonstrations cover a broad range of human behavioral determinants—including the biology, psychology, sociology, and psychopathology of behavior. A holistic concept of behavior, including its spiritual components, is taught.

The third-year, six-week psychiatry clerkship includes: five weeks divided between two psychiatry treatment sites; and one week at an addiction-treatment site. These clerkship experiences offer broad and varied training in the treatment of psychiatric problems of adults and children. Students also participate in an interactive, case-based seminar series.

Fourth-year medical students have the opportunity to take electives with psychiatry faculty in child and adult settings, as well as an intensive reading/discussion course in religion and psychiatry.

## PREVENTIVE MEDICINE

WAYNE S. DYSINGER, Chair

### FACULTY

David Abbey  
 Timothy J. Arnott  
 Mihran H. Ask  
 Frederick M. Bischoff  
 Arlene F. Braham  
 Marcus A. Braham  
 Gilbert M. Burnham  
 Terrence L. Butler  
 Bonnie I. Chi-Lum  
 Joseph H. Cummings  
 T. Allan Darnell  
 Ann L. Dew  
 David T. Dyjack  
 P. William Dysinger  
 Wayne S. Dysinger  
 Linda H. Ferry  
 Diana J. Fleming  
 Gary E. Fraser  
 Eric K. Frykman  
 John A. Goley  
 George E. Guthrie  
 David Z. Hall  
 Richard H. Hart  
 Kenneth W. Hart  
 Ronald P. Hattis  
 Jayakaran S. Job  
 Nancy E. Jones  
 John H. Kelly

Synnove M. F. Knutsen  
 Susanne B. Montgomery  
 Eric Ngo  
 Warren R. Peters  
 Floyd E. Petersen  
 Thomas J. Prendergast  
 Ernest J. Prochazka  
 Anthony B. Radcliffe  
 John W. Rhee  
 Douglas C. Richards  
 Wilfred Shiu  
 Pramil N. Singh  
 Katherine E. Sljuka  
 Bruce E. Smith  
 Victor Sulit  
 Larry L. Thomas  
 Lori Wilber  
 Gary H. Wong

The Department of Preventive Medicine is involved in preventive-medicine training and research and in patient and community service activities for the School of Medicine. The Department provides a comprehensive four-year preventive medicine curriculum to all medical students. Graduate medical education training is available in a general preventive medicine residency, an occupational medicine residency, and an addiction medicine fellowship. The department works with and supports the School of Public Health as well as various other Loma Linda programs in health promotion and epidemiology research projects, the most prominent of which is the Adventist Health Study. Preventive-medicine faculty direct clinical services at the Center for Health Promotion, the Social Action Community (SAC) Health System clinics, Empire Occupational Medicine, and five separate Inland Empire university health services. A diverse faculty focus primary activities through the School of Medicine, the School of Public Health, the Jerry L. Pettis Memorial Veterans Medical Center, the San Bernardino County Health Department, and various other regional/community entities.

### SCHOOLS OF MEDICINE AND PUBLIC HEALTH

Complementary degrees are offered through the School of Public Health. Courses are offered in fulfillment of requirements for the Master of Public Health and Doctor of Public Health degrees. These programs are outlined in this CATALOG in Sections III and IV.

### RADIATION MEDICINE

JERRY D. SLATER, Chair  
 DAVID A. BUSH, Vice Chair

#### FACULTY

John O. Archambeau  
 Bijan Arjomandy  
 Eleanor A. Blakely  
 David A. Bush  
 George B. Coutrakon  
 Lora M. Green

Daila S. Gridley  
 Thomas J. Hegarty  
 Janet M. Hocko  
 B. Rodney Jabola  
 Richard P. Levy  
 Lilia N. Loreda  
 Quoc T.A. Luu  
 David W. Mantik  
 Xiao Wen Mao  
 Daniel W. Miller  
 Michael Moyers  
 Ivan Namihas  
 Gregory A. Nelson  
 W. James Nethery  
 Ernest Ngo  
 Andre Obenaus  
 Baldev R. Patyal  
 Michael J. Pecaut  
 William Preston  
 Carl J. Rossi, Jr.  
 Reinhard W. Schulte  
 Maira Simental  
 James B. Slater  
 Jerry D. Slater  
 Stanislav Vatnitsky  
 Jerry R. Williams  
 Leslie T. Yonemoto

The purpose of the Department of Radiation Medicine is to provide superior patient services, education, and research using methods supportive of the Loma Linda University School of Medicine.

### RADIOLOGY

DAVID B. HINSHAW, JR., Chair

#### DIVISIONS

##### ABDOMINAL IMAGING

DALE R. BROOME

##### DIAGNOSTIC RADIOLOGY

HANS SAATY, Head

##### COMMUNITY RADIOLOGY

RICHARD J. TULLY, Head

##### COMPUTED BODY TOMOGRAPHY

PHIROZE BILLIMORIA, Head

##### OUTPATIENT DIAGNOSTIC RADIOLOGY (FMO)

RICHARD D. DUNBAR, Co-Head

WON BAE, Co-Head

#### DIAGNOSTIC ULTRASOUND

##### INPATIENT ULTRASOUND

GLENN A. ROUSE, Head

## OUTPATIENT ULTRASOUND

GERALD GRUBE, Head

## ENT RADIOLOGY

NATHANIEL D. WYCLIFFE, Head

## ANGIO/INTERVENTIONAL RADIOLOGY

DOUGLAS C. SMITH, Head

## MAGNETIC RESONANCE SCIENCES

DAVID B. HINSHAW, JR., Head

## MUSCULOSKELETAL

INGRID KJELLIN, Head

## NEURORADIOLOGY

DANIEL K. KIDO, Head

## INTERVENTIONAL NEURORADIOLOGY

GEORGE LUH, Head

## NUCLEAR RADIOLOGY

GERALD A. KIRK, Head

## PEDIATRIC RADIOLOGY

LIONEL W. YOUNG, Head

## FACULTY

Bruce T. Austin  
 Won-Chul Bae  
 Donald T. Barnes  
 Phiroze Billimoria  
 J. Timothy Blackwelder  
 Dale R. Broome  
 Patrick J. Bryan  
 Jerome Burstein  
 Christopher D. Cumings  
 Richard D. Dunbar  
 Kendra L. Fisher  
 Peggy J. Fritzsche  
 Edward Gabriel  
 Geoffrey A. Gardiner  
 Arnold Z. Geller  
 Liliane H. Gibbs  
 Gerald Grube  
 Kathlene E. Guth  
 E. Mark Haacke  
 Sheri L. Harder  
 Bernard W. Hindman  
 David B. Hinshaw, Jr.  
 Barbara Holshouser  
 Thora F. Howard  
 J. Paul Jacobson  
 Carl Jansen  
 William G. Jones  
 Daniel K. Kido  
 Monika L. Kief-Garcia  
 Susan J. Kim  
 Gerald A. Kirk  
 Shannon Kirk  
 Ingrid B. Kjellin  
 Evert Kuester

Joseph G. Llaurado  
 George Y. Luh  
 Jeanine A. McNeill  
 Michael Neglio  
 Son C. Nguyen  
 Andre Obenaus  
 Shailendri E. Philip  
 Moussa Raiszadeh  
 Garry D. Roghair  
 Glenn A. Rouse  
 Hans Saaty  
 Isaac Sanders  
 David E. Scafidi  
 Eloy E. Schulz  
 James B. Slater  
 Douglas C. Smith  
 Jason C. Smith  
 Walter L. Stilson  
 Joseph R. Thompson  
 Karen A. Tong  
 Richard J. Tully  
 Joseph S. Unis  
 Alix Vincent  
 Gregory Watkins  
 Thomas E. Wiley  
 James Wolfsen  
 Beverly Wood  
 Nathaniel D. Wycliffe  
 Lionel W. Young

The purposes of the Department of Radiology are to provide:

1. Excellent patient services through imaging studies, special diagnostic procedures, and interventional procedures.
2. Educational programs that include research and clinical training for technologists, dosimetrists, physicists, medical students, postdoctoral fellows, radiology residents, and fellows.
3. Research support through laboratory facilities and clinical facilities.

**SURGERY**

LEONARD L. BAILEY, Chair  
 J. DAVID KILLEEN, Vice Chair

**DIVISIONS****CARDIOTHORACIC**

ANEES J. RAZZOUK, Head

**GENERAL**

RICHARD D. CATALANO, Head

**HEAD AND NECK (OTOLARYNGOLOGY)**

ALFRED A. SIMENTAL, Head

**NEUROSURGERY**

AUSTIN R. T. COLOHAN, Head

**ORAL**

ALAN S. HERFORD, Head

**PEDIATRIC**

DONALD C. MOORES, Head

**PLASTIC AND RECONSTRUCTIVE**

SUBHAS GUPTA, Head

**TRANSPLANTATION**

OKECHUKWU N. OJOGHO, Head

**UROLOGY**

HERBERT C. RUCKLE, Head

**VASCULAR**

J. DAVID KILLEEN, Head

The Department of Surgery is in harmony with the stated purposes and philosophy of Loma Linda University School of Medicine.

The purposes of the Department of Surgery are to:

1. Provide the highest standard of surgical patient care.
2. Maintain educational programs in the surgical disciplines for medical students, residents, and fellows.
3. Provide facilities for laboratory and clinical research in the areas of surgical interest.

**FACULTY****CARDIOTHORACIC**

Leonard L. Bailey  
 Michael del Rio  
 Robert Fierro  
 Nahidh Hasaniya  
 George Kafrouni  
 Molly K. McAfee  
 Alfredo L. Rasi  
 Anees J. Razzouk  
 Edwin E. Vyhmeister  
 Nan Wang  
 Ellsworth E. Wareham  
 Michael Wood

**GENERAL**

Yousef G. Amaar  
 Marvin J. Atchison  
 J. Augusto Bastidas  
 Jack L. Bennett  
 Richard D. Catalano  
 Esmond Chi  
 Lori J. Chow  
 N. Eugene Cleek  
 Joseph V. Davis  
 Clifford C. Eke  
 Carlos A. Garberoglio  
 Fekede Gemechu  
 Appannagari Gnanadev  
 Lawrence A. Harms

Lawrence E. Heiskell  
 David B. Hinshaw, Sr.  
 Charles Hu  
 Farabi M. Hussain  
 Janet K. Ihde  
 Joelle L. Jakobsen  
 Victor C. Joe  
 Samir D. Johna  
 Simon Keushkerian  
 Faisal A. Khan  
 Arputharj H. Kore  
 Douglas M. Krahn  
 Shellee R. Lazar  
 Jerrold K. Longersbeam  
 Hector D. Ludi  
 Sharon S. J. Lum  
 M. C. Theodore Mackett  
 Lester L. Mohr  
 Andre Nguyen  
 Mohammad A. P. Pourshahmir  
 Clifton D. Reeves  
 Mark E. Reeves  
 Jorge L. Rivera  
 Antonio E. Robles  
 Marc D. Rudich  
 Mohan K. Sehdev  
 Gregory S. Shank  
 Arnold D. Tabuenca  
 Matthew S. Tan  
 David C. Thompson  
 Ralph J. Thompson  
 David L. Vannix  
 Robert S. Vannix  
 Hansen Wang  
 David B. Welsh  
 David T. Wong  
 J. Frank Yamanishi  
 Robert M. Yuhan

**HEAD AND NECK (Otolaryngology)**

George D. Chonkich  
 Christopher A. Church  
 Lawrence Fechter  
 Leland R. House  
 Timothy Jung  
 Paul D. G. Kim  
 John Y. G. Kim  
 Paul Kim  
 Brenda Lonsbury-Martin  
 Glen K. Martin  
 David G. McGann  
 Donald U. Perez  
 George H. Petti, Jr.  
 Mark Rowe  
 Robert P. Rowe  
 Alfred A. Simental  
 Charles E. Stewart III

**NEUROSURGERY**

Maged L. Abu-Assal  
 Traian T. Cojocaru  
 Austin R. T. Colohan  
 Lloyd A. Dayes  
 Frank P. K. Hsu  
 Walter D. Johnson  
 Michael E. Kirby  
 Wolff M. Kirsch

Robert Marohn  
Renatta J. Osterdock  
Findlay E. Russell  
Shokei Yamada  
John H. Zhang  
Yong Hua Zhu  
Alexander Zouros

**ORAL**

Philip J. Boyne  
Alan S. Herford

**PEDIATRIC**

H. Gibb Andrews  
Joanne E. Baerg  
Gerald Gollin  
Donald C. Moores

**PLASTIC AND RECONSTRUCTIVE**

Ghada Y. Afifi  
Dennis K. Anderson  
Troy J. Andreasen  
Ben J. Childers  
James Chui  
Norberto E. Collins  
Linda D'Antonio  
Brian Eichenberg  
Grace Elias  
James O. Greek  
Subhas C. Gupta  
Robert A. Hardesty  
Robert Kachenmeister  
Sharon L. Kalina  
Daniel B. Kim  
Brett E. Lehocky  
Ka Ming Li  
Duncan A. G. Miles  
Daniel C. Mills  
Michael C. Pickart  
J. Edson Price  
Anil P. Punjabi  
Andrea O. Ray  
Charlotte Resch  
Frank R. Rogers  
Norman Y. Sogioka  
Gordon H. Sasaki  
John B. Slayback  
Stephen S. West  
Thomas J. Zirkle

**TRANSPLANTATION**

Pedro Baron  
Waldo Concepcion  
Edson S. Franco  
Okechukwu N. Ojogho

**UROLOGY**

D. Duane Baldwin  
Gary A. Barker  
Marc A. Beaghler  
Victor C. Ching  
H. Roger Hadley  
Howard Landa  
Paul Lui  
J. David Moorhead  
Herbert C. Ruckle  
Michael A. Sanford  
Steven C. Stewart

Robert R. Torrey, Jr.  
Christopher Tsai

**VASCULAR**

Ahmed M. Abou-Zamzam  
Paul K. Aka  
Christian Bianchi  
William J. Hopewell  
J. David Killeen  
Edward F. Levine  
Afshin M. Molkara  
Robert Pereyra  
Louis L. Smith  
Theodore H. Teruya

## Microbiology and Molecular Genetics—SM (M.S., Ph.D.)

LAWRENCE C. SOWERS, Program Coordinator

HANSEL M. FLETCHER, Associate Program Co-  
Coordinator

**FACULTY**

Edouard M. Cantin  
Carlos A. Casiano  
Daniela Castanotto  
Alan P. Escher  
Istvan Fodor  
Lora M. Green  
Daila S. Gridley  
Sandra Hilliker  
George T. Javor  
Mark S. Johnson  
James D. Kettering  
William H. R. Langridge  
Benjamin H. S. Lau  
John E. Lewis  
Yiming Li  
Michael B. Lilly  
Ren-Jang Lin  
Giuseppe A. Molinaro  
John J. Rossi  
Junichi Ryu  
Donna D. Strong  
Barry L. Taylor  
Anthony J. Zuccarelli

The School of Medicine's Division of Microbiology and Molecular Genetics (Department of Biochemistry and Microbiology) offers programs leading to the Doctor of Philosophy and Master of Science degrees. The programs include a core curriculum that provides a broad background in molecular biology, immunology, and medical microbiology and infectious diseases. Advanced courses allow each student to develop fully an area of interest. Research strengths of the department include: signal transduction in bacteria, virulence and periodontal disease, mechanisms of cell death, cellular and tumor immunology, autoimmunity, chaperonins and protein folding, diagnostic virology,

DNA restriction modification, and antimicrobial resistance.

#### Ph.D. program

The Doctor of Philosophy degree is designed to prepare students for a career of independent research and teaching in a university, clinical, or biotechnology setting. Students are encouraged to develop creativity and independence in addition to technical skills. A superior academic record is required for entry into the program.

The research or thesis Master of Science degree provides training for persons who will become technicians involved in biomedical research in universities or in the biotechnology industry, and for medical technologists seeking specialized research training.

The nonthesis Master of Science degree provides content appropriate for medical technologists preparing for the specialist in microbiology certification; for secondary teachers seeking advanced training in areas such as molecular biology, immunology, or microbiology; and for students seeking admission to a professional school, such as medicine or dentistry.

#### Ph.D. with other degrees

In addition to these programs, combined M.D./Ph.D., M.D./M.S., D.D.S./Ph.D., or D.D.S./M.S. degrees are offered to those seeking a career in academic medicine or dentistry combining research, teaching, and clinical practice. (See sections on Combined-Degrees Program and on the Medical Scientist Program.)

### MICROBIOLOGY—M.S.

**P**rerequisites for acceptance include results of the GRE General Test. Scores on the Test of English as a Foreign Language (TOEFL) are required from students whose native language is not English. Applicants should have a bachelor's degree, or equivalent from a foreign university, with a strong undergraduate preparation in the biological and physical sciences, including a full year each of general biology, general chemistry, organic chemistry, and physics. Other upper-division sciences and calculus are strongly recommended. Exceptions are considered by the faculty on an individual basis. The program reserves the right to decide on the equivalence of courses presented by the applicant.

#### Core requirements

Students earning this degree will maintain a B (3.0) grade average. Core courses include the integrated biomedical graduate course IBGS 511, 512, 513 Cellular Mechanisms and Integrated Systems; and the cognate course IBGS 501, 502. Students will take 1 unit of IBGS 605 Integrative Biology Presentation Seminar for each year in residence. Additionally, they will enroll in IBGS 607 Biomedical Graduate Seminar each quarter; but these units will not be counted toward the fulfillment of the total unit requirement.

#### PROGRAM COURSES

IBGS 511, 512, 513	Cellular Mechanisms and Integrated Systems I, II, III	(30)
IBGS 501	Biomedical Communication and Integrity	(2)

IBGS 502	Biomedical Information and Statistics	(2)
IBGS 503	Biomedical Grant Writing	(2)
IBGS 605	Integrative Biology Presentation Seminar	(4)
MICR 515	Introduction to Bioinformatics and Genomics	(2)
MICR 530	Introduction to Graduate Immunology	(3)
MICR 534	Microbial Physiology	(3)
MICR 536	Laboratory in Gene Transfer and Gene Expression	(4)
#MICR 537	Selected Topics in Molecular Biology	(2)
MICR 546	Advanced Immunology	(4)
#MICR 565	Virology	(3)
MICR 566	Cell Culture	(3)
MICR 605	Colloquium	(1)
IBGS 607	Biomedical Seminar	(1)
MICR 624	Special Problems in Microbiology	(2-4)
MICR 625	Independent Study in Microbiology Literature	(2-4)
MICR 626	Special Topics in Microbiology	(2-4)
MICR 634	Clinical Microbiology Practicum	(4)
MICR 697	Research	(1-5)
MICR 698	Thesis	(3)
MICR 699	Dissertation	(3)

### Natural Sciences—ST (M.S.)

ROBERT A. CUSHMAN, JR., Ph.D.  
Program Coordinator

#### FACULTY

Leonard R. Brand  
Doug Britton  
H. Paul Buchheim  
Ronald L. Carter  
Robert A. Cushman  
Raul Esperante  
Robert Ford  
William K. Hayes  
Kevin E. Nick  
Samuel Soret  
Benjamin L. Clausen

**T**he Natural Sciences Program offers a program leading to the Master of Science degree in natural sciences. Course work is selected from the allied fields of biology, paleontology, geology, earth systems science, and geographic information systems. Areas of curriculum strength include ecology, genetics, systematics, sedimentary geology, paleontology, environmental geology, earth systems science, and GIS.

#### Objectives

Students completing the Master of Science degree in natural sciences:

1. Will be fluent in the fundamental concepts of biology, geology, GIS, and earth systems science.

2. Will seek endorsement for subject teaching in secondary education and will be competent in either biological science or geoscience.
3. Will exhibit effective skills in written and oral communication.
4. Will be familiar with the scientific method, hypothesis testing, and deductive reasoning.
5. Will be familiar with key issues related to the integration of faith and science.
6. Will seek employment in
  - K-12 teaching,
  - civil or public service, or
  - be satisfied that the degree met other personal or professional development objectives.

### Admission

Applicants must meet the general School of Science and Technology admission requirements. Acceptable undergraduate preparation includes a bachelor's degree in biology, geology, chemistry, physics, or other degree with typical biology and geology prerequisites; and must include two quarters of college mathematics (calculus recommended), one-year courses in biology, chemistry, and physics, and courses in general ecology and physical geology.

### Program objectives

The Natural Sciences Program emphasizes ecology-oriented areas of biology and field-oriented geology, particularly sedimentology, stratigraphy, and paleontology. Field work is emphasized because it provides a first-hand experience with biological and geological phenomena that cannot be satisfactorily grasped or understood solely from classroom or laboratory study. Throughout the natural sciences curriculum, students are encouraged to develop an open-minded and investigative approach in the application of the scientific method to the resolution of biological and geologic problems. Consideration of multiple working hypotheses is encouraged. The goal is to prepare students for effective careers in teaching or government.

### Curriculum

A minimum of 50 quarter units, including 36 at or above the 500 level, constitutes the curriculum for the Master of Science degree in natural sciences. In addition to the general requirements of the School of Science and Technology, the following courses are required (all nonrequired courses must be selected in consultation with the student's faculty adviser. Undergraduate courses must be 400-level):

CORE CURRICULUM	(34-36 units, including religion)
GEOL 566 Advanced Sedimentology	(4)
One additional graduate geology or paleontology course	(3-4)
A graduate-level ecology or conservation course	(3-4)
One additional graduate biology course	(4)
BIOL 558 Philosophy of Science and Origins	(4)
or	
GEOL 558 Philosophy of Science and Origins	(4)

BIOL 605 Seminar Presentation in Biology	(3 units)
or	
GEOL 605 Seminar in Geology	(3 units)
BIOL 616 Research and Experimental Design	(2)
or	
GEOL 616 Research and Experimental Design	(2)
Religion (school requirement)	(3)
An earth systems science course	(4)
Research or special projects	(4)

### Project

As part of the core curriculum, the student will complete a project, in consultation with the adviser, involving 4 units of registration in research or special projects.

### Other courses

The remaining courses beyond the core will be selected in consultation with the student's faculty adviser.

### Program seminar attendance

Students are expected to attend all program seminars.

### Final examinations

Students are expected to pass a written comprehensive examination during their penultimate quarter in residence, and an oral comprehensive examination their ultimate quarter in residence.

### ROSARIO BEACH SUMMER COURSES

In cooperation with the Walla Walla College Marine Station in Anacortes, Washington, facilities are available for marine courses and research by graduate students of this program. Some of the available courses are listed below.

BIOL 455 Comparative Physiology	(5)
BIOL 458 Marine Biology	(5)
BIOL 459 Marine Invertebrates	(5)
BIOL 460 Marine Ecology	(5)
BIOL 462 Ichthyology	(5)
BIOL 463 Marine Botany	(5)
BIOL 508 Physiology of Algae	(5)
BIOL 516 Behavior of Marine Organisms	(5)

## Nuclear Medicine Technology—AH (certificate)

ERMA EZPELETA, Program Coordinator

Nuclear medicine uses radioactivity to diagnose and treat disease. This medical specialty provides information about both the structure and the function of virtually every major organ system within the body. Nuclear medicine procedures are safe, involve little or no patient discomfort, and do not require the use of anesthesia.

The nuclear medicine technologist is responsible for preparing and administering radiopharmaceuticals; performing patient-imaging procedures; accomplishing computer processing and image enhancement; analyzing biologic specimens; and providing images, data analysis, and patient information for diagnostic interpretation by the physician health care-team member.

### The program

During the twelve-month certificate Nuclear Medicine Technology Program, students take formal course work along with instruction in the clinical aspects of nuclear medicine. This includes participation, under close supervision, in the actual procedures within the nuclear medicine department. The clinical calendar varies from the University calendar in that the clinical schedule is full time (forty clock hours per week), arranged around lectures and coordinated with affiliated nuclear medicine departments. The program begins with the Autumn Quarter.

### Accreditation

The program is accredited by the Western Association of Schools and Colleges, Accrediting Commission for Senior Colleges and Universities, 985 Atlantic Avenue, Suite 100, Alameda, CA 94501; and by the Department of Health Services, Radiologic Health Branch, P.O. Box 942732, Sacramento, CA 94234-7320.

### Distance education

The Nuclear Medicine Technology Program is offered via distance education at Fresno City College, Fresno, California.

### CPR certification

Students are required to have current cardiopulmonary resuscitation (CPR) certification (adult and child) for all scheduled clinical experience. Classes are available on campus at Life Support Education, University Arts building, 24887 Taylor Street, Suite 102.

### Professional registration and certification

Upon completion of the certificate requirements, the student is eligible to write the qualifying examination in nuclear medicine of The American Registry of Radiologic Technologists (ARRT), and the certifying examination of the Nuclear Medicine Technology Certification Board (NMTCB) and of the state of California (CTNM).

### Admission

#### PREREQUISITE

The applicant must fulfill one of the following requirements:

- Be a graduate of an accredited radiologic technology program; or
- Be an ARRT-registered radiologic technologist; or
- Be an ASCP-certified medical technologist; or
- Be a registered nurse with at least two years of college credit, with a minimum of an associate degree; or
- Have a baccalaureate degree in one of the natural sciences;

AND

### must have credits in the following:

- Two years high school mathematics with grades of C or above, intermediate algebra in college
- Chemistry with laboratory (one quarter/semester introductory or general)
- General physics with laboratory, complete sequence (highly recommended)
- Human anatomy and physiology with laboratory, complete sequence
- Medical terminology
- Patient-care methods

### Observation experience

A minimum of twenty-four hours of observation in a nuclear medicine department is required.

### Certifications

1. CPR certification (adult, child)
2. Venipuncture\*
3. ECG/EKG interpretation\*

If the student is unable to complete the three certifications prior to entering the program, then equivalent courses<sup>#</sup> or \* can be taken concurrently with the program.

Offered by:

# LLU Life Support Education

\* LLU Medical Center Staff Development

### PROGRAM OF INSTRUCTION

RTNM 351, 352	Principles of Nuclear Medicine I, II	(3, 3)
RTNM 353, 354	Nuclear Medicine Procedures I, II	(2, 2)
RTNM 371-374	Nuclear Medicine Affiliation I, II, III, IV	(1, 1, 1, 1)
RTNM 381	Topics in Nuclear Medicine I	(2)
RELE 457	Christian Ethics and Health Care	(2)

A minimum grade of C (2.0) is required for all courses in the program.

## Nursing—SN

(A.S., B.S., M.S., PM certificate, or Ph.D. in nursing;

PB certificate in nursing management; M.S. in nursing administration)

MARILYN M. HERRMANN, Associate Dean, Undergraduate Program

ELIZABETH BOSSERT, Associate Dean, Graduate Program

PATRICIA S. JONES, Director, Office of International Nursing

### FACULTY

Elva Abogado  
Andee S. Alsip  
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 Sally Curnow  
 Ellen D'errico  
 Jane Doetsch  
 Marcia Dunbar  
 Sabine Dunbar  
 June N. Dysinger  
 Jeanette R. Earnhardt  
 Judy A. Earp  
 Donna Edmundson  
 Patricia J. Foster  
 Maudie Foy  
 Katty Joy French  
 Patricia L. Garvin  
 Marilyn Christian Gearing  
 Anne M. Gillespie  
 Sharon Goodrich  
 Mina Joy Grasso  
 Ramona Perez Greek  
 Dynnette E. Hart  
 Judith A. Hart  
 Lee Ann Hawkins  
 Marilyn M. Herrmann  
 Anabelle Mills Hills  
 Marie Hodgkins  
 Wendell Hom  
 Catherine K. Horinouchi  
 Kathie Ingram  
 Bernadine L. Irwin  
 Janene T. Jenkins  
 Angela Jones  
 Patricia S. Jones  
 Lana S. Kanaeki  
 Helen E. King  
 Nancy A. Kofoed  
 Susan L. Krider  
 Janet M. Kroetz  
 L. Lucile Lewis  
 Keri L. Medina  
 Bonnie L. Meyer  
 Eva J. Miller  
 Frances P. Miller  
 Beverly Monti  
 Jan M. Nick  
 Nancy Oakley  
 Pauline Park  
 Judith Perrotte  
 Judith M. Peters  
 Floyd Petersen  
 Patricia K. T. Pothier  
 L. Frances Pride  
 Sofia Puerto  
 Patricia A. Radovich  
 Nancy L. Sarpy  
 Marilyn Savedra  
 Helen Staples-Evans  
 Debra J. Stelmach  
 Sylvia D. Stewart  
 Cora (Penny) Stone  
 Elizabeth Johnston Taylor  
 Bonnie Thiel

Patricia Townsend  
 Lois H. Van Cleve  
 Corinne H. Wales  
 Ruth S. Weber  
 Betty Winslow  
 Clarice W. Woodward  
 Dolores J. Wright  
 Joanna J. Yang  
 Zelne Zamora  
 Janice R. Zumwalt

## UNDERGRADUATE PROGRAM

### Undergraduate curricula

The sections that follow describe the undergraduate curricula offered by the School of Nursing (Bachelor of Science degree and the Associate in Science degree option) and list the courses each student must complete. Students are expected to operate under the general policies of the University and school and specific policies of the degree program in which they are enrolled. The school reserves the right to update and modify the curriculum to keep current with trends in health care.

### B.S. degree/A.S. degree option

The primary aim of the School of Nursing undergraduate nursing program is to prepare competent practitioners who are committed to excellence in practice and to Christian principles. The faculty believe that baccalaureate education in nursing is the basis for professional practice. However, in response to both societal and students' needs, an Associate in Science (A.S.) degree option is provided for students after they have completed all nursing and general education content necessary to prepare for licensure as a registered nurse in California.

The basic professional curriculum leading to a Bachelor of Science (B.S.) degree in nursing is consistent with the faculty belief that students should be broadly educated. The focus is on the synthesis of nursing knowledge and skills with knowledge and skills from the humanities and sciences. Preparation for practice includes experiences in primary, secondary, and tertiary health care with clients from various age and cultural groups and socioeconomic strata. The curriculum is based on the Neuman Systems Model, which addresses stressors to the client system.

### Undergraduate program sequence

The undergraduate program begins with four quarters of preclinical work, which forms the general education and science base for nursing. These quarters may be completed at any accredited college or university. Following six quarters of clinical instruction, additional general education, and cognate courses at Loma Linda University School of Nursing, the student is eligible to receive the A.S. degree and is prepared to write the state board examination. After completion of another two quarters, the student is eligible to receive the B.S. degree and is prepared for professional nursing practice at the baccalaureate level. The clinical experience develops the student's technical and theoretical capabilities in a progressive manner and within the context of the nursing process: assessment, analysis, planning, implementing, evaluating. Most of the baccalaureate nursing major is in the upper division,

where clinical experience is gained in a broad variety of settings. Integral components of upper-division courses are leadership concepts and skills, research, health promotion, and activities which foster collaboration in planning health care with the family and all members of the health care team.

### PRECOURSE PREPARATION FOR NURSING (OPTIONAL)

These courses—required for students in the Bridge Program—prepare disadvantaged students to be successful in regular baccalaureate nursing classes. These courses do not count toward the nursing major.

NRSB 101	Critical Thinking and Learning Strategies for Nursing	(2)
NRSB 102	Science Principles Applied to Nursing	(2)
NRSB 103	Introduction to Math for Nursing	(1)
NRSB 104	Medical Terminology for Nursing	(2)
NRSB 105	Writing for Nursing	(3)
NRSB 106	Reading in Nursing	(2)

### UNDERGRADUATE COURSES

Nursing course credits are offered in quarter units under the following formula:

1. One hour of instruction in theory each week throughout a quarter equals one quarter unit.
2. Three hours of clinical practice each week throughout a quarter equals one quarter unit.

### GRADUATION REQUIREMENTS UNDERGRADUATE PROGRAM IN NURSING

**BACHELOR OF SCIENCE DEGREE: 193 quarter units**

Total units  
required

#### Scientific Inquiry and Analysis (40)

##### NATURAL SCIENCES—28

Anatomy and Physiology	(8)
Introduction to Organic Chemistry and Biochemistry	(8)
Medical Microbiology	(5)
Statistics	(4)
Epidemiology	(3)

##### SOCIAL SCIENCES—12

General Psychology	(4)
Introduction to Sociology	(4)
Developmental Psychology	(4)

#### Communication Skills (13)

Freshman English	(9)
Speech	(4)

#### Health and Well-being (5)

##### PHYSICAL EDUCATION—1

including two activity classes

##### NUTRITION—4

#### Spiritual/Cultural (30)

RELIGION—4 units per year of attendance at a Seventh-day Adventist college, including:

one of the following Foundational Studies—  
RELT 406, 423, 436, or 437—selected  
from religion in the General Educa-  
tion courses listed in Section II (2)

Ethical Studies  
Relational (RELR) Studies

##### HUMANITIES—14

Language (2-4)

including at least two areas from  
General Education courses listed in  
Section II

History, Literature, Art, Music

#### Elective (4)

#### Nursing (101)

TOTAL 

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 193

**GRADUATION REQUIREMENTS**

UNDERGRADUATE PROGRAM IN NURSING

ASSOCIATE IN SCIENCE DEGREE: 140 quarter units

Total units  
required

**Scientific Inquiry and Analysis (33)**

NATURAL SCIENCES—21

Anatomy and Physiology (8)

Introduction to Organic Chemistry  
and Biochemistry (8)

Medical Microbiology (5)

SOCIAL SCIENCES—12

General Psychology (4)

Introduction to Sociology (4)

Developmental Psychology (4)

**Communication Skills (13)**

Freshman English (9)

Speech (4)

**Health and Well-being (5)**

PHYSICAL EDUCATION—1

including two activity classes

NUTRITION—4

**Spiritual/Cultural (18)**

RELIGION

HUMANITIES

**Nursing (71)**

TOTAL 140

**B.S. DEGREE / A.S. DEGREE  
PROGRAM OPTIONS**

The School of Nursing offers a number of options,  
depending on the student's educational back-  
ground.

**STANDARD (GENERIC) B.S. DEGREE PROGRAM  
OPTION**

[FOR STUDENT WITH NO NURSING DEGREE OR LICENSE]

PREREQUISITE UNITS

Intermediate algebra (or high school algebra II) (4)

Introduction to organic chemistry and biochemistry (8)

Anatomy and physiology (8)

Introduction to physics (or high school physics) (4)

Basic medical microbiology (5)

Sociology (4)

Freshman English (9)

General psychology (4)

Speech (4)

Physical education (2 activity classes)

Humanities (including language) (16)

Elective (4)

16

**SOPHOMORE YEAR**

NRSG 214 Fundamentals of Professional Nursing\* (8)

PSYC 226 Lifespan Development\* (4)

NRSG 216 Basic Nursing Skills/Health  
Assessment\* (4)

NRSG 217 Psychiatric Mental Health Nursing I\* (6)

NRSG 309 Nursing of the Older Adult\* (4)

\_\_\_\_\_ Religion\* (2)

NRSG 244 Nursing Pathophysiology\* (4)

**JUNIOR YEAR**

NRSG 308 Nursing of the Adult and Aging Client\* (8)

NRSG 305 Nursing Pharmacology\* (3)

\_\_\_\_\_ Religion\*\* (2)

DTCS 311 Human and Clinical Nutrition\*  
for Nursing (4)

NRSG 316 Health Promotion across the Lifespan\* (4)

NRSG 317 Nursing of the Adult and Aging  
Family I\* (8)

\_\_\_\_\_ Religion\*\* (4)

NRSG 314 Nursing of the Childbearing Family\* (6)

NRSG 315 Child Health Nursing\* (6)

STAT 414, 415 Statistics (4)

ELIGIBLE TO WRITE STATE BOARD.

**SENIOR YEAR**

NRSG 408 Nursing of the Adult and  
Aging Family II CC\* (6)

NRSG 409 Home Health Nursing\* (3)

NRSG 410 Professional Nursing Issues I\* (1)

\_\_\_\_\_ Religion\*\* (4)

EPDM 414 Epidemiology I (3)

ELIGIBLE TO WRITE STATE BOARD.

NRSG 416 Community Health/Public Health  
Nursing (8)

NRSG 421 Professional Nursing Issues II (2)

NRSG 415 Community Mental Health Nursing  
Humanities (4)  
(2)

NRSG 417 Professional Nursing-Practice Elective (6)

NRSG 429 Clinical Nursing Research (4)

NRSG 414 Nursing Management (6)

NOTE: Advancement to each succeeding level is dependent upon successful completion of all classwork shown for the preceding level.

\*Courses must be completed for the A.S. degree.

\*\*Course selection must include one ethical (RELE), one relational (RELR), and one theological (RELT) from the Faculty of Religion courses.

#### A.S. DEGREE PROGRAM OPTION

[FOR STUDENT WORKING TOWARD AN RN AND A B.S. DEGREE]

For the student who wishes to work as a registered nurse during the last two quarters of the generic B. S. degree program, an A.S. degree option is available. (See: Program outline.)

#### ADDITIONAL PROGRAM OPTIONS

##### ACCELERATED B.S. DEGREE PROGRAM

[FOR GENERIC STUDENT WITH NO NURSING DEGREE OR LICENSE]

A student who has completed all humanity, social science, and statistics courses with an overall G.P.A. of 3.0 and has received no provisional grades may accelerate by joining the B.S./B.A. degree track. Any student in this intensive bachelor's degree track whose G.P.A. falls below 3.0 or whose grade in any course falls below a B during any quarter will be returned to the regular schedule (the standard Bachelor of Science degree program) at the beginning of the next quarter.

##### INTENSIVE B.S. DEGREE PROGRAM; OR A.S. OR CERTIFICATE TO M.S.

[FOR STUDENT WITH (NON-NURSING) BACHELOR'S DEGREE]

For students who have completed a B.S. or B.A. degree in a field other than nursing, there are two options. One option leads to a baccalaureate degree in nursing; the other option permits the student to go directly to the M.S. degree upon completion of A.S. degree requirements and community/public health nursing. Applicants to either of these tracks should expect to carry very intensive academic loads. Because of this, students in these tracks must maintain a 3.0 G.P.A. each quarter. If a student's G.P.A. falls below 3.0, the student will be moved to the standard track.

##### PREREQUISITE

Bachelor's degree with a 3.0 G.P.A.

High school or college algebra and physics

Introduction to organic chemistry and biochemistry

Anatomy and physiology

General psychology

Developmental psychology

Speech

Microbiology

Freshman English

Statistics

Research

#### PROGRAM

##### Quarter 1

NRSG 214, NRSG 216, NRSG 224, REL\_ (2 units)\*

##### Quarter 2

NRSG 305, NRSG 308, NRSG 309, REL\_ (3 units)\*

##### Quarter 3

NRSG 217, NRSG 317, DTCS 311

##### Quarter 4

NRSG 314, NRSG 315, NRSG 316 REL\_ (2 units)\*

##### Quarter 5

NRSG 408, NRSG 409, NRSG 410,

##### Quarter 6

NRSG 416 and graduate work.

\*Religion units must include RELR, ethics, and one of the following: RELF 406, 423, 436, or 437.

#### B.S. DEGREE OR RN

[FOR THE LICENSED VOCATIONAL NURSE (LVN)]

The School offers two options to the LVN: a baccalaureate degree or the 45-unit RN option.

##### The B.S. degree option

This option will lead to a Bachelor of Science (B.S.) degree in nursing.

##### PREREQUISITE

- All prerequisite courses listed for the standard-program student (see page 46)
- Overall G.P.A. of 3.0
- Humanities, including a foreign language (18 units)
- Developmental psychology
- An LVN license (skills will need to be validated)

#### PROGRAM

##### Quarter 1

NRSG 217, NRSG 224, NRSG 225\*\* REL\_ (2 units)\*

##### Quarter 2

NRSG 305, NRSG 308#, DTCS 311, REL\_ (2 units)\*

##### Quarter 3

NRSG 316, NRSG 317, REL\_ (3 units)\*

##### Quarter 4

NRSG 314, NRSG 315, STAT 414, STAT 415

##### Quarter 5

NRSG 408, NRSG 409, NRSG 410, EPDM 414, REL\_ (3 units)\*

##### Quarter 6

NRSG 414, NRSG 417, NRSG 429

##### Quarter 7

NRSG 415, NRSG 416, NRSG 421, REL\_ (2 units)\*

\*Religion units must include RELR, ethics, and one of the following: RELF 406, 423, 436, or 437.

\*\*Upon successful completion of this course, students are credited with NRSG 214, NRSG 216 (2 units), and NRSG 309 (2 units).

#With appropriate experience, this course may be challenged. The examination covers both theory and a demonstration of clinical skills in an acute-care setting.

**The 45-unit RN-only option**

The 45-unit option is open to all LVNs who seek only the RN license. Since the LVN choosing this option will not meet the requirements for the Associate in Science degree as outlined by the School, no degree or certificate will be issued; no graduation exercise will be included; nor will the student be eligible to wear the school pin, cap, or other insignia. In addition, an RN license obtained through this program is valid only in California and is not transferable to other states.

**PREREQUISITE**

- High school diploma
- Current LVN license in California
- Completion of physiology and microbiology with a grade of C or better
- G.P.A. of at least 2.0

**PROGRAM**

**Required courses (19 units):**

- NRSG 217, NRSG 308#, NRSG 225+, NRSG 317, NRSG 321

**Optional courses (to complete 45 units):**

- NRSG 314, NRSG 315, NRSG 316, NRSG 318, NRSG 319

+Upon completion of this course, the student will receive 12 units of credit as follows:

- NRSG 214, 8 units
- NRSG 216, 2 units
- NRSG 308, 2 units

#This course may be challenged.

NOTE: The student in this 45-unit RN option must maintain a G.P.A. of at least 2.0 and a grade of at least a "C" in each course throughout enrollment at LLU.

**THREE-QUARTER OR PART-TIME B.S. DEGREE PROGRAM**

[FOR THE RETURNING RN]

The returning RN may complete a baccalaureate degree in three quarters of full-time course work. Part-time schooling is also possible.

**PREREQUISITE**

- (no more than 105 units can transfer from a two-year institution)
- A.S. degree or diploma in nursing
- Anatomy and physiology
- Introduction to chemistry

- Microbiology
- General psychology
- Freshman English
- Developmental psychology
- Sociology
- Physical education
- Speech
- Humanities, 22 units
- Elective(s).
- Nutrition (usually integrated into the nursing classes)

**PROGRAM**

**Courses include:**

- NRSG 337, NRSG 407 or 408, NRSG 409#, NRSG 414\*\*, NRSG 415, NRSG 416, NRSG 417^, NRSG 421^, NRSG 429, STAT 414 and 415, EPDM 414, BCHM 306, REL\_ (6 units)\*

\*Religion units must include RELR, ethics, and one of the following: RELF 406, 423, 436, or 437.

#With appropriate experience, this course may be challenged.

^For the experienced nurse (three years) who wishes to go directly into the graduate nursing program, 8 units of the graduate nursing course work may be substituted for NRSG 417 and NRSG 421.

**COURSES**

**LOWER-DIVISION**

**SOPHOMORE YEAR**

**PREREQUISITE**

For admission to clinical nursing courses, all prerequisite courses must be successfully completed.

- NRSG 214 Fundamentals of Professional Nursing (8)
- NRSG 216 Basic Nursing Skills and Health Assessment (4)
- NRSG 217 Psychiatric Mental Health Nursing (6)
- NRSG 224 Nursing Pathophysiology (4)
- NRSG 225 LVN Bridge Course (4)
- NRSG 244 Skills for Academic Success (1)
- NRSG 299 Directed Study (1-8)

**UPPER-DIVISION**

**JUNIOR YEAR**

**PREREQUISITE**

For admission to junior-level nursing courses, the following courses must be successfully completed: NRSG 214, 216, 224.

- NRSG 305 Nursing Pharmacology (3)
- NRSG 308 Nursing of the Adult and Aging Client (8)
- NRSG 309 Nursing of the Older Adult (4)
- NRSG 314 Nursing of the Childbearing Family (6)
- NRSG 315 Child-Health Nursing (6)

NRS 316	Health Promotion across the Lifespan	(4)
NRS 317	Nursing of the Adult and Aging Family I	(8)
NRS 336	Transition to Professional Nursing	(3)
NRS 337	Strategies for Professional Transition	(4)

#### SENIOR YEAR

##### PREREQUISITE

For admission to senior-level nursing courses, sophomore- and junior-year nursing courses must be successfully completed.

NRS 407	Integration of Essential Concepts	(6)
NRS 408	Nursing of the Adult and Aging Family II	(6)
NRS 409	Home Health	(3)
NRS 410	Professional Nursing Issues I	(1)
NRS 414	Nursing Management	(6)
NRS 415	Community Mental Health Nursing	(4-6)
NRS 416	Community Health Nursing	(8)
NRS 417	Professional Nursing Practice Elective	(6)
NRS 421	Professional Nursing Issues II	(2)
NRS 429	Clinical Nursing Research	(4)

## GRADUATE PROGRAM

### Overview

The sections that follow describe the clinical-option and administration-option graduate curricula offered by the School of Nursing and list the courses for each: Master of Science degree in nursing; post-bachelor's certificate in nursing management, and Doctor of Philosophy degree in nursing (with selected concentration/s in various research, teaching, clinical and/or administration areas). School of Nursing students are expected to operate under the general policies of the University and school and the specific policies of the degree or certificate program in which they are enrolled. The school reserves the right to update and modify the curriculum to keep current with trends in health care.

### Advanced nursing practice; nursing administration

A curriculum leading to a Master of Science degree with preparation for advanced nursing practice/nursing education or nursing administration is offered through the School of Nursing of Loma Linda University. Options available for advanced nursing practice are outlined in the following sections.

### Chosen areas of concentration

In graduate education, the student has opportunity for the intense pursuit of knowledge in a chosen field of interest. Teaching focuses on attainment of knowledge and development of advanced intellectual, clinical, leadership, and investigative skills.

### Class scheduling

Convenient class scheduling allows students to complete the program on a full-time or part-time basis. Core nursing courses are scheduled in late afternoons to accommodate working nurses. Applications may be initiated throughout the year.

### Required units

A minimum of 53-72 quarter units is required to complete the program. Ideally the sequence begins in the Autumn Quarter but may commence any term during the year.

### Admission to graduate program

The following criteria are required for admission to the graduate program in nursing:

A baccalaureate degree in nursing from an accredited program (or its equivalent).

A 3.00 undergraduate G.P.A. (on a 4.00 scale), both cumulative and in the nursing major.

A standardized interview with two graduate nursing faculty members.

The GRE general test (recommended).

Current California registered nurse license before enrollment in clinical nursing courses.

### Post-master's and postbachelor's certificates

Nursing experience in the area of the desired major before beginning graduate study. One year of experience as a registered nurse is required to enter nursing administration. A minimum of one year of experience in critical care is a prerequisite to beginning the sequence of specialty courses in neonatal and critical care.

An A.S. degree or diploma in nursing from an accredited program and a B.S. or B.A. degree in another field can qualify the applicant for admission to the graduate program in nursing after s/he takes 20 quarter units of approved upper-division clinical nursing courses that include at least 8 quarter units of community health nursing with field experience. Many courses may be challenged.

Students entering with a bachelor's degree in another field and a certificate in nursing from Loma Linda University School of Nursing will be required to take 2 units of guided study in clinical management practice concurrent with NRS 547 Management: Principles and Practice.

### Grades

A minimum G.P.A. of 3.00 must be maintained in all work taken for the degree and in the nursing major.

### Thesis option

The student has the option of completing a thesis within the curriculum for the master's degree. The decision is made in consultation with the student's adviser.

### Candidacy

Students are eligible for candidacy after completing 24 units of required graduate course work.

### Examination

A comprehensive written examination is required. The examination must be taken before enrolling in the last 8 units of the program.

### Curriculum change

To maintain quality education, the curriculum is subject to change without prior notice. Students in continuous attendance will meet graduation requirements of the CATALOG under which they enter the School of Nursing.

**General requirements**

For information about requirements and practices to which all graduate students are subject, the student should consult Sections II and III of this CATALOG.

**M.S. IN NURSING, PM CERTIFICATE**

The following clinical options are available within the graduate program in nursing:

- Adult nurse practitioner
- Family nurse practitioner
- Pediatric nurse practitioner
- Neonatal critical care nurse practitioner
- School nursing
- Clinical nurse specialist: Adult and aging family
- Clinical nurse specialist: growing family

**M.S. DEGREE CORE COURSE REQUIREMENTS**  
(52-72 units)

For the Master of Science degree in nursing, the student must complete 52-72 quarter units. Elective courses are selected in consultation with the student's adviser.

The following 19 units of core courses are required of all students:

NRSG 508	Nursing in Community Systems	(2)
NRSG 515	Health Policy: Issues and Process	(2)
NRSG 516	Advanced Practice Role Development	(2)
NRSG 604	Nursing in Family Systems	(3)
NRSG 684	Research Methods	(4)
NRSG 680	Intermediate Statistics	(3)
RELE 524	Christian Bioethics	(3)

Students who choose the thesis option also take:

NRSG 697	Research	(3)
NRSG 698	Thesis in Nursing	(2)

**CLINICAL OPTIONS**

The clinical options in nursing prepare nurse specialists who have advanced nursing knowledge, clinical expertise, and functional preparation. Clinical options are offered in eight areas.

**NOTE:**

A single asterisk (\*) indicates a course that is offered alternate years.

Double asterisks (\*\*) indicate that a clinical option is offered every other year or when the student pool is sufficient.

**ADULT NURSE PRACTITIONER (M.S.)\*\***  
(68 units)

The Adult Nurse Practitioner clinical option prepares the nurse to exercise independent judgment in assessment, supervision, and management of the primary health care needs of adults, in consultation and collaboration with primary-care physicians. The curriculum prepares the student to be certified by the state of California and the American Nurses Association as a nurse practitioner.

**Clinical focus**

*NRSG 624	The Adult and Aging Family I	(2)
NRSG 651	Advanced Physical Assessment	(3)
NRSG 561	Adult Primary Health Care I	(4)
NRSG 562	Adult Primary Health Care II	(6)
NRSG 563	Adult Primary Health Care III	(6)
NRSG 564	Adult Primary Health Care IV	(7)
NRSG 565	Adult Primary Health Care V	(6)

**Required courses**

PHSL 533	Physiology I	(4)
NRSG 544	Teaching and Learning Theory	(3)
NRSG 547	Management: Principles and Practices	(3)
NRSG 555	Pharmacology in Advanced Practice I	(3)
NRSG 556	Pharmacology in Advanced Practice II	(2)

**ADULT NURSE PRACTITIONER POST-MASTER'S CERTIFICATE** (39 units)

The *Adult Nurse Practitioner* post-master's certificate program is designed to prepare the nurse with a master's degree in a clinical area of nursing to become certified by the Board of Registered Nursing as a nurse practitioner in the state of California.

Prerequisite: Graduate-level physiology and advanced physical assessment.

**Required courses**

NRSG 604	Nursing in Family Systems	(2)
or	(may be challenged)	
NRSG 624	The Adult and Aging Family I	(2)
NRSG 555	Pharmacology in Advanced Practice I	(3)
NRSG 556	Pharmacology in Advanced Practice II	(2)
RELE 524	Christian Bioethics	(3)
NRSG 561	Adult Primary Health Care I	(4)
NRSG 562	Adult Primary Health Care II	(6)
NRSG 563	Adult Primary Health Care III	(6)
NRSG 564	Adult Primary Health Care IV	(7)
NRSG 565	Adult Primary Health Care V	(6)

**FAMILY NURSE PRACTITIONER (M.S.)**  
(69 units)

The *Family Nurse Practitioner* clinical option prepares the nurse to exercise independent judgment in assessment, supervision, and management of the primary health care needs of family members from newborn through elders, in consultation and collaboration with family practice physicians. The curriculum prepares the student to be certified by the state of California and the American Nurses Association as a nurse practitioner.

**Clinical focus**

NRSG 651	Advanced Physical Assessment	(3)
NRSG 652	Family Primary Health Care I	(5)
NRSG 653	Family Primary Health Care II	(6)
NRSG 654	Family Primary Health Care III	(7)
NRSG 655	Family Primary Health Care IV	(7)
NRSG 656	Family Primary Health Care V	(7)

**Required courses**

PHSL 533	Physiology I	(4)
NRSG 544	Teaching and Learning Theory	(3)

NRSG 547	Management: Principles and Practices	(3)
NRSG 555	Pharmacology in Advanced Practice I	(3)
NRSG 556	Pharmacology in Advanced Practice II	(2)

### FAMILY NURSE PRACTITIONER POST-MASTER'S CERTIFICATE (42 units)

The *Family Nurse Practitioner* post-master's certificate program is designed to prepare the nurse with a master's degree in a clinical area of nursing to become certified by the Board of Registered Nursing as a nurse practitioner in the state of California.

Prerequisite: Graduate-level physiology and advanced physical assessment.

#### Required courses

NRSG 604	Nursing in Family Systems (may be challenged)	(2)
NRSG 555	Pharmacology in Advanced Practice I	(3)
NRSG 556	Pharmacology in Advanced Practice II	(2)
RELE 524	Christian Bioethics	(3)
NRSG 652	Family Primary Health Care I	(5)
NRSG 653	Family Primary Health Care II	(6)
NRSG 654	Family Primary Health Care III	(7)
NRSG 655	Family Primary Health Care IV	(7)
NRSG 656	Family Primary Health Care V	(7)

### PEDIATRIC NURSE PRACTITIONER (M.S.) (68 units)

The *Pediatric Nurse Practitioner* clinical option prepares the nurse to exercise independent judgment in assessment, supervision, and management of primary health care needs of children from birth through adolescence in consultation and collaboration with physicians. The curriculum prepares the student to be certified by the state of California, the American Nurses Association as a nurse practitioner, and by the Pediatric Nursing Certification Board.

#### Clinical focus

*NRSG 645	Growing Family I	(2)
NRSG 651	Advanced Physical Assessment	(3)
*NRSG 551	Pediatric Primary Health Care I	(4)
*NRSG 552	Pediatric Primary Health Care II	(6)
*NRSG 553	Pediatric Primary Health Care III	(7)
*NRSG 554A	Pediatric Primary Health Care IV	(7)
*NRSG 554B	Pediatric Primary Health Care V	(5)

#### Required courses

PHSL 533	Physiology I	(4)
NRSG 544	Teaching and Learning Theory	(3)
NRSG 547	Management: Principles and Practices	(3)
NRSG 555	Pharmacology in Advanced Practice I	(3)
NRSG 556	Pharmacology in Advanced Practice II	(2)

### PEDIATRIC NURSE PRACTITIONER POST-MASTER'S CERTIFICATE (37 units)

The *Pediatric Nurse Practitioner* post-master's certificate program is designed to prepare the nurse with a master's degree in a clinical area of nursing to become certified by the Board of Registered Nursing as a nurse practitioner in the state of California.

Prerequisite: Graduate-level physiology and advanced physical assessment.

#### Required courses

NRSG 604	Nursing in Family Systems	(2)
or		
*NRSG 645	Growing Family I (may be challenged)	(2)
NRSG 555	Pharmacology in Advanced Practice I	(3)
NRSG 556	Pharmacology in Advanced Practice II	(2)
RELE 524	Christian Bioethics	(3)
*NRSG 551	Pediatric Primary Health Care I	(4)
*NRSG 552	Pediatric Primary Health Care II	(6)
*NRSG 553	Pediatric Primary Health Care III	(7)
*NRSG 554A	Pediatric Primary Health Care IV	(7)
*NRSG 554B	Pediatric Primary Health Care V	(5)

### NEONATAL CRITICAL CARE /\*\* NURSE PRACTITIONER (M.S.) (72 units)

The *Neonatal Critical Care Nurse Practitioner* clinical option specializes in the theory and practice of neonatal intensive-care nursing. The curriculum prepares the nurse to exercise independent judgment in assessment, supervision, and management of sick newborns—with consultation and collaboration of neonatologists. Working with families, the nurse will fill the role of consultant and educator. The curriculum prepares the student to be certified by the state of California and the National Association of Neonatal Nurses.

#### Clinical focus

**NRSG 619	Neonatal Critical Care I: Physical Assessment	(3)
**NRSG 620	Neonatal Critical Care II	(5)
**NRSG 621	Neonatal Critical Care III	(8)
**NRSG 622	Neonatal Critical Care IV	(9)
**NRSG 623	Neonatal Critical Care V: Practicum	(13)

#### Required courses

PHSL 533	Physiology I	(4)
NRSG 544	Teaching and Learning Theory	(3)
NRSG 547	Management: Principles and Practices	(3)
NRSG 555	Pharmacology in Advanced Practice I	(3)
NRSG 560	Neonatal Pharmacology	(2)

### NEONATAL CRITICAL CARE NURSE PRACTITIONER POST-MASTER'S CERTIFICATE (41 units)

The *Neonatal Critical Care Nurse Practitioner* post-master's certificate program is designed to prepare the nurse with a master's degree in parent/child nursing (or equivalent to the LLU clinical major in *Growing Family*)

to become certified by the California Board of Registered Nursing as a nurse practitioner in the state of California.  
Prerequisite: Graduate-level physiology and pharmacology.

**Required courses**

RELE 524	Christian Bioethics	(3)
**NRSRG 619	Neonatal Critical Care I	(3)
**NRSRG 620	Neonatal Critical Care II	(5)
**NRSRG 621	Neonatal Critical Care III	(8)
**NRSRG 622	Neonatal Critical Care IV:	(9)
**NRSRG 623	Neonatal Critical Care V: Practicum	(13)
NRSRG 560	Neonatal Pharmacology	(2)

**ADULT AND AGING FAMILY (M.S.) (58 units)**

The *Adult and Aging Family* clinical option prepares students for a variety of leadership roles in nursing, including clinical specialization and teaching. Clinical and theoretical content focuses on adult and aging clients and families. The program offers opportunities to develop knowledge and expertise for advanced practice in oncology nursing, coronary-care nursing, and gerontological nursing. The curriculum includes preparation for certification by the American Nurses Association as a clinical nurse specialist in either medical-surgical nursing or gerontological nursing after completing the required practice hours.

**Clinical focus**

*NRSRG 624	The Adult and Aging Family I	(4)
*NRSRG 626	The Adult and Aging Family II	(3)
*NRSRG 628	Clinical Practicum: Adult and Aging Family	(2-12)
NRSRG 651	Advanced Physical Assessment	(3)

**Required courses**

PHSL 533	Physiology I	(4)
NRSRG 547	Management: Principles and Practices	(3)
	Electives	(3)

**Teaching option**

NRSRG 544	Teaching and Learning Theory	(3)
*NRSRG 545	Teaching Practicum	(3)
*NRSRG 546	Curriculum Development in Higher Education	(3)

**Advanced-practice option**

NRSRG 544	Teaching and Learning Theory	(3)
PHSL 534	Physiology II	(3)

**GROWING FAMILY (M.S.) (58 units)**

The *Growing Family* clinical option prepares students for a variety of leadership roles in nursing, including clinical specialization and teaching. The curriculum offers opportunity for the student to choose an emphasis providing advanced nursing care to families in the early phase of childbearing or in care of children. The curriculum includes preparation for certification by the American Nurses Association as a clinical nurse specialist in child and adolescent health care or in maternal and child health, after completing the required practice hours.

**Clinical focus**

*NRSRG 645	Growing Family I	(4)
*NRSRG 646	Growing Family II	(3)

*NRSRG 617	Clinical Practicum: Growing Family	(2-12)
NRSRG 651	Advanced Physical Assessment	(3)

**Required courses**

NRSRG 547	Management: Principles and Practices	(3)
PHSL 533	Physiology I	(4)
	Electives	(3)

**Teaching option**

NRSRG 544	Teaching and Learning Theory	(3)
*NRSRG 545	Teaching Practicum	(3)
*NRSRG 546	Curriculum Development in Higher Education	(3)

**Advanced-practice option**

NRSRG 544	Teaching and Learning Theory	(3)
PHSL 534	Physiology II	(3)

**SCHOOL NURSING (M.S.) (52 units)**

Public health nursing certificate required

The *School Nursing* clinical option prepares students to meet both the requirements for a health services (school nurse) credential issued by the state of California and a Master of Science degree. It builds on the content of the baccalaureate degree and has a strong emphasis in advanced nursing theories, cultural and behavioral concepts, research, and nursing issues. The role of the school nurse encompasses a broad range of activities, including health-promotion education, illness prevention and detection, counseling and guidance, and specialized health services to students and their families. The state special teaching authorization in health (STAH) credential option is available.

Prerequisite: EDPC 460 Exceptional Child (or equivalent) (3)

*NRSRG 512	School Nursing Services	(4-6)
	(prerequisite audiometry certification; preliminary school nurse service cre- dential or a certificate of clearance)	
NRSRG 544	Teaching and Learning Theory	(3)
*NRSRG 645	Growing Family I	(3)
*NRSRG 646	Growing Family II	(3)
*NRSRG 546	Curriculum Development in Higher Education	(3)
NRSRG 547	Management: Principles and Practices	(3)
NRSRG 651	Advanced Physical Assessment	(3)
	Electives (without STAH option)	(9-11)

*STAH option:*

AHCJ 506	Educational Evaluation and Clinical Assessment	(3)
NRSRG 546	Teaching Practicum	(4)
	Electives	(2-4)

**NURSING ADMINISTRATION OPTION—M.S.**

The nursing administration option prepares nurses for leadership in a variety of organizational settings. The curriculum draws from the practice of nursing, from management, and from related fields; and includes administrative, research, and clinical components.

**NURSING ADMINISTRATION (M.S.) (53 units)**

The master of science degree *Nursing Administration* option prepares nurses for leadership in a variety of organizational settings. The curriculum draws from the practice of nursing, management and related fields, and includes administration, research, and clinical components.

**Administration focus**

NRSG 624_	Adult and Aging Family I	(3)
or		
NRSG 645	Growing Family I	(3)
*NRSG 541	Nursing Administration Practicum I	(3)
*NRSG 542	Nursing Administration Practicum II	(4)
NRSG 547	Management: Principles and Practice	(3)

**Required courses**

HADM 534	Legal and Regulatory Issues in Health Care	(3)
HADM 542	Managerial Accounting for Health Care Organizations	(3)
HADM 528	Organizational Behavior in Health Care	(3)
HADM 514	Health Care Economics	(3)
or		
HADM 559	Health Care Marketing	(3)
Electives		(9)

**NURSE EDUCATOR OPTION (M.S.) (55-56 units)**

The Nurse Educator option prepares faculty for educational programs in nursing. The student will select either the Adult and Aging Family or the Growing Family as a focus area for their clinical work. Additional coursework includes education courses, research and other core courses. The curriculum prepares the graduate to take the NLN Certified Nurse Educator Examination.

**Nurse Educator: Growing Family****Clinical focus**

PHSL 533	Physiology I	(4)
NRSG 547	Management: Principles and Practices	(3)
NRSG 555	Pharmacology in Advanced Practice I	(3)
NRSG 651	Advanced Physical Assessment	(3)
NRSG 624	Adult and Aging Family I	(3)
NRSG 626	Adult and Aging Family II	(3)
NRSG 617	*Clinical Practicum: Growing Family	(3)

**Teaching option**

NRSG	Teaching and Learning Theory	(3)
NRSG 545	Teaching Practicum	(3)
**NRSG546	Curriculum Development in Higher Education	(3)
AHCJ 506	Educational Evaluation and Clinical Assessment	(3)

**Electives**

PHSL 534	Physiology II	(3)
or		
NRSG 556	Pharmacology in Advanced Practice II	(2)

**Nurse Educator: Adult and Aging Family****Clinical focus**

PHSL 533	Physiology I	(4)
NRSG 547	Management: Principles and Practices	(3)
NRSG 555	Pharmacology in Advanced Practice I	(3)
NRSG 651	Advanced Physical Assessment	(3)
*NRSG645	Growing Family I	(3)
*NRSG646	Growing Family II	(3)
*NRSG617	Clinical Practicum: Growing Family	(3)

**Teaching option**

NRSG 544	Teaching and Learning Theory	(3)
NRSG 545	Teaching Practicum	(3)
**NRSG 546	Curriculum Development in Higher Education	(3)
AHCJ 506	Educational Evaluation and Clinical Assessment	(3)

**Electives**

PHSL 534	Physiology II	(3)
or		
NRSG 556	Pharmacology in Advanced Practice II	(2)

**PH.D. DEGREE PROGRAM IN NURSING****Doctoral options**

The aim of the doctoral program in nursing is to prepare nurse scholars for leadership in education, health care administration, clinical practice, and research.

The doctorally prepared nurse scientist who completes this program should be committed to the generation of knowledge critical to development of nursing science and practice. Graduates join with other nursing leaders in furthering the development of nursing science and improving health care delivery throughout the world.

**Goals and objectives**

- To prepare nursing scholars for leadership in education, health care administration, clinical practice, and research within a global community.
- To prepare nurse scientists who are committed to the generation and dissemination of knowledge relevant to the development of nursing science and practice.
- To prepare individuals whose wholistic perspective encompasses social, cultural, political, ethical, and spiritual dimensions in their scholarship practice.
- To prepare individuals to engage in interdisciplinary discourse and scholarship.

**The curriculum**

The doctoral degree program is designed to provide an in-depth understanding of knowledge development within the discipline of nursing through philosophical, theoretical, and scientific methods of inquiry. The core courses of the program emphasize these three areas. In addition to the core courses, each student is encouraged to select an individually focused area of concentration that will support the student's chosen area of expertise in nursing and that will focus her or his area of advanced inquiry. The area of concentration may fit with established research programs of School of Nursing

faculty and may also take advantage of graduate courses throughout the University.

Potential areas of concentration include: symptom management, family caregiving, quality of life, spirituality in health care, nursing education, biomedical and clinical ethics, physiological nursing, health policy, health care leadership, and behavioral health sciences.

The Ph.D. degree in nursing has a credit-hour requirement of 95-quarter units beyond the Master of Science degree. Twenty-four of the units are for dissertation; the remaining units are divided among core courses, area of concentration, religion, and electives. The program can be completed in eleven quarters of full-time study or may be extended up to seven years to accommodate the part-time student. Classes are scheduled to accommodate the needs of adult students. Some seminar experiences are supplemented with online distance learning.

#### Admission criteria

The following criteria are considered for admission to the doctoral program in nursing:

1. Preference will be given to applicants with a master's degree in nursing.
2. The grade-point average minimum is 3.5 on a 4.0 scale or equivalent at the master's level.
3. The Graduate Record Examination must have been taken within the past five years, with satisfactory scores indicating advanced verbal and quantitative skills.
4. A minimum TOEFL score of 213 must be earned by international students.
5. A personal interview is required.
6. Evidence of scholarly work must be provided.

#### Progression criteria

The following sequential elements are required for progression in the doctoral program:

1. Area of concentration developed and approval of student's proposed program of study by end of the first year of full-time study.
2. Written and oral qualifying examination after completion of all required course work.
3. Advancement to candidacy.
4. Successful defense of research proposal.
5. Successful defense of dissertation.

### OUTLINE OF COURSES

#### Philosophy of science and nursing

PHIL 616	Seminar in Philosophy of Science I	(3)
NRSG 574	Philosophical Foundation of Nursing Science	(2)

#### Theory development

NRSG 575	Strategies for Theory Development	(2)
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#### Research and statistics

NRSG ____	Qualitative Research Methods	(4)
NRSG 686	Advanced Quantitative Research Methods	(4)
PSYC 501	Advanced Statistics I	(4)
PSYC 502	Advanced Statistics II	(4)

PSYC 503	Advanced Multivariate Statistics III	(4)
	Selected analytical topics (optional)	(2-4)

#### Cognates and electives

RELE	Religion (ethics, foundational, and relational)	(3, 3, 3)
NRSG 664	Nursing Science Seminar concentration courses	(1, 1, 1)
	Electives	(8-12)
NRSG 697	Research (20 units required)	(1-4)
NRSG 699	Dissertation	(4)

## Nutrition—PH

(M.S. in clinical nutrition, nutrition care management, or nutritional sciences;

M.P.H. or Dr.P.H. in public health nutrition;

Ph.D. in nutrition care management)

SUJATHA RAJARAM, Nutritional Sciences  
Program Coordinator and Clinical Nutrition  
Program Coordinator

ELLA HADDAD, Interim Chair

#### FACULTY

Carol Abidin  
Diane L. Barnhart  
Ardis S. Beckner  
Paula D. Benedict  
James W. Blankenship  
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Dianne L. Butler  
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Zaida R. Cordero-MacIntyre  
Barbara A. Crouse  
Paula C. de Silva  
Barbara F. Dickinson  
Elaine K. Fleming  
Constance L. Garrett  
Ella H. Haddad  
Diana L. Herington  
Elaine G. Hiel  
Lorrie L. Hinkleman  
Richard W. Hubbard SM  
Daniza Ivanovic  
Karen Jaceldo-Siegl  
Judith M. Jamison  
Patricia K. Johnston  
John H. Kelly, Jr.  
Merrill L. H. King  
Diana T. Lamb  
Susan K. Lewis  
Karla D. Magie  
Samar S. McGregor  
Merijane T. Malouin  
M. Alfredo Mejia  
Mark J. Messina  
Virginia L. Messina  
Alisa L. Minear-Morton  
Doree L. Morgan

Jerl L. Noval  
 Leh C. Ota  
 Carmen G. Llerandi Phipps  
 M. Elizabeth Quigley  
 Sujatha Rajaram  
 Inherla H. Rivera  
 Joan Sabaté  
 Lia M. Robinson  
 Albert S. Sanchez  
 John A. Scharffenberg  
 Louise E. Schneider  
 Jeanne F. Silberstein  
 Kathleen M. Wolf

The Department of Nutrition provides programs leading to the Master of Public Health (M.P.H.) and the Doctor of Public Health (Dr.P.H.) degrees. These programs prepare public health nutritionists who can combine knowledge of nutrition science with competencies in education, behavioral science, management, and public policy to enhance the nutrition status of individuals, groups, and populations. Public health nutrition uses the science of nutrition and related disciplines to identify and solve nutrition-related health problems.

This program maintains links to nutrition-service providers and programs that allow students the opportunity to be exposed to various nutrition services and to work with professionals in a variety of disciplines and settings.

The M.P.H. degree program in nutrition is approved by the Faculties of Graduate Programs in Public Health Nutrition and conforms to the high standards established by this national organization.

#### Department goals

The Department of Nutrition will:

- Train competent public health nutritionists.
- Contribute to the body of nutrition knowledge through active research, emphasizing issues related to vegetarian nutrition, plant-based diets, prevention of disease, and promotion of health.
- Serve as a resource for the Seventh-day Adventist Church and others, with special attention to vegetarian nutrition.
- Collaborate with local agencies in various activities for improvement of the nutritional status of the community.
- Provide opportunity within a graduate program to meet the didactic and professional practice requirements for registration by the Commission on Dietetic Registration of the American Dietetic Association.

#### Learner outcomes

To help students acquire the body of knowledge and develop the skills required of nutrition professionals, the public health-nutrition curriculum provides for both didactic and field experiences.

Graduates from the M.P.H. degree program in public health nutrition will be able to:

- Apply nutrition and public health sciences to improve nutritional status and health.

- Plan, conduct, and evaluate dietary studies, nutritional assessment studies, and surveillance activities.
- Lead nutrition-education programs, food-assistance efforts, and related projects.
- Create, select, and evaluate educational materials to disseminate nutrition information to professionals and consumers.
- Monitor and recommend public policies to protect and promote nutritional status and health.

To meet the specific needs of prospective students who desire training in nutrition, four programs are offered: nutritional sciences, clinical nutrition, nutrition-care management and health nutrition.

#### Admission

Applicants must meet the general admission requirements of the school as well as those specific to the program in nutrition, as stated below.

### CLINICAL NUTRITION—M.S.

The M.S. degree program in clinical nutrition has the following objectives:

1. To provide the student with training needed in specialized areas of clinical nutrition.
2. To prepare the student to become eligible for nutrition-support certification (CNSD) and other areas of advanced clinical practice.

This program is suitable for persons pursuing careers as managers of free standing out-patient clinics, treatment centers, or wellness centers; as chief clinical dietitians in acute care facilities; and as research dietitians. It provides specialized training in medical nutrition therapy for advanced-level practice and provides advanced educational opportunities in clinical nutrition for physicians and other health professionals.

Both the nutritional sciences and clinical nutrition programs emphasize the role of diet—particularly vegetarian diet—in health promotion and disease prevention and treatment. The programs are interdisciplinary and require a project or a research thesis.

#### PREREQUISITE

Applicants for the Clinical Nutrition Program must hold a baccalaureate degree; be a registered dietitian, (or eligible), a physician, or a dentist. Specific courses required as prerequisites are microbiology, physiology, and general and organic chemistry. For the program in nutritional sciences, applicants must have taken a complete sequence of general and organic chemistry.

### CURRICULUM

#### Required courses

PHSL 533	Physiology I	(4)
PHSL 534	Physiology II	(3)
NUTR 504	Nutritional Metabolism	(5)
#NUTR 517	Advanced Nutrition I	(4)
NUTR 518	Advanced Nutrition II	(4)

NUTR 539	Research Methods in Nutrition	(2)
NUTR 554	Critical Care Nutrition I	(3)
NUTR 555	Critical Care Nutrition II	(3)
NUTR 577	Nutrition-Care Management	(3)
NUTR 597	Special Topics in Clinical Nutrition	(1, 1)
REL_ ____	Religion	(3)

**Project option**

STAT 509	General Statistics	(4)
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**Approved electives (12)**

NUTR ____	Project	(4)
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**Thesis option**

STAT ____	Statistics	(5)
NUTR 694	Research	(5)
NUTR 695	Thesis	(2)

**TOTAL UNITS REQUIRED:**

<b>Project option</b>		<b>(56)</b>
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<b>Thesis option</b>		<b>(48)</b>
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**Additional requirements**

In addition to the course work, students are required to attend the Department of Nutrition colloquia and grand rounds, pass a comprehensive examination, and either present the project or pass the oral defense of their thesis.

**NUTRITION CARE MANAGEMENT—M.S.**

**Objectives**

The M.S. degree program in nutrition-care management has the following objectives:

1. Provide students a strong background in nutrition-care management.
2. Prepare students for management of institutional services facilities in various settings.

The M.S. degree in nutrition-care management is suitable for those planning careers in institutional settings with food-services divisions. It provides a strong background in the fundamentals of nutrition and organizational and management skills, as well as exposure to finance and technology.

**Prerequisites**

Students in the Nutrition-Care Management Program must be credentialed as a registered dietitian with a minimum of two years of professional work experience. Applicants to all programs must have an overall G.P.A. of 3.0 or better in their undergraduate course work and must provide acceptable scores on the general test of the Graduate Record Examination, as well as a clear statement of personal and professional goals. Evidence of computer literacy must be provided; however, computer requirements may be taken concurrently and in addition to the required courses.

**CURRICULUM**

**Required courses**

#NUTR 517	Advanced Nutrition I	(4)
NUTR 518	Advanced Nutrition II	(4)
NUTR 539	Research Methods	(2)
NUTR 564	Contemporary Issues of Vegetarian Diets	(2)
NUTR 577	Nutrition-Care Management	(3)
#NUTR 605	Seminar	(1, 1)
AHCJ 504	Current Issues in Health Care	(3)
MHIS 503	Organizational Structure and Behavior	(3)
MHIS 504	Health Care Financial Management	(3)
MHIS 521	Human Factors in Technology Management	(3)
MHIS 601	Health Systems Operations Management	(3)
DTCS 5__	Nutrition-Care Marketing	(3)
DTCS 5__	Capstone course	(3)
REL_ 5__	Religion elective	(3)

**Thesis track**

STAT 531	Statistics	(4)
DTCS 694	Research	(4)
DTCS 695	Thesis	(2)

**Nonthesis track**

STAT 531	Statistics	(4)
DTCS 696	Nutrition Project	(2)

**Electives (9)**

**TOTAL UNITS REQUIRED**

<b>Thesis track</b>		<b>(51)</b>
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<b>Non-thesis track</b>		<b>(56)</b>
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**Additional requirements**

Two years work experience as a registered dietitian.  
Show leadership potential.  
Have a mentor.

**NUTRITION CARE MANAGEMENT—PH.D.**

For information regarding the Nutrition Care Management Program, please contact the School of Public Health Department of Nutrition.

**NUTRITIONAL SCIENCES—M.S.**

The M.S. degree program in nutritional sciences has the following objectives:

1. To provide a basic science approach to understanding advanced areas in human nutrition.

- To enhance research skills by developing or applying advanced laboratory techniques in human-nutrition research.

This program is suitable for individuals or students pursuing a doctoral degree in nutrition or other related areas and for individuals or students preparing to teach at the secondary or college level. It provides background experience to those interested in research careers in academia or industry and provides advanced training in basic nutrition for physicians and other health professionals.

**General requirements**

For information about requirements and practices to which all graduate students are subject, the student should consult Section II, and the School of Public Health in Section III.

**PREREQUISITE**

Applicants for the Nutritional Sciences Program must hold a baccalaureate degree in science, or be a physician or other health professional.

**CURRICULUM**

TOTAL UNITS REQUIRED (48)

**Required courses**

NUTR 504	Nutritional Metabolism	(5)
#NUTR 517	Advanced Nutrition I	(4)
NUTR 518	Advanced Nutrition II	(4)
NUTR 539	Research Methods in Nutrition	(2)
#NUTR 605	Seminar in Nutrition	(1, 1)
#NUTR 694	Research	(1-12)
NUTR 695	Thesis	(2)
STAT ____	Statistics	(4-6)
REL_ ____	Religion	(3)

**Area of emphasis and nutrition electives (15-17)**

**Possible areas of emphasis**

- Biochemistry
- Physiology
- Pharmacology
- Molecular biology
- Nutrition

**Additional requirements**

In addition to the course work, students are required to attend the Department of Nutrition colloquia and graduate seminars, and to pass a comprehensive examination and the oral defense of their thesis.

**COURSES—NUTRITION M.S. AND PH.D.**

NUTR 504	Nutritional Metabolism	(5)
NUTR 509	Public Health Nutrition	(3)
#NUTR 510	Advanced Public Health Nutrition	(3)
NUTR 517	Advanced Nutrition I: Carbohydrates and Lipids	(4)
NUTR 518	Advanced Nutrition II: Proteins, Vitamins, and Minerals	(4)
#NUTR 519	Phytochemicals	(2)
NUTR 525	Nutrition Policy, Programs, and Services	(3)

#NUTR 527	Assessment of Nutritional Status	(2) or (1-3)
NUTR 528	Symposium: Adventist Philosophy of Nutrition	(1)
NUTR 534	Maternal and Child Nutrition	(3)
#NUTR 536	Nutrition and Aging	(2)
NUTR 537	Community Programs Laboratory	(1)
NUTR 539	Research Methods in Nutrition	(2)
#NUTR 543	Concepts in Nutritional Epidemiology	(3)
#NUTR 545	Clinical Nutrition	(4)
NUTR 554	Critical Care Nutrition I	(3)
NUTR 555	Critical Care Nutrition II	(3)
#NUTR 564	Contemporary Issues of Vegetarian Diets	(1-2)
NUTR 565	Ethnic Food Practices	(2)
#NUTR 575	Food-Systems Management	(3)
#NUTR 577	Nutrition-Care Management	(3)
#NUTR 578	Exercise Nutrition	(2-3)
NUTR 597	Special Topics in Clinical Nutrition	(1)
#NUTR 605	Seminar in Nutrition	(1)
#NUTR 694	Research	(1-12)
NUTR 695	Thesis	(2)
#NUTR 696	Directed Study/Special Project	(1-4)

**PUBLIC HEALTH NUTRITION—M.P.H.**

The M.P.H. degree program in public health nutrition provides specialized training in community nutrition within the multidisciplinary public health programs offered by the school. The program is designed to train professionals to assume leadership positions in assessing community-nutrition needs; and in planning, directing, and evaluating the nutrition component of health-promotion and disease-prevention efforts.

Public health nutritionists may work in a variety of settings—in government and voluntary agencies, public and private community-health centers, ambulatory care clinics, schools, industries, private practice, and specialized community-health projects. They may function as directors and administrators of nutrition programs, nutrition-care providers, advocates, educators, counselors, consultants, and researchers.

**PUBLIC HEALTH NUTRITION (TRACK I)**

This program outlines the basic requirements of the M.P.H. degree and prepares students for careers in public health and community nutrition. It is appropriate for individuals with professional credentials—such as medicine, dentistry, dietetics, or nursing. Students may select the option of completing a moderate-sized research project with publication potential in lieu of field practicum.

**Learner outcomes**

Upon satisfactory completion of the M.P.H. degree Nutrition Program, graduates will be able to:

- Identify and evaluate physiological mechanisms linking diet and nutrition to disease risk.
- Identify and address emerging and controversial food and nutrition issues that impact public health.

3. Evaluate the role of vegetarian dietary practices on human health, the environment, and ecology.
4. Apply the science of food and human nutrition to optimize nutritional status and prevent disease in populations across the life span.
5. Select and use appropriate tools and strategies to assess nutritional status and prioritize nutritional problems of individuals and groups.
6. Apply effective management principles in the administration of nutrition programs and services, including human and financial resources.
7. Identify national and regional governmental structures and processes in the development of public policy and the delivery of services that influence food intake and nutritional status.
8. Develop, implement, and evaluate the food and nutrition component of community-based interventions to promote health and prevent disease.
9. Develop and evaluate appropriate theory-based and culturally sensitive educational approaches for nutrition counseling and education.
10. Communicate effectively by using varied media and informational systems for lay and professional audiences.
11. Critically review and evaluate the literature and report research findings.

#### PREREQUISITE

Chemistry through organic (at least 5 quarter hours of organic)

Physiology

Microbiology

Foods

Human nutrition

#### COREQUISITE

NUTR 504 Nutritional Metabolism (advanced biochemistry) (5)

#### DEGREE REQUIREMENTS

##### Public health core courses (20 units)

ENVH 509	Principles of Environmental Health	(3)
EPDM 509	Principles of Epidemiology I	(3)
HADM 509	Principles of Administration in Public Health	(3)
HPRO 509	Principles of Health Behavior	(3)
REL_ 5__	Religion (RELE 534 recommended)	(3)
PHCJ 605	Philosophy of Public Health	(1)
STAT 509	General Statistics	(4)

##### Public health nutrition core courses (24 units)

HPRO 536	Program Planning and Evaluation	(3)
NUTR 510	Advanced Public Health Nutrition	(3)
NUTR 517	Advanced Nutrition I: Carbohydrates and Lipids	(4)
NUTR 518	Advanced Nutrition II: Proteins, Vitamins, and Minerals	(4)
NUTR 525	Nutrition Policy, Programs, and Services	(3)

NUTR 527	Assessment of Nutritional Status	(3)
*NUTR 528	Symposium: Adventist Philosophy of Nutrition	(1)
NUTR 535	Research Applications in Nutrition	(2)
*NUTR 564	Contemporary Issues of Vegetarian Diets	(1-2)
NUTR 605	Seminar in Public Health Nutrition	(1)
<b>Electives in the major field, selected from the following or in consultation with adviser (5-6 units)</b>		
NUTR 519	Phytochemicals	(2)
NUTR 526	Nutrition Counseling	(2)
NUTR 534	Maternal and Child Nutrition	(3)
NUTR 536	Nutrition and Aging	(2)
NUTR 543	Concepts in Nutritional Epidemiology	(3)
NUTR 545	Clinical Nutrition I	(3)
NUTR 546	Clinical Nutrition II	(3)
NUTR 565	Ethnic Food Practices	(2)
NUTR 578	Exercise Nutrition	(2-3)
NUTR 585	Topics in Global Nutrition	(3)
STAT 515	Grant- and Contract-Proposal Writing	(3)

#### Field practicum or research

NUTR 798A/B Field Practicum (200-400 clock hours) or

NUTR 694 Research (2)

TOTAL UNITS 50 (not including research units or field practicum)

\*choose one course

#### Culminating activity

The culminating activity shall include a written comprehensive examination (prior to the field experience), field experience (upon completion of essential major course work), professional portfolio (upon completion of the field experience), and an exit interview with the department chairman (at the conclusion of the program).

#### GRADUATE COORDINATED PROGRAM IN PUBLIC HEALTH NUTRITION AND DIETETICS (TRACK II)

The graduate coordinated track of the Public Health Nutrition Program enables students to meet the didactic and supervised practice requirements for registration eligibility in dietetics. The purpose of registration is to protect the health, safety, and welfare of the public by encouraging high standards of performance by persons practicing in nutrition and dietetics.

Students in the M.P.H. or Dr.P.H. degree tracks of the Nutrition Program may establish eligibility to write the registration examination to become a registered dietitian (RD) by completing this curriculum. The graduate coordinated program is currently granted accreditation status by the Commission on Accreditation for Dietetics Education (CADE) of the American Dietetic Association, 120 South Riverside Plaza, Suite 2000, Chicago, IL 60606, 312-899-0040, ext. 5400.

**Learner outcomes**

The curriculum of the graduate coordinated track of the Nutrition Program integrates the requirements of the Master of Public Health degree in nutrition with the competency requirements, knowledge and skills to practice dietetics as defined by CADE. Therefore, in addition to the M.P.H. degree learner outcomes, graduates of the program will be able to:

1. Provide medical nutrition therapy care to clients and patients through systematic screening, assessment, intervention, evaluation, and documentation.
2. Provide enteral and parenteral nutrition to clients and patients.
3. Translate medical nutrition therapy needs to menu plans for individuals and groups.
4. Participate in the management of food-service systems—including food procurement, production, distribution, and service.
5. Supervise the safety and sanitation of food service and distribution.

**PRACTICUM**

**COREQUISITE  
(practicum hours) (unit hours)**

DTCS 461	Food Science	(4)
NUTR 504	Nutritional Metabolism (advanced biochemistry)	(5)
^NUTR 537A	Community Nutrition Project-A	(40) (1)
^NUTR 537B	Community Nutrition Project-B	(40) (1)
NUTR 545	Clinical Nutrition I	(3)
^NUTR 546	Clinical Nutrition II	(45) (3)
^NUTR 575	Food-Systems Management	(60) (4)

**DEGREE REQUIREMENTS**

**Public health core courses (20 units)**

ENVH 509	Principles of Environmental Health	(3)
EPDM 509	Principles of Epidemiology I	(3)
HADM 509	Principles of Administration in Public Health	(3)
HPRO 509	Principles of Health Behavior	(3)
REL_ 5__	Religion (RELE 534 recommended)	(3)
PHCJ 605	Philosophy of Public Health	(1)
STAT 509	General Statistics	(4)

**Public health nutrition core courses (29-30 units)**

HPRO 536	Program Planning and Evaluation	(3)
NUTR 510	Advanced Public Health Nutrition	(3)
NUTR 517	Advanced Nutrition I: Carbohydrates and Lipids	(4)
NUTR 518	Advanced Nutrition II: Proteins, Vitamins, and Minerals	(4)
NUTR 525	Nutrition Policy, Programs, and Services	(3)
NUTR 526	Nutritional Counseling	(2)
NUTR 527	Assessment of Nutritional Status	(30) (3)
*NUTR 528	Symposium: Adventist Philosophy of Nutrition	(1)
NUTR 534	Maternal and Child Nutrition	(3)

*NUTR 564	Contemporary Issues of Vegetarian Diets	(1-2)
NUTR 605	Seminar in Public Health Nutrition	(1)
NUTR 535	Research Applications in Nutrition	(2)

**Electives, chosen in consultation with adviser (2-3)**

**Field practicum/supervised practice**

NUTR 798B	Field Practicum	(400 clock hours)
NUTR 798C	Dietetic Practicum	(400 clock hours)
NUTR 798D	Dietetic Practicum	(30 clock hours, as needed)

TOTAL 52 units  
+ corequisites as needed  
+ 1015 hours practice

\*choose one course

^includes dietetic practice hours

**Culminating activity**

Successful completion of written comprehensive examinations is required. The culminating activity shall include a written comprehensive examination (prior to the field experience), field experience (upon completion of essential major course work), professional portfolio (upon completion of the field experience), and an exit interview with the department chairman (at the conclusion of the program).

**NUTRITIONAL EPIDEMIOLOGY**

This double major is administered jointly by the Nutrition Program and the Epidemiology Program, and allows the student to study the etiologic role of nutrition in major public health problems. The graduate will be prepared to design, implement, and evaluate population and intervention studies dealing with the relation of nutrition to health, aging, and chronic and infectious disease. This program is for the individual interested in research. If either major is dropped, additional requirements are necessary to complete the remaining major. See curriculum description under Epidemiology Program.

**NUTRITION—DR.P.H.**

The Doctor of Public Health (Dr.P.H.) degree is designed to provide the advanced knowledge, skills, and competencies required to meet the increasing needs of public health nutrition at the doctoral level in the areas of program management, leadership, and research. Research emphasis is on community-nutrition program research as well as the relation of dietary practices to health promotion and disease prevention.

**Learner outcomes**

Upon completion of this degree, the graduate should be able to:

1. Develop research questions into viable research projects, write a research proposal, and procure external funding to support research work.
2. Conduct research projects and contribute to the knowledge base in public health nutrition using critical thinking and analytical skills.
3. Disseminate knowledge acquired through research work and public health nutrition practice to the scientific and lay community through publications and presentations.

4. Participate in projects in different aspects of public health nutrition, including community nutrition, counseling, policy making, applied nutrition, and nutrition education.

**PREREQUISITE**

Anatomy and physiology  
 Behavioral science (one course)  
 Advanced biochemistry  
 Quantitative proficiency

A master's degree in nutrition or a health-professional degree at the doctoral level (M.D., D.D.S., or equivalent)

**COREQUISITE**

ENVH 509	Principles of Environmental Health	(3)
EPDM 509	Principles of Epidemiology I	(3)
HADM 509	Principles of Administration in Public Health	(3)
HPRO 509	Principles of Health Behavior	(3)
HPRO 536	Program Planning and Evaluation	(3)
PHCJ 605	Philosophy of Public Health major field	(1) (30 units)
NUTR 510	Advanced Public Health Nutrition	(3)
NUTR 517	Advanced Nutrition I: Carbohydrates and Lipids	(4)
NUTR 518	Advanced Nutrition II: Proteins, Vitamins, and Minerals	(4)
NUTR 519	Phytochemicals	(2)
NUTR 525	Nutrition Policy, Programs, and Services	(3)
NUTR 527	Assessment of Nutritional Status	(3)
NUTR 534	Maternal and Child Nutrition	(3)
NUTR 538	Principles of Effective Nutrition Education	(3)
NUTR 543	Concepts in Nutritional Epidemiology	(3)
NUTR 608	Doctoral Seminar in Public Health Nutrition	(1)

**Administration and leadership, chosen in consultation with adviser (15 units)**

HADM 505	Public Health Communication	(3)
HPRO 543	Writing for Health Professionals	(2-3)
STAT 515	Grant and Contract Proposal Writing	(3)
— —	Approved electives	(6-7)
— —	Research and evaluation	(25 units)
NUTR 535	Research Applications in Nutrition	(3)
NUTR 685	Preliminary Research Experience	(2)
NUTR 694	Research	(4-6)
PHCJ 604	Research Seminar	(2)
STAT 521	Biostatistics I	(4)
STAT 549	Analytical Applications of SPSS	(2)
STAT 564	Survey and Advanced Research Methods	(3)
— —	Approved electives	(4-6)

**Cognates (14 units)**

Chosen from allied areas to enhance competence; minimum of 7 units in the School of Public Health. (7)

**Dissertation (12 units)**

**Religion (3 units)**

REL\_ 5\_\_ Selectives (3)

TOTAL UNITS 99

**Nutrition and Dietetics—AH (B.S., certificate)**

MAXINE J. TAYLOR, Academic Coordinator of Clinical Education, Nutrition and Dietetics Program  
 BERTRUM C. CONNELL, Academic Coordinator of Certificate Program

**FACULTY**

Caroline R. Adame  
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 Ardis S. Beckner  
 Mary D. Booth-Williams  
 Jana D. Bowen  
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 Noha S. Daher  
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 Elaine K. Fleming  
 Danetta Frost  
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 Sondra D. Henderson  
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 Deanna Nakamura  
 Leh C. Ota  
 Marjorie E. Quigley  
 Jennifer Radice  
 Inherla H. Rivera  
 Lia M. Robinson  
 Brian D. Sharp  
 Louise Elizabeth Schneider  
 David M. Stanton  
 Maxine J. Taylor  
 Crystal G. Whitten  
 Linda J. Whiting  
 Pamela Yong

## ADVISORY COMMITTEE

James Lumsden, Chair  
 Caroline R. Adame  
 Carol S. Baker  
 Bertrum C. Connell  
 Donna Galluzzo  
 Craig R. Jackson\*  
 Richard A. Jacobs  
 Stella Jones  
 Merijane T. Malouin  
 Norman H. Meyer  
 Elmar P. Sakala  
 Grenith J. Zimmerman

\*ex officio

## NUTRITION AND DIETETICS— PROGRESSION B.S.

### Prerequisites to the junior year

Progression to the bachelor's degree program to become a registered dietitian requires completion of all the prerequisites for the bachelor's degree. These include introductory chemistry with laboratory (full sequence), microbiology, general psychology, and humanities—including cultural diversity/cultural anthropology. The dietetic technician, registered, (DTR), should complete a year of practice before applying to the bachelor's degree program.

## NUTRITION AND DIETETICS—B.S.

**D**ietetics, a vital profession in the field of health promotion, focuses on the sciences of nutrition and management in feeding individuals and groups throughout the life cycle. The coordinated program in dietetics combines supervised professional practice with didactic curriculum to develop professional skills concurrently with cognitive and technical skills to enable the graduate to establish eligibility to become a registered dietitian.

Admission to the program is based on a selective process. To be eligible for consideration, the applicant must meet the following criteria: completion of subject requirements, as indicated, at an accredited college or university; a 3.0 G.P.A. or above; an interview; a letter of application; and recommendations.

### Opportunities

Dietetic practice is the application of principles derived from integrating knowledge of food, nutrition, biochemistry, physiology, business and management, journalism, behavioral and social sciences, and the arts to achieve and maintain health, prevent disease, and facilitate recovery from illness.

Members of the dietetics profession practice in a variety of environments, including hospitals and other health care facilities, schools and universities, government and community agencies, business, and industry. A growing number of dietitians are employed in physicians' offices, clinics, home-health care agencies, mass communication, and many other entrepreneurial roles.

By successfully passing the registration examination for dietitians, practice opportunities as a specialist in medical nutrition therapy, administrative dietetics, nutrition education, community nutrition, or research are available. There is increased recognition of the

importance of nutrition in the fields of medicine, dentistry, and health promotion—with emphasis on fitness and optimal well-being. This indicates that the dietitian's scope of practice is steadily widening.

### Medical nutrition therapy

The registered dietitian in medical nutrition therapy applies the science of nutrition to the care of people through health promotion and disease prevention and uses medical-nutrition therapy in the treatment of disease. The effective dietitian must be aware of the cultural, social, economic, aesthetic, and psychological factors that affect eating patterns. As a member of the patient-care team, the registered dietitian (RD) is responsible for assessing, implementing, and monitoring the nutritional care of patients. In addition, the RD may serve professionally as a nutrition practitioner in health care; a teacher in an educational institution; a research dietitian; or a nutrition consultant-educator in municipal, state, or federal departments of health.

### Administrative dietetics

The registered dietitian (RD) in management is accountable for the food-service systems. In a health care institution, the RD is responsible for the effective functioning of food service from the standpoint of patients, administration, medical staff, and personnel. The administrative RD may also teach; manage food systems in educational, public, or commercial facilities; serve as a consultant to health care or educational institutions; or enter the field of research.

### Community dietitian

Community registered dietitians practice in diverse settings, translating nutrition science into improved health status. Challenges may include forming partnerships with various organizations, mastering technology, enacting regulations and policies that protect and improve the public's health, and creatively managing scarce resources. Dietitians working in the community exhibit high-quality leadership and planning skills, and many create positions that are entrepreneurial as well as financially rewarding.

## THE PROGRAM

**T**he Nutrition and Dietetics Program is established to prepare entry-level dietitians to join the profession and contribute to the wholeness of mankind. The graduate is awarded the Bachelor of Science degree and is eligible to write the registration examination of the Commission on Dietetic Registration. The program is composed of didactic and supervised professional practice experiences in an environment of liberal arts education to prepare an educated graduate. Admission to the professional program at this University begins with the postsummer session of the sophomore year. The applicant will present at least two years of pre-professional education from an accredited college or university to meet the specific subject requirements for 2005-2006.

The professional program of seven or eight quarters includes theory, laboratory, research, and clinical experiences. Ten weeks of clinical experience are scheduled at the end of the junior year and ten weeks during the Spring Quarter of the senior year. Students participate as active members of the nutrition-care

team in multiple clinical settings. Administrative affiliation experiences involve decision-making assignments in volume-feeding operations.

#### Accreditation

The Coordinated Program in Dietetics is currently granted continuing accreditation by the Commission on Accreditation for Dietetics Education of the American Dietetic Association, 120 South Riverside Plaza, Suite 2000, Chicago, IL 60606-6995, 312/899-5400.

#### Professional registration

Upon satisfactory completion of the program and upon recommendation of the faculty, the graduate will be eligible to take the registration examination for dietitians in order to become a registered dietitian.

#### Professional association

Students and graduates are eligible for membership in the American Dietetic Association. The association grants student membership at a nominal rate to students in accredited programs.

The national office of the American Dietetic Association is at 120 South Riverside Plaza, Suite 2000, Chicago, IL 60606-6995. Along with membership in the American Dietetic Association, students become members of the California Dietetic Association. Students are encouraged to join the Inland District Dietetic Association and, where possible, the Seventh-day Adventist Dietetic Association.

#### The program goals

1. Prepare graduates to be competent entry-level dietitians;
2. Assure that 90 percent of enrolling students complete the program with the encouragement, empowerment, and support of faculty and staff;
3. Provide professionally trained registered dietitians, who may be employed by the health care and educational systems of the Seventh-day Adventist Church; or local, national, or international entities;
4. Serve as a nutrition resource to Seventh-day Adventist Church organizations.

#### Program objectives

Upon completion of the program, the graduate should be qualified to:

1. Perform competently at the entry level of professional practice.
2. Exhibit Christian ethical and moral values.
3. Exhibit an investigative spirit to continue attaining knowledge and developing professional competency beyond the entry level.
4. Communicate effectively and be computer literate, using and analyzing data in the decision-making process.
5. Develop leadership skills to achieve personal and corporate goals.
6. Incorporate critical-thinking skills into professional and personal decisions.
7. Demonstrate, from a historical and contemporary basis, the value of diversity in the personal and professional life from ethnic, gender, generational, and ideological points of view.

#### Admission

Admission to the program is based upon a selective process. To be eligible for consideration, the applicant must meet the following criteria:

- a 3.0 G.P.A. or above
- an interview
- a letter of application
- recommendations
- completion of program prerequisites

#### PREREQUISITE

20 units minimum in humanities

Choose minimum of two areas from: history, literature, philosophy, foreign language, art/music appreciation, or art/music history

Must include also 4 units of religion per year of attendance at a Seventh-day Adventist college or university

Two years high school mathematics with grades of C or better or intermediate algebra in college

Anatomy and physiology, complete sequence with laboratory

Introductory chemistry, complete sequence with laboratory

NOTE: General chemistry recommended for those considering an advanced degree in nutrition and dietetics, although either chemistry sequence will be accepted.

Microbiology with laboratory

General psychology

Sociology

Cultural anthropology or an approved course dealing with cultural diversity

English composition, complete sequence

Speech

Two physical activity courses

Human nutrition

DTCS 302 Food Selection and Preparation

DTCS 303 The Art of Food Presentation

Electives—total minimum requirement (97 quarter units)

For total unit requirements for graduation, see **Division of General Studies, LLU GENERAL EDUCATION REQUIREMENTS (Section II).**

#### PROGRAM OF INSTRUCTION

##### JUNIOR YEAR

##### Postsummer Session (4 weeks):

August 22–September 16, 2005

\*DTCS 301 Human Nutrition (3)

\*DTCS 302 Food Selection and Preparation (4)

\*DTCS 303 The Art of Food Presentation (3)

TOTAL (10)

\*Required only if not completed as a prerequisite.

##### Autumn Quarter

September 21–December 9, 2005

DTCS 305 Professional Issues in Nutrition and Dietetics (0.5)

DTCS 339	Life-Cycle Nutrition	(2)
DTCS 341	Nutrition Assessment	(3)
DTCS 371	Quantity Food Purchasing, Production, and Service	(5)
AHCJ 329	Organic Chemistry with Laboratory	(5)
TOTAL		(15.5)

**Winter Quarter**

January 2–March 17, 2006

DTCS 342	Medical Nutrition Therapy I	(5)
DTCS 372	Food-Systems Organization and Management	(4)
RELT 436	Adventist Heritage and Health	(3)
AHCJ 334	Biochemistry	(5)
TOTAL		(17)

**Spring Quarter**

March 27–June 9, 2006

DTCS 304	Community Nutrition	(4)
DTCS 321	Nutrition and Human Metabolism	(4)
DTCS 343	Medical Nutrition Therapy II	(5)
DTCS 442	Nutrition Counseling	(3)
AHCJ 305	HIV/AIDS and the Health Provider	(1)
TOTAL		17

**SENIOR YEAR****Summer**

DTCS 395	Nutrition and Dietetics Practicum	(10 weeks) (6)
TOTAL		6

**Autumn**

September 21–December 9, 2005

DTCS 405	Senior Seminar	(0.5)
DTCS 445	Nutrition-Care Management	(4)
DTCS 452	Advanced Nutrition	(4)
DTCS 476	Exercise Physiology in Medical Nutrition Therapy	(3)
AHCJ 351	Statistics for the Health Professions	(3)
RELE —	Religion elective	(3)
TOTAL		17.5

**Winter**

January 2–March 17, 2006

DTCS 425	Pharmacology in Medical Nutrition Therapy	(2)
DTCS 461	Food Science	(4)
DTCS 491	Orientation to Research in Dietetics Laboratory	(1)
AHCJ 407	Financial Management	(2)

AHCJ 461	Research Methods	(2)
RELE 457	Christian Ethics and Health Care	(2)
DTCS 453	Advanced Medical Nutrition Therapy	(4)
or		
DTCS 474	Advanced Food-Systems Manage- ment	(3)
TOTAL		16 or 17

**Spring**

March 27–June 9, 2006

DTCS 473	Medical Nutrition-Therapy Affiliation	(10 weeks) (6)
or		
DTCS 479	Food Systems-Management Affiliation	(10 weeks) (6)
or		
DTCS 478	Community-Nutrition Affiliation	(10 weeks) (6)
TOTAL		6

**NUTRITION AND DIETETICS—  
CERTIFICATE****Admission**

To be eligible for admission, the applicant must have earned a minimum of a baccalaureate degree at an accredited college or university.

**Subject requirements**

The applicant must complete the core professional courses required for the B.S. degree.

**Residency requirement**

A minimum of 18 units of credit in residency is required.

**PREREQUISITE**

Bachelor's degree from an accredited college

Human anatomy and physiology with laboratory,  
complete sequence

Microbiology with laboratory

Introductory chemistry with laboratory, full sequence

**NOTE:** A minimum grade of C (2.0) is required for all courses in the program.

**Program of instruction**

An individualized program of instruction will be developed prior to admission, based on the applicant's need and previous courses, to assure that all program requirements are met. Eligibility to write the registration examination for dietetians of the Commission on Dietetic Registration will be based on completion of program requirements as well as on demonstrated competency in the certificate prerequisites.

## Occupational Therapy—AH (Occupational Therapy Assistant A.A., Entry-Level M.O.T., Postprofessional M.O.T.)

LIANE H. HEWITT, D Program Director for  
Associate in Arts and Postprofessional Master of  
Occupational Therapy

ESTHER M. HUECKER, Program Director for  
Entry-Level Master of Occupational Therapy

JUDITH A. PALLADINO, Academic Coordinator  
for Fieldwork Education, Occupational Therapy  
Program

SHARON L. PAVLOVICH, Academic Coordinator  
for Fieldwork Education, Occupational Therapy  
Assistant Program

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Noha S. Daher  
Michael K. Davis  
Deborah Enix  
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Luella M. Grangaard  
Kathryn I. Gunderson  
Diane S. Hardy  
Liane H. Hewitt  
Joyce W. Hopp  
Esther M. Huecker  
John W. Kerr, Jr.  
Tonia A. Kimber  
Bradford D. Martin  
Janette L. Morey  
Beth Anne Nelson  
Laurie E. Nelson  
Harold T. Neuendorff  
Christine S. O'Hagan  
Nancy Olsen  
Judith A. Palladino  
Sharon L. Pavlovich  
Karen M. Pendleton  
Ernest R. Schwab  
Patricia Shiokari  
Diana Su-Erickson  
Heather J. Thomas  
Donna G. Thorpe  
Yvonne C. Trousdale  
Tracy G. Uditsky  
Christine M. Wietlisbach  
Dorre Yamashiro Zane  
Grenith J. Zimmerman

### ADVISORY COMMITTEE

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John Kerr  
Rebecca Larson  
LeRoy Nattress  
Madge Oh  
Christine O'Hagan  
Annette Richardson  
Clarissa Saunders-Newton

\*ex officio

The occupational therapist and occupational therapy assistant work with persons who find it difficult to cope with psychological or physiological dysfunction.

The primary concern of both therapist and assistant is to stimulate those changes in behavior patterns that will increase the patient's personal independence and ability to work within his/her cultural and personal milieu. To accomplish this goal, the occupational therapist evaluates the patient; sets up treatment goals; and works together with the occupational therapy assistant in selecting tasks from the gamut of normal daily self-care activities, using them to assist the patient in gaining independent-living skills regardless of disability or handicap.

Essential to the role of occupational therapy is an interest in the behavioral sciences and a concern for the individual's need to find proper adjustments to life's circumstances. A desire to teach and a background or interest in medical science are beneficial. Those inclined to mechanical or scientific techniques are suited to helping patients develop their capacities for employment. Others find that they can use their interests in creative arts, crafts, music, and teaching to work with disabled homemakers, children, and retired persons.

### Opportunities

Occupational therapists and occupational therapy assistants practice in general hospitals, rehabilitation centers, pediatric or psychiatric clinics, schools, skilled-nursing facilities, home care, and outpatient community-centered programs (including hand-rehabilitation, work-evaluation, and adult day-care facilities). Occupational therapy professionals have a wide choice of positions (using varied therapeutic skills with individuals of varying age and disability) and opportunities for advancement.

### Accreditation

Both the Occupational Therapy Program and Occupational Therapy Assistant Program are accredited by the Accreditation Council for Occupational Therapy Education (ACOTE), P. O. Box 31220, Bethesda, MD 20824-1220, 301/652-2682. Graduates of the programs will be able to take the national certification examination for occupational therapist and occupational therapy assistant, administered by the National Board for Certification in Occupational

Therapy (NBCOT). After successful completion of this examination, the individual will be an occupational therapist, registered (OTR), or a certified occupational therapy assistant (COTA).

#### Professional registration

Upon satisfactory completion of the occupational therapy A.A. or entry-level M.O.T. degree—including completion of Level II fieldwork within twenty-four months following completion of academic preparation, and upon recommendation of the faculty—the graduate is eligible to take the national certification examination administered by The National Board for Certification for Occupational Therapy (NBCOT). The board offers computerized examinations on demand throughout the year.

Many states require licensure in order to practice; however, state licenses are based on the results of the NBCOT certification examination. The American Occupational Therapy Association provides recognition essential to the practice of occupational therapy in the United States and most foreign countries. Information about qualifying examinations can be obtained at the office of the department chair.

When the graduate applies to write the certification examination with the NBCOT, s/he will be asked to answer questions related to the topic of felonies. For further information on these limitations, contact NBCOT at 800 South Frederick Avenue, Suite 200, Gaithersburg, MD 20877-4150; or telephone 301/990-7979. Graduates practicing in the state of California must acquire licensure from the California Board of Occupational Therapy. For further information, contact CBOT at 916/322-3394; e-mail cbot@dca.ca.gov. The office address is 444 N. 3<sup>rd</sup> Street, Suite 410, Sacramento, CA 95814.

#### Professional associations

Students are eligible for membership in The American Occupational Therapy Association and Occupational Therapy Association of California, two organizations that foster development and improvement of service and education. The student is encouraged to become a member, read the journal, and attend local professional meetings. The national office address is:

The American Occupational Therapy Association  
P. O. Box 31220  
Bethesda, MD 20824-1220.

## OCCUPATIONAL THERAPY ASSISTANT—A.A.

#### The program

The second year of the Occupational Therapy Assistant (OTA) Program, leading to the Associate in Arts degree, is based on the completion of one year of prerequisite course work at any accredited college or university. The four quarters of course work at Loma Linda University begin with the Autumn Quarter of the sophomore year. For the two ten-week clinicals during the summer at the end of the program, the student is assigned for experience at approved hospitals and in various community health care programs. Level II fieldwork must be completed within eighteen months following academic preparation.

#### Transportation

Students are required to have their own transportation to and from fieldwork sites and other class-related activities.

#### Admission

To be eligible for admission, the applicant must have completed a minimum of 48 quarter units or 32 semester units at an accredited college or university.

**Please note: grades of C- are not transferable for credit.**

#### PREREQUISITE

Religion required, 4 units per year of attendance at a Seventh-day Adventist college or university

Fine arts or music appreciation

U.S. history

Human anatomy and physiology with laboratory, one quarter/semester

Introductory chemistry or introductory physics (one quarter/semester)

Two years high school mathematics with grades of C or better or intermediate algebra in college

Sociology or anthropology

General psychology

English composition, complete sequence

Speech (public speaking recommended)

Introduction to computers

Ceramics or other related art, such as pottery or sculpture

Electives to meet the minimum total requirement of 48 quarter units or 32 semester units

#### Work experience

A minimum of forty hours of documented volunteer hours in an occupational therapy department of the applicant's choice is required before applicant will be considered for admission.

#### The program objectives

Upon completion of the program, the graduate should be qualified to:

1. Demonstrate a basic level of knowledge and skills for safe and effective delivery of occupational therapy services.
2. Exhibit Christian and ethical values in clinical practice.
3. Implement and reassess appropriate occupational therapy treatment plans that are focused on client needs.
4. Function as an effective member of an interdisciplinary team.
5. Incorporate clinical reasoning and problem-solving skills into professional practice.
6. Commit to life-long learning as it pertains to both professional and personal growth.
7. Commit to advancing the philosophy of the Seventh-day Adventist Church to achieve its global mission.

**PROGRAM OF INSTRUCTION****Autumn Quarter**

OCTA	201	Introduction to Occupational Therapy	(1)
OCTA	215	Introduction to Functional Neuroanatomy	(2)
OCTA	224	Therapeutic Activities I	(2)
OCTA	228	Intervention Techniques	(2)
OCTA	233	Occupational Therapy Practice I	(5)
OCTA	241	Rehabilitation Principles	(2)
OCTA	251	Human Pathology I	(2)

**Winter Quarter**

OCTA	214	Applied Anatomy	(2)
OCTA	217	Occupational Therapy Assistant Practicum I	(2)
OCTA	225	Therapeutic Activities II	(2)
OCTA	234	Occupational Therapy Practice II	(5)
OCTA	252	Human Pathology II	(2)
OCTA	271	Group Dynamics	(2)
REL_	___	Religion elective	(2)

**Spring Quarter**

OCTA	218	Occupational Therapy Assistant Practicum II	(2)
OCTA	226	Occupational Therapy Assistant Seminar	(2)
OCTA	235	Occupational Therapy Practice III	(5)
OCTA	253	Human Pathology III	(2)
OCTA	256	Professional Self-Management	(2)
OCTA	261	Aging	(2)
AHCJ	305	HIV/AIDS and the Health Provider	(1)
RELE	457	Christian Ethics and Health Care	(2)

**Summer Quarter**

OCTA	291	Occupational Therapy Assistant Affiliation I	(3)
OCTA	292	Occupational Therapy Assistant Affiliation II	(3)

A minimum grade of C (2.0) is required for all courses in the program.

**OCCUPATIONAL THERAPY—ENTRY-LEVEL M.O.T.**

Occupational Therapy Program begins with the Summer Quarter. Admission to the Entry-Level Master of Occupational Therapy Program junior and senior years at this University is based on presentation of credit for two academic years of prerequisites earned at an accredited college or university, as listed under Admission—Entry-Level Master of Occupational Therapy.

Students who already have a baccalaureate degree may apply under Option Two, based on specific prerequisites listed under Admission—Option Two.

The curriculum is built on three levels of learning: foundation, practice, and professional. These levels of learning represent curriculum content that supports the student's progressive growth and knowledge. Initially, students focus primarily on foundation-knowledge courses in basic sciences combined with concepts of wholeness and looking at their own, as well as others', occupational

worlds. Next, the curriculum emphasizes student learning of core occupational therapy practice. Subsequently, the curriculum provides opportunities for the student to develop professional competency in research and in program development/evaluation; and to envision how the occupational therapy profession enhances health care trends. Classroom instruction is integrated with supervised fieldwork practice at approved community programs.

**Clinical experience**

For the two three-month fieldwork experiences (Winter Quarter and Spring Quarter of the second year), the student is assigned for experience at approved hospitals and in community health care programs. Assignments cannot always be arranged in the immediate community because of limited facilities; students are responsible for their own transportation. Level II fieldwork must be completed within twenty-four months of the didactic course work. Fingerprinting and background checks are required at certain fieldwork sites.

**The program objectives**

Upon completion of the program, the graduate should be qualified to:

1. Support the mission of the University to make humankind whole through the healing ministry of Jesus Christ.
2. Practice lifelong learning as it pertains to professional and personal growth.
3. Integrate Christian and ethical values in personal living and professional practice, with respect for diversity.
4. Promote occupation and client-centered practice.
5. Engage in global critical thinking and envision future possibilities for the profession.
6. Demonstrate an entry-level competency in knowledge and skills for safe and effective delivery of occupational therapy services.

**Admission—Option One****Bachelor of Science (B.S.) and Master of Occupational Therapy (M.O.T.) track**

Option One is for individuals who do not have an earned bachelor's degree from an accredited college or university. Graduates will receive a Bachelor of Science degree in health science and a Master of Occupational Therapy degree.

To be eligible for admission, the applicant must have completed a minimum of 96 quarter units at an accredited college or university.

**Please note: Grades of C- are not transferable for credit.**

**PREREQUISITE**

**20 units minimum in humanities (choose minimum of three areas from: history, literature, philosophy, foreign language, art/music appreciation or art/music history)**

Included in this minimum, 4 units of religion per year of attendance at a Seventh-day Adventist college or university

Human anatomy and physiology with laboratory, complete sequence

Select one course from chemistry or or college mathematics  
 Physics with laboratory, one quarter or semester  
 Two years high school mathematics with grades of C or better or intermediate algebra in college  
 Cultural anthropology or an approved course dealing with cultural diversity  
 Sociology  
 General psychology  
 Human growth and development  
 Select one additional behavioral science  
 English composition, complete sequence  
 Speech  
 Introduction to computers  
 Personal health or nutrition  
 Two physical activity courses  
 Electives to meet the minimum total requirement of 96 quarter units

**Work experience**

A minimum of forty hours of documented community service of the applicant's choice is required before application will be considered for admission.

**Admission: Option Two****Master of Occupational Therapy (M.O.T.) track**

This option is for individuals who have earned a baccalaureate degree from an accredited college or university. Graduates will receive a Master of Occupational Therapy degree ONLY.

**PREREQUISITE**

The applicant must complete the following subject requirements at an accredited college or university:

Human anatomy and physiology with laboratory, complete sequence

Select one additional course from chemistry or college mathematics

Physics with laboratory

or

Complete sequence of chemistry or physics also acceptable

**Work experience**

A minimum of forty hours of documented community service of the applicant's choice is required before application will be considered for admission.

**PROGRAM OF INSTRUCTION****(Option One and Option Two)**

For Option Two, prerequisites may be waived at the discretion of the OT department.

**YEAR ONE**

OCTH 301 Introduction to Occupational Therapy (3)  
 OCTH 306 Group Dynamics and Intervention (2)  
 OCTH 309 Human Occupation across the Lifespan (5)  
 OCTH 314 Task Analysis (2)  
 OCTH 315 Therapeutic Media (2)  
 OCTH 316 Design and Technology (2)  
 OCTH 317, 318 Occupational Therapy

Practicum I, II (2, 2)  
 OCTH 321 Intervention Techniques and Strategies I (2)  
 OCTH 331 Functional Kinesiology (3)  
 OCTH 341 Neuroanatomy (3)  
 OCTH 442 Case Analysis, Reasoning, and Management I (2)  
 OCTH 451-453 Disorders of Human Performance I, II, III (5, 5, 4)  
 AHCJ 305 HIV/AIDS and the Health Provider (1)  
 AHCJ 311 Medical Terminology (2)  
 AHCJ 351 Statistics for the Health Professions (3)  
 AHCJ 402, 403 Pathology I, II (4, 3)  
 AHCJ 404 Pharmacology (1)  
 AHCJ 412 Anatomy (9)  
 REL\_ \_\_\_ Religion electives (2, 2)

**YEAR TWO**

OCTH 411 Introduction to Occupational Therapy Research (2)  
 OCTH 417 Occupational Therapy Practicum III (2)  
 OCTH 418 Occupational Therapy Practicum IV (2)  
 OCTH 431 Intervention Techniques and Strategies II (3)  
 OCTH 434 Intervention Techniques and Strategies III (3)  
 OCTH 443 Case Analysis, Reasoning, and Management II (2)  
 OCTH 491 Fieldwork Experience I (6)  
 OCTH 492 Fieldwork Experience II (6)  
 OCTH 513 Case Analysis, Reasoning, and Management III (3)  
 OCTH 525 Program Seminar (2)  
 OCTH 526 Business Topics in Health Care (2)  
 OCTH 541 Current Trends in Occupational Therapy Practice I (3)  
 AHCJ 461 Research Methods (2)  
 \*RELE 457 Christian Ethics and Health Care (2)  
 REL\_ \_\_\_ Religion elective (2)

**YEAR THREE**

OCTH 542 Current Trends in Occupational Therapy Practice II (3)  
 OCTH 544 Advanced Occupational Therapy History (3)  
 OCTH 551 Theoretical Perspectives on Occupation (3)  
 OCTH 552 Practice Perspectives in Occupational Therapy (3)  
 OCTH 561, 562 Program Development/Design I, II (3, 3)  
 OCTH 563 Professional Competency Development (3)  
 OCTH 571-573 Research I, II, III (2, 2, 2)  
 AHCJ 509 Teaching and Learning Styles (3)  
 AHCJ 601 Research-Proposal Writing (3)  
 \*RELR 536 Spirituality and Occupation (3)

A minimum grade of C with an overall G.P.A. of 2.5 is required for all courses in the program.

The program of instruction is full time for each quarter. Academic credit of less than 12 units per quarter does not indicate less than full-time work.

\*To meet the religion/ethics requirement, Option Two (MOT track) students are required to take only RELE 457 and RELR 536. Option One (MOT track) students will take all REL\_, RELE, and RELR courses listed.

## OCCUPATIONAL THERAPY— POSTPROFESSIONAL M.O.T.

### The program

The postprofessional master's degree program is designed for the occupational therapist with an entry-level baccalaureate degree in occupational therapy who wishes to pursue advanced studies in the profession.

### Admission

To be eligible for admission, the applicant must have earned a bachelor's degree or postbaccalaureate certificate in occupational therapy from an accredited program, with a minimum G.P.A. of 3.0. The applicant must also be certified by the National Board for Certification in Occupational Therapy (NBCOT). The applicant's recommendations, interview, essay, and work experience are also considered in the admissions screening process.

### PREREQUISITE

Baccalaureate degree in occupational therapy from an accredited institution

## PROGRAM OF INSTRUCTION

The curriculum is four quarters in length for full-time students, or eight quarters in length for part-time students.

OCTH 526	Business Topics in Health Care	(3)
OCTH 542	Current Trends in Occupational Therapy Practice II	(3)
OCTH 544	Advanced Occupational Therapy History	(3)
OCTH 551	Theoretical Perspectives on Occupation	(3)
OCTH 552	Practice Perspectives in Occupational Therapy	(3)
OCTH 699	Directed Study	(3)
AHCJ 509	Teaching and Learning Styles	(3)
AHCJ 511	Biostatistics I	(3)
AHCJ 526	Computer Applications II	(3)
AHCJ 591	Research I	(3)
AHCJ 592	Research II	(3)
_____	Elective	(3)
_____	Elective	(3)
_____	Elective	(3)
REL_ _____	Religion elective	(3)

## Online Executive Master of Public Health—PH (M.P.H.)

### FACULTY

Faculty in each of the departments of the School of Public Health who are interested in the online environment have adapted their courses for this new teaching medium for the Online Executive M.P.H. Program:

### Distance-learning programs

The student wishing to obtain an M.P.H. online is referred to the general information in Section III of this CATALOG about the distance-learning programs of the School of Public Health—including the Online Executive Master of Public Health Degree Program.

### Online local and international M.P.H.

Currently the Online Executive Master of Public Health Program caters to both local and international students.

### Public health practice major

The Online Executive Master of Public Health Program is offered with a major in public health practice.

### Residence requirement

The Online Executive Master of Public Health program has a residence requirement. Online students must come to Loma Linda University for two weeks in August to start the program and again for two weeks at the beginning of the second year of study. There is no residential requirement in the third year.

This is a three-year blended program, with online courses as well as residential sessions. A new cohort of students begins each August. During this time they will plan a program of study with their adviser, complete 5 units of course work, become familiar with the technology, and get to know the other students in the group. Students go home ready to study online as well as ready to support and mentor each other. It is a very positive way to learn.

### Culminating activity

The program closes with a culminating activity, which includes a comprehensive examination, the community practicum report, preparation of a portfolio and an exit interview.

### Website information

For more information, please check our Website <[www.llu.edu/sphonline](http://www.llu.edu/sphonline)>.

### Financial policies for online M.P.H.

Tuition for the Online Executive Master of Public Health Program courses is the same as the on-campus tuition rate. Tuition must be paid in full at the time of registration.

### Refund policy

Tuition for courses dropped is according to the following schedule:

- First day of class, or fraction thereof—100 percent of tuition refunded;

- Second day of class, or fraction thereof—75 percent of tuition refunded;
- Third day of class, or fraction thereof—50 percent of tuition refunded;
- After the on-site class session is completed— no tuition is refunded.

### CORE COURSES

ENVH 509	Principles of Environmental Health	(3)
EPDM 509	Principles of Epidemiology I	(3)
GLBH 517	Cultural Issues in Health Care	(3)
HADM 509	Principles of Administration in Public Health	(3)
HADM 510	Public Health Policy	(3)
HPRO 509	Principles of Health Behavior	(3)
NUTR 509	Public Health Nutrition	(3)
PHCJ 501	Introduction to Online Learning	(1)
PHCJ 605	Philosophy of Public Health	(1)
RELE 534	Ethical Issues in Public Health	(3)
STAT 509	General Statistics	(4)
STAT 515	Grant and Contract Proposal Writing	(3)

## Oral and Maxillofacial Surgery, Advanced—SD (M.S., PD certificate)

ALAN HERFORD, Program Director

### FACULTY

Gregory Litvinoff  
Wayne Tanaka

The advanced dental education program in oral and maxillofacial surgery is designed to prepare the resident for practice of the specialty and to provide the foundation for the continued acquisition of knowledge and skills. Clinical surgical health care delivery is emphasized. The resident is introduced to research methodology and teaching to develop an increased awareness of their importance in assessing clinical procedures and patient management. The content of the program conforms to the Standards of the Commission on Accreditation, and is designed to prepare the surgeon for certification by the American Board of Oral and Maxillofacial Surgery.

Four-year and six-year residency programs are available. Residents in the six-year program will also complete medical school and a one-year general surgery internship. The residency begins July 1.

Following enrollment into the program, residents may apply for acceptance to the Master of Science (M.S.) degree track in addition to the specialty certificate. The application should be submitted before the end of the first year and must be supported by a letter of recommendation from the program director. Acceptance into the M.S. degree program may extend the length of study; the additional time must be in residence.

### Application deadline

Application for admission should reach the school by October 15 of the year prior to the summer of intended enrollment. The program participates in the National Match Program and the Post Doctoral Application Service (PASS). Applicants to the six-year program must also apply to the School of Medicine.

### Tuition

Tuition and fees are waived.

### DEPARTMENTAL REQUIRED COURSES

OMFS 604	Selected Topics in Oral and Maxillofacial Surgery	(1)
OMFS 605	Integrated Orthodontics and Surgical Correction of Dentofacial Deformities	(1)
OMFS 606	Applied Surgical Anatomy	(1)
OMFS 607	Principles of Medical History, Physical Examination, and Clinical Medicine	(2)
OMFS 608	Surgical Oral and Maxillofacial Pathology Conference	(6)
OMFS 609	Literature Review in Oral and Maxillofacial Surgery	(6)
OMFS 614	Experience in Oral and Maxillofacial Surgery Practice	(7)
OMFS 615	Trends in Medicine and Surgery	(2)
OMFS 616	Application of Surgical Principles to Orthognathic Surgery	(1)
OMFS 617	Critical-Decision Thinking in Oral and Maxillofacial Surgery	(1)
OMFS 697A	Research	(1)
OMFS 697B	Research	(1)
OMFS 698	Thesis (M.S. track only)	(1)

### INTERDISCIPLINARY AND NON-DEPARTMENTAL REQUIRED COURSES

GRDN 531	Applied Surgical Anatomy	(2)
GRDN 601	Practice Management (audit only)	(2)
GRDN 622	Biomedical Science I (audit only)	(4)
GRDN 623	Biomedical Science II (audit only)	(4)
GRDN 632	Basic Microsurgery Technique	(2)
RELE ___	Religion elective	(3)

## Orthodontics and Dento-facial Orthopedics, Advanced—SD (M.S., PD certificate)

JOSEPH M. CARUSO, Program Director

### FACULTY

Joseph Caruso  
James Farrage  
V. Leroy Leggett  
Roland Neufeld  
R. David Rynearson

The graduate program in orthodontics and dental facial orthopedics is organized to do the following:

1. Develop technical competence in the skills of orthodontics;
2. Deepen understanding of the basic natural sciences and their correlation with orthodontic practice;
3. Develop analytical thinking;
4. Develop skills in clinical research;
5. Increase the sense of responsibility toward the patient and the community; and
6. Develop increased awareness of the obligation to make contributions to the growth and stature of the profession and to coordinate with those of allied professional disciplines.

All of the above are designed to prepare the resident for a specialty practice in orthodontics or for pursuing a teaching career. The content of the program conforms to the standards developed by the specialty board, and graduates are educationally qualified for certification by the American Board of Orthodontics.

The master's degree program requires a minimum of twenty-seven months in residence, beginning in June. Additional time may be required, depending on the research selected.

#### Application deadline

Application for admission should reach the school by September 1 of the year prior to the summer of intended enrollment.

#### Tuition

Tuition and fees per quarter for the academic year 2005-2006 are: tuition \$8300, insurance \$300, student services fee \$93, information technology \$150.

#### DEPARTMENTAL REQUIRED COURSES

ORDN 524	Introduction to Graduate Orthodontics	(12)
ORDN 524L	Introduction to Graduate Orthodontics Laboratory	(6)
ORDN 525	Materials Science and Mechanics	(2)
ORDN 526	Applied Anatomy	(2)
ORDN 527	Clinical Photography	(1)
ORDN 535	Advanced Cephalometrics	(2)
ORDN 536	Concepts of Physical Anthropology	(2)
ORDN 545	Growth and Development	(3)
ORDN 546	Fundamentals of Occlusion	(2)
ORDN 571	Diagnosis and Treatment Planning I	(2)
ORDN 574	Diagnosis and Treatment Planning II	(2)
ORDN 584	Current Orthodontic Literature I	(2)
ORDN 591	Current Orthodontic Literature II	(2)
ORDN 597	Orthognathic Surgery Theory and Literature Review	(2)
ORDN 604	Seminar in Orthodontics	(1)
ORDN 605	Advanced Seminar in Orthodontics	(2)
ORDN 606	Craniofacial Genetics	(2)
ORDN 608	Physiology and Pathology of Speech	(1)
ORDN 625	Clinical Practice in Orthodontics	(1600 clock hours)
ORDN 634	Orthodontic Clinical Conference	(2)

ORDN 635	Finishing Mechanics I	(2)
ORDN 636	Finishing Mechanics II	(1)
ORDN 654	Practice Teaching in Orthodontics	(4)
ORDN 655	Temporomandibular Function and Dysfunction	(2)
ORDN 657	Orthodontic Board Preparation	(6)
ORDN 697A	Research	(1)
ORDN 697B	Research	(1)
ORDN 698	Thesis (M.S. track only)	(3)

#### INTERDISCIPLINARY AND NONDEPARTMENTAL REQUIRED COURSES

GRDN 514	Introduction to Biomedical Research	(4)
GRDN 601	Practice Management	(2)
GRDN 609	Professional Ethics	(2)
GRDN 623	Biomedical Science II	(5)
OMFS 608	Surgical Oral and Maxillofacial Pathology Conference	(2)
OMFS 616	The Application of Surgical Principles to Orthognathic Surgery	(1)
RELE ___	Religion elective	(3)

## Peace Corp Master's International Program/ Master of Public Health— PH (M.P.H.)

The Peace Corps was established in 1961 to provide U.S. citizens an opportunity to serve their country in the cause of peace by living and working in developing countries. Over the years as the needs of host countries have evolved, the Peace Corps has continued striving to attract individuals whose education, experience, and cross-cultural sensitivity can address global needs as they arise; and who can facilitate sustainable, community-centered development. After identifying a number of areas in which there was a shortage of personnel with specialized expertise—including the area of public health—the Peace Corps established the Master's International Program in 1987. This program is designed not only to meet the increasing demand from Peace Corps host countries for volunteers with higher levels of education and technical expertise, but also to provide volunteers the opportunity to incorporate Peace Corps service into graduate-education pursuits.

Loma Linda University is one of eighty-two universities currently participating in the Master's International Program. It is one of only eleven universities that offer this prestigious program in conjunction with the Master of Public Health degree, which includes one of the following emphases: environmental and occupational health, health promotion and education, and global health.

Prospective students must be accepted both by Loma Linda University School of Public Health into the Master of Public Health degree program, and by the Peace Corps into the Master's International Program.

To join the Peace Corps, the applicant must be a U.S. citizen, at least 18 years of age, and in good physical health.

For information regarding additional eligibility criteria and the excellent benefits package (including language and cultural training, living/housing expenses in the field, medical/dental coverage, deferment of student-loan repayment, transportation allowance to and from one's service assignment, vacation time and allowances, financial readjustment and allowance, and employment assistance postservice), contact the Peace Corps at 800/424-8580, ext. 1843; or Office of University Programs at [www.peacecorps.gov](http://www.peacecorps.gov).

After acceptance into the program, the student completes the environmental health, health education, or global health course work on the Loma Linda campus. The student also completes three months of intensive language, technical, and cross-cultural training.

When the academic course work and training have been completed, the student enters the Peace Corps in lieu of the field practicum otherwise required for the degree, and begins duty in the assigned country of service. For students with an academic emphasis in global health, six-to-twelve-month nongovernmental (NGO) internships are available with organizations in the U.S. or abroad that are under contractual agreement with the University's Department of Global Health.

While on assignment, MIP/M.P.H. degree program student receive an internship or a field-practicum tuition scholarship. In addition, students in the program receive priority placement for their public health service assignment.

Upon satisfactory completion of the Peace Corps assignment and the culminating activity report, the student is awarded the M.P.H. degree.

#### **Peace Corps Fellows/USA [community] Program**

Peace Corps fellows receive scholarships and full credit for Peace Corps service; and are eligible for work-study, medical benefits, and discounts on housing. Fellows will help coordinate community-based learning activities in the Norton neighborhoods of San Bernardino, California. (Internship requires access to an automobile.) Specific responsibilities include assisting faculty in organizing projects and in helping to mentor students.

## **Pediatric Dentistry, Advanced—SD (M.S., PD certificate)**

JOHN PETERSON, JR., Program Director

#### **FACULTY**

J. Todd Milledge  
Bonnie Nelson

Wesley Okumura  
Valeria Pereira  
John Peterson, Jr.

The advanced dental education Pediatric Dentistry Program is designed to prepare the resident as a specialist in this area of dentistry. The curriculum leads to a certificate in pediatric dentistry. Clinical pediatric dentistry is emphasized; however, this clinical experience is balanced with a didactic curriculum of multidisciplinary courses and seminars. There is also a research component designed to expose the resident to problem solving using the scientific method. The program requires a minimum of twenty-four months in residence beginning July 1, and fulfills the requirements for initiating the process of certification by the American Board of Pediatric Dentistry.

Following enrollment into the program, residents may apply for acceptance to the Master of Science (M.S.) degree track in addition to the specialty certificate. The application should be submitted before the end of the first year and must be supported by a letter of recommendation from the program director. Acceptance into the M.S. degree program may extend the length of study; the additional time must be in residence.

#### **Application deadline**

Application for admission should reach the department by November 1 of the year prior to the summer of intended enrollment.

#### **Tuition**

Tuition and fees per quarter for the academic year 2005-2006: tuition \$8300, insurance \$300, student-services fees \$93, information technology fee \$150.

#### **DEPARTMENTAL REQUIRED COURSES**

PEDN 503	Pediatric Dental Seminar	(2)
PEDN 508	Pediatric Hospital Dentistry Seminar	(2)
PEDN 512	Oral Sedation Seminar	(2)
PEDN 521	Principles of Medicine and Physical Diagnosis	(2)
PEDN 524	Introduction to Orthodontics, Lecture	(2)
PEDN 524L	Introduction to Orthodontics, Laboratory	(1-2)
PEDN 546	General Anesthesia Clinic	(160 clock hours)
PEDN 601	Pediatric Dental Practice Management	(2)
PEDN 604	Pediatric Dental Literature	(2)
PEDN 625	Pediatric Dental Clinic	(1500-2000 clock hours)
PEDN 654	Pediatric Dental Teaching	(1)
PEDN 680	Elective Study	(2)
PEDN 697A	Research	(1)
PEDN 697B	Research	(1)
PEDN 698	Thesis (M.S. degree only)	(1-3)

**INTERDISCIPLINARY AND NON-DEPARTMENTAL REQUIRED COURSES**

GRDN 514	Introduction to Biomedical Research	(4)
GRDN 531	Applied Surgical Anatomy	(2)
GRDN 535	Clinical Oral Pathology	(2)
GRDN 604	Topics in Medicine and Hospital Protocol	(2)
GRDN 609	Professional Ethics	(2)
GRDN 622	Biomedical Sciences I	(4)
GRDN 623	Biomedical Sciences II	(4)
ORDN 545	Growth and Development	(3)
ORDN 606	Craniofacial Genetics	(2)
ORDN 608	Physiology and Pathology of Speech	(1)
ORPA 533	Radiology	(2)
RELE ___	Religion elective	(3)

## Periodontics, Advanced— SD (M.S., PD certificate)

TORD LUNDGREN, Program Director

**FACULTY**

Nikola Angelov  
R. Leslie Arnett,  
Max Crigger  
P. G. Hallstrom  
Oliver Hoffmann  
Robert Holt, Jr.  
Sanmoo Lee  
Tord Lundgren  
Adrian Mobilia  
Craig Ririe  
Barbara Valadez

The three-year, advanced dental education Periodontics Program leads to a certificate in periodontics; additionally a Master of Science degree may be obtained.

The certificate in periodontics prepares the resident for a specialty practice and provides the basis for continuing professional development after completion of the program. Specific emphasis is placed on various high-level technique procedures, including aesthetics- and prosthetics-related mucogingival surgery, root-form implant placement, preparatory augmentation, and repairs. The training includes didactic and clinical components, as well as research opportunities.

The Master of Science degree prepares the resident for academic careers in periodontal research and teaching. The program includes the didactic and clinical components of the certificate training. The resident is required to complete one or more research projects and to be involved in clinical and didactic predoctoral teaching activities.

A minimum of thirty-six months in residence is required, beginning in July.

**Application deadline**

Application for admission should reach the department by September 15 of the year prior to the summer of intended enrollment. The Graduate Record Examination (GRE) is required for admission into the advanced dental education Periodontics Program.

**Tuition**

Tuition and fees per quarter for the academic year 2005-2006 are: tuition \$8300, insurance \$300, student-services fee \$93, information technology fee \$150.

**DEPARTMENTAL REQUIRED COURSES**

PERI 524	The Periodontium	(2)
PERI 531	Periodontal Pathology	(2)
PERI 546	General Anesthesia Clinic (84 clock hours)	
PERI 601	Periodontal Therapy	(2)
PERI 604	Current Periodontal and Implant Literature	(2)
PERI 605	Implant Literature Review	(2)
PERI 611	Introduction to Periodontics	(2)
PERI 614	Implant Treatment Planning	(2)
PERI 625	Clinical Practice Periodontics (1800-2100 clock hours)	
PERI 626	Clinical Practice in Implant Surgery (700 clock hours)	
PERI 634	Clinical Conference	(1-2)
PERI 654	Practice Teaching in Periodontics	(1, 1, 1, 1)
PERI 697A	Research	(1)
PERI 697B	Research	(1)
PERI 698	Thesis (M.S. degree only)	(1)

**INTERDISCIPLINARY AND NON-DEPARTMENTAL REQUIRED COURSES**

ANES 548	Anesthesia Residents Seminar	(2)
ANES 604	Anesthesia Literature Review	(1)
ANES 622	Conscious Sedation Techniques	(1)
GRDN 514	Introduction to Biomedical Research	(4)
GRDN 535	Clinical Oral Pathology	(2)
GRDN 604	Topics in Medicine and Hospital Protocol	(2)
GRDN 609	Professional Ethics	(2)
GRDN 632	Basic Microsurgery Technique	(2)
RELE ___	Religion elective	(3)

## Pharmacology—SM (M.S., Ph.D.)

JOHN BUCHHOLZ, Associate Chair

**FACULTY**

John Buchholz  
C. Raymond Cress

Lincoln P. Edwards  
David A. Hessinger  
Lubo Zhang

### Admission

A student may be admitted to a program of study toward the Doctor of Philosophy degree in pharmacology after having completed an undergraduate program or after successfully completing a master's degree in one of the natural sciences.

### PREREQUISITE

Prerequisites for acceptance include results of the GRE General Test. Scores on the Test of English as a Foreign Language (TOEFL) are required from students whose native language is not English. Applicants should have a bachelor's degree, or equivalent from a foreign university, with a strong undergraduate preparation in the biological and physical sciences, including a full year each of general biology, general chemistry, organic chemistry, and physics. Other upper-division sciences and calculus are strongly recommended. Exceptions are considered by the faculty on an individual basis. The program reserves the right to decide on the equivalence of courses presented by the applicant.

The incoming student must have completed the prerequisites or have made suitable arrangements to do so, as stated below and in the Programs and Degrees and the Academic Practices sections of this CATALOG.

The optimum undergraduate preparation for a student to do well in graduate pharmacology is a major in chemistry with a minor in biology, or a biology major with a chemistry minor. Either combination should include a good background in elementary physics.

Applicants to a graduate degree program in pharmacology are expected to have a baccalaureate degree with the following minimum prerequisites in their undergraduate preparation (quarter units):

Biology	(8)
Chemistry (including general, quantitative, and organic chemistry)	(20)
Physics	(8)

With the consent of the department, applicants who do not meet the foregoing requirements may be admitted to the Graduate School on a provisional basis until the deficiencies are removed.

### Financial aid

Applications for admission requesting financial support should be completed by March 1.

### Master's degree credit toward doctoral degree

Applicants having completed a master's degree previously at another institution may receive up to 48 quarter units of academic credit toward the doctoral degree. The amount of credit eligible for transfer will depend on the courses taken during the master's degree program and must be approved by the program coordinator.

### Terminal master's degree

Applicants will not be accepted into the program with the intent of completing a master's degree only. However, if a student pursuing a Ph.D. degree finds it impossible or undesirable to continue, a terminal mas-

ter's degree may be awarded, providing he or she has completed a minimum of 48 quarter units. Of this total, 23 units must be in pharmacology.

### PROGRAM REQUIREMENTS

A maximum of 25 units of pharmacology may be in research leading to the preparation and successful oral defense of a formal thesis, or the results may be in the form of a publishable scientific paper.

### Ph.D. degree

For the Ph.D. degree, students must complete a minimum of 87 units, including those listed in the core requirements below. Additionally, they must take IBGS 503 Biomedical Grant Writing. At least 15 units of advanced courses in pharmacology plus a course in statistics must be included. Students will carry out research (20 units of PHRM 697), which culminates in a dissertation or several publishable papers (5 units of PHRM 699). Doctoral students are required to pass both written and oral comprehensive examinations in order to advance to candidacy. The candidate must take comprehensive written and oral examinations over the major field of study and prepare an acceptable dissertation based on the research program. They must successfully defend the dissertation to their guidance committee before being awarded the Ph.D. degree.

### Combined-degrees program

In the combined-degrees program, some courses taken in the M.D. or D.D.S. curricula may be credited toward the Ph.D. in Pharmacology. Consent for such credit must be obtained from the program in Pharmacology and the Graduate School after the courses are completed with satisfactory grades. For a course taken in a professional curriculum to be accepted for graduate credit, the student must maintain the competence required for the respective graduate level.

### General requirements

For information about requirements and practices to which all graduate students are subject, the student should consult Sections II and III of this CATALOG.

### Core requirements

Students earning this degree will maintain a B (3.0) grade average. Core courses include the integrated biomedical graduate course IBGS 511, 512, 513 Cellular Mechanisms and Integrated Systems; and the cognate course IBGS 501, 502. Students will take 1 unit of IBGS 605 Integrative Biology Presentation Seminar for each year in residence. Additionally, they will enroll in IBGS 607 Biomedical Graduate Seminar each quarter; but these units will not be counted toward the fulfillment of the total unit requirement.

### CORE BASIC SCIENCE COURSES

IBGS	511, 512, 513	Cellular Mechanisms and Integrated Systems I, II, III	(30)
IBGS	501	Biomedical Communication and Integrity	(2)
IBGS	502	Biomedical Information and Statistics	(2)
IBGS	503	Biomedical Grant Writing	(2)
IBGS	607	Biomedical Graduate Seminar	(X)
IBGS	607	Integrative Biology Presentation Seminar	(X)

**PROGRAM COURSES**

Courses are to be selected in consultation with the adviser.

PHRM 511, 512	General and Systematic Pharmacology I, II	(5, 3)
PHRM 534	Topics in Pharmacology for Dentistry	(2)
PHRM 544	Topics in Advanced Pharmacology	(3)
PHRM 545	Laboratory in Advanced Pharmacology	(1-2)
PHRM 554	Neuropharmacology	(4)
PHRM 564	Cardiovascular and Renal Pharmacology	(3)
PHRM 584	Drug Metabolism and Biochemical Pharmacology	(3)
PHRM 586	Toxicology	(3)
PHRM 605	Integrative Biology Graduate Seminar	(1)
IBGS 607	Biomedical Seminar	(1)
PHRM 684	Special Problems in Pharmacology	(2-6)
PHRM 697	Research	(1-6)
PHRM 698	Thesis	(1-6)
PHRM 699	Dissertation	(1-6)

## Pharmacy—SP (Pharm.D.)

AVIS J. ERICSON, Dean

**FACULTY**

Eileen J. Brantley  
 Rebecca J. Cheung  
 Bruce L. Currie  
 Willie L. Davis  
 Avis Ericson  
 Naomi R. Florea  
 Rebecca J. Gryka  
 Odette de Guzman  
 Sharon H. Hanson  
 Elvin Abueg Hernandez  
 Gamal I. Hussein  
 Ladonna M. Jones  
 Nancy E. Kawahara  
 Kathryn T. Knecht  
 Kelly C. Lee  
 Anh-Vuong Ngoc Ly  
 Eric J. Mack  
 Jocelyn A. Mallari  
 Rashid Moshavin  
 Nathan A. Painter  
 Mark A. Redell  
 S. Reza Taheri  
 Desiree R. Wallace  
 Sompon Wanwimolruk  
 Linda N. Williams

The curriculum at Loma Linda University School of Pharmacy is dynamic. This is due partly to the newness of the program and partly to the changing nature of the profession. The school reserves the right

to change the curriculum after due deliberation of the Curriculum Committee and the Executive Committee, and will provide notice to students of all changes.

The information that follows—which has not appeared previously in an official school BULLETIN—is provided for the classes of 2006, 2007, and 2008. The curricula are listed according to class by professional year (PY).

**CLASS OF 2006**
**PROGRAM OF INSTRUCTION  
for 2002-2003 school year (PY1)**
**AUTUMN 2002**

RXPS 521	Anatomy and Physiology I	(4)
RXPS 517	Biochemistry I	(3)
RXSA 544	Communications/Writing Skills Laboratory	(3)
RXSA 540	Introduction to Health Care	(2)
RXPS 510	Pharmaceutical Calculations	(2)
RXEE 561	Pharmaceutical Care I	(2)
RXPS 511	Pharmaceutics I	(3)
RXRK 501	School of Pharmacy Forum	(0)
TOTAL		19

**WINTER 2003**

RXPS 522	Anatomy and Physiology II	(3)
RXPS 582	Biochemistry II	(3)
RELE 705	Ethics in Pharmacy Practice	(2)
RXPS 571	Microbiology/Immunology I	(3)
RXPS 531	Molecular Biology/Genomics I	(2)
RXEE 562	Pharmaceutical Care II	(2)
RXPS 512	Pharmaceutics II	(3)
RXRK 502	School of Pharmacy Forum	(0)
TOTAL		18

**SPRING 2003**

RXRK 505	Advanced Compounding Laboratory	(0)
RXPS 523	Anatomy and Physiology III	(3)
RXRK 504	Immunization Certification	(0)
RXPS 572	Microbiology/Immunology II	(3)
RXPS 532	Molecular Biology/Genomics II	(2)
RXEE 563	Pharmaceutical Care III	(2)
RXPS 513	Pharmaceutics III	(2)
RXPS 514	Pharmaceutics Laboratory	(1)
RXSA 547	Pharmacy Law	(2)
RXSA 546	Pharmacy/Public Health Interface	(3)
RXRK 503	School of Pharmacy Forum	(0)
TOTAL		18

**SUMMER 2003**

RXRK 506	Introduction to Pharmacy Leadership [selected students only]	[1]
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TOTAL		0-1
<b>2002-2003 YEAR TOTAL</b>		<b>55-56</b>

**CLASS OF 2006****PROGRAM OF INSTRUCTION**

for 2003-2004 school year (PY2)

**AUTUMN 2003**

RXPS 610	Basic Pharmacokinetics	(4)
RELR 709	Christian Perspectives on Death and Dying	(2)
RXSA 640	Epidemiology and Biostatistics	(3)
RXTH 670	IPDM I: Introduction to Pharmacology and Therapeutics	(3)
RXTH 671	IPDM II: Electrolytes, Fluids, and Nutritional Balance	(3)
RXPS 611	Medicinal Chemistry I	(3)
RXPC 661	Pharmaceutical Care IV	(1)
RXRX 604	Professional Development	(0)
RXRX 601	School of Pharmacy Forum	(0)
TOTAL		19

**WINTER 2004**

RXTH 672	IPDM IIIA: Cardiovascular Disease I	(3)
RXTH 673	IPDM IIIB: Cardiovascular Disease II	(3)
RXTH 674	IPDM IV: Renal and Respiratory Disease	(3)
RXTH 675	IPDM V: CV, Renal, and Respiratory Disease Combined Recitation	(1)
RXSA 644	Lifestyles and Health	(2)
RXPC 660	OTC and Herbal Products	(3)
RXPC 662	Pharmaceutical Care V	(1)
RXPC 665	Physical Assessment	(2)
RXRX 604	Professional Development	(0)
RXRX 602	School of Pharmacy Forum	(0)
TOTAL		18

**SPRING 2004**

RXDI 664	Drug Information and Literature Evaluation	(3)
RXTH 676	IPDM VI: Infectious Diseases I	(3)
RXTH 677	IPDM VII: Endocrine Diseases	(2)
RXTH 678	IPDM VIII: Combined Recitation	(1)
RXPS 612	Medicinal Chemistry II	(4)
RXPC 663	Pharmaceutical Care VI	(1)
RXRX 604	Professional Development	(0)
RXRX 602	School of Pharmacy Forum	(0)
RELF 540	World Religions and Human Health	(3)
TOTAL		17

**SUMMER 2004**

TOTAL		0
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2003-2004 YEAR TOTAL **54**CUMULATIVE TOTAL FOR CLASS OF 2006 **109****CLASS OF 2006****PROGRAM OF INSTRUCTION**

for 2004-2005 school year (PY3)

**AUTUMN 2004**

RXSA 748	Advanced Topics in Pharmacy Law (elective [or RXPC 756])	(3)
RXTH 770	IPDM IX: Infectious Diseases II	(4)
RXTH 771	IPDM X: Neurology	(3)
RXPS 714	Medicinal Chemistry IV	(3)
RXTH 776	Combined Recitation III	(1)
RXPC 761	Pharmaceutical Care Laboratory I	(4)
RXSA 741	Pharmacy Management I	(2)
RXRX 704	Professional Development	(0)
RXRX 701	School of Pharmacy Forum	(0)
RXPC 756	Women's Health (elective [or RXSA 748])	(3)
TOTAL		20

**WINTER 2005**

RXTH 794	Combined Recitation IV	(1)
RXPC 710	Dietary Supplements (elective)	(3)
RXTH 777	IPDM XI: GI Diseases	(2)
RXTH 778	IPDM XII: Miscellaneous Conditions	(3)
RXPS 715	Medicinal Chemistry V	(2)
RXPC 762	Pharmaceutical Care Laboratory II	(4)
RXSA 740	Pharmacoeconomics	(3)
RXRX 704	Professional Development	(0)
RXRX 702	School of Pharmacy Forum	(0)
RXSA 751	Social Behavioral Pharmacy I	(2)
TOTAL		20

**SPRING 2005**

RXTH 795	Combined Recitation V	(1)
RXTH 779	IPDM XIII: Oncology/Transplant	(2)
RXTH 780	IPDM XIV: Psychiatry and Substance Abuse	(4)
RXPS 716	Medicinal Chemistry VI	(2)
RXPC 763	Pharmaceutical Care Laboratory III (	4)
RXTH 784	Special Topics in Pharmacy Practice (elective)	(3)
RELE 706	Advanced Ethics	(2)
RXRX 701	School of Pharmacy Forum	(0)
RXRX 704	Professional Development	(0)
TOTAL		18

**SUMMER 2005**

TOTAL		0
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2004-2005 YEAR TOTAL **58**CUMULATIVE TOTAL FOR CLASS OF 2006 **167**

**CLASS OF 2006**  
**PROGRAM OF INSTRUCTION**  
**for 2005-2006 school year (PY4)**

<b>AUTUMN 2005</b>	
Advanced Practice Rotations (3)	(18)
TOTAL	18
<b>WINTER 2006</b>	
Advanced Practice Rotations (2)	(12)
TOTAL	12
<b>SPRING 2006</b>	
Advanced Practice Rotations (1)	(6)
Reconnections	(3)
TOTAL	9
<b>SUMMER 2006</b>	
TOTAL	0
<b>2005-2006 YEAR TOTAL</b>	<b>39</b>
<b>CUMULATIVE TOTAL FOR CLASS OF 2006</b>	<b>206</b>

**CLASS OF 2007**  
**PROGRAM OF INSTRUCTION**  
**for 2003-2004 school year (PY1)**

<b>AUTUMN 2003</b>	
RXPS 521 Anatomy and Physiology I	(4)
RXPS 581 Biochemistry I	(3)
RXSA 544 Communications/Writing Skills Laboratory	(3)
RELE 706 Introduction to Adventist Beliefs and Life	(2)
RXSA 540 Introduction to Health Care	(2)
RXEE 561 Pharmaceutical Care I	(2)
RXPS 511 Pharmaceutics I	(3)
RXPS 510 Pharmaceutical Calculations	(2)
RXRX 507 Professional Development	(0)
RXRX 501 School of Pharmacy Forum	(0)
TOTAL	21
<b>WINTER 2004</b>	
RXPS 522 Anatomy and Physiology II	(3)
RXPS 582 Biochemistry II	(3)
RELF 705 Ethics in Pharmacy Practice	(2)
RXPS 571 Microbiology and Immunology I	(3)
RXPS 531 Molecular Biology/Genomics I	(2)
RXEE 562 Pharmaceutical Care II	(2)
RXPS 512 Pharmaceutics II	(3)
RXRX 507 Professional Development	(0)
RXRX 502 School of Pharmacy Forum	(0)
TOTAL	18
<b>SPRING 2004</b>	
RXPS 523 Anatomy and Physiology III	(3)
RXPS 572 Microbiology and Immunology II	(3)
RXPS 532 Molecular Biology/Genomics II	(2)

RXEE 563 Pharmaceutical Care III	(2)
RXPS 513 Pharmaceutics III	(2)
RXPS 514 Pharmaceutics Laboratory	(1)
RXSA 547 Pharmacy Law	(3)
RXSA 546 Pharmacy/Public Health Interface	(2)
RXRX 507 Professional Development	(0)
RXRX 503 School of Pharmacy Forum	(0)
TOTAL	18

<b>SUMMER 2004</b>	
TOTAL	0
<b>2003-2004 YEAR TOTAL</b>	<b>57</b>

**CLASS OF 2007**  
**PROGRAM OF INSTRUCTION**  
**for 2004-2005 school year (PY2)**

<b>AUTUMN 2004</b>	
RXPS 610 Basic Pharmacokinetics	(4)
RXSA 640 Epidemiology/Biostatistics	(3)
RXTH 670 IPDM I: Introduction to Pharmacology and Therapy	(3)
RXTH 671 IPDM II: Electrolytes, Fluids, Nutrition	(3)
RXPS 611 Medicinal Chemistry I	(3)
RXPC 661 Pharmaceutical Care IV	(1)
RXPC 665 Physical Assessment	(2)
RXRX 604 Professional Development	(0)
RXRX 601 School of Pharmacy Forum	(0)
TOTAL	19
<b>WINTER 2005</b>	
RXTH 691 Combined Recitation I	(1)
RXDI 664 Drug Information and Literature Evaluation	(3)
RXTH 683 IPDM III: Endocrine/GI Diseases	(4)
RXTH 674 IPDM IV: Renal and Respiratory	(3)
RXPS 612 Medicinal Chemistry II	(2)
RXPC 662 Pharmaceutical Care V	(1)
RXSA 645 Pharmacoeconomics	(3)
RXRX 604 Professional Development	(0)
RXRX 602 School of Pharmacy Forum	(0)
TOTAL	17
<b>SPRING 2005</b>	
RELX 709 Christian Perspectives on Death and Dying	(2)
RXTH 692 Combined Recitation II	(1)
RXTH 684 IPDM V: Cardiovascular Diseases	(6)
RXPS 613 Medicinal Chemistry III	(2)
RXSA 646 Principles of Management	(3)
RXRX 601 School of Pharmacy Forum	(0)
RELT 540 World Religions and Human Health	(3)
RXRX 604 Professional Development	(0)
TOTAL	17

**SUMMER 2005**

TOTAL 0

**2004-2005 YEAR TOTAL****53**CUMULATIVE TOTAL FOR CLASS OF 2007 **110****CLASS OF 2007****PROGRAM OF INSTRUCTION****for 2005-2006 school year (PY3)****AUTUMN 2005**

RXPS 714	Medicinal Chemistry IV	(3)
RELE 706	Advanced Ethics	(2)
RXTH 793	Combined Recitation III	(2)
RXTH 770	IPDM VI: Infectious Diseases I	(3)
RXTH 773	IPDM IX: Psychiatry	(4)
RXPC 761	Pharmaceutical Care Laboratory I	(4)
RXPS 710	Dietary Supplements	(3)
RXR X 701	School of Pharmacy Forum	(0)
RXR X 704	Professional Development	<u>(0)</u>
TOTAL		21

**WINTER 2006**

RXPS 715	Medicinal Chemistry V	(2)
RXTH 794	Combined Recitation IV	(2)
RXTH 772	IPDM VIII: Infectious Diseases II	(4)
RXTH 771	IPDM VII: Neurological Diseases	(3)
RXPC 762	Pharmaceutical Care Laboratory II	(4)
TBD ____	Professional Elective	(3)
RXR X 701	School of Pharmacy Forum	(0)
RXR X 704	Professional Development	<u>(0)</u>
TOTAL		18

**SPRING 2006**

RXPS 716	Medicinal Chemistry VI	(2)
RXTH 795	Combined Recitation V	(2)
RXTH 774	IPDM X: Miscellaneous Conditions	(3)
RXTH 775	IPDM XI: Oncology/Transplant	(2)
RXPC 763	Pharmaceutical Care Laboratory III	(4)
RXSA 751	Social/Behavioral Pharmacy	(3)
TBD ____	Professional Elective	(3)
RXR X 701	School of Pharmacy Forum	(0)
RXR X 704	Professional Development	<u>(0)</u>
TOTAL		19

**SUMMER 2006**

TOTAL 0

**2005-2006 YEAR TOTAL** **58**CUMULATIVE TOTAL FOR CLASS OF 2007 **168****CLASS OF 2007****PROGRAM OF INSTRUCTION****for 2006-2007 school year (PY4)****AUTUMN 2006**

Advanced Practice Rotations (3)	<u>(18)</u>
TOTAL	18

**WINTER 2007**

Advanced Practice Rotations (2)	<u>(12)</u>
TOTAL	12

**SPRING 2007**

Advanced Practice Rotations (1)	(6)
Reconnections	<u>(3)</u>
TOTAL	9

**SUMMER 2007**

TOTAL 0

**2006-2007 YEAR TOTAL** **39**CUMULATIVE TOTAL FOR CLASS OF 2007 **207****CLASS OF 2008****PROGRAM OF INSTRUCTION****for 2004-2005 school year (PY1)****AUTUMN 2004**

RXPS 521	Anatomy and Physiology I	(4)
RXPS 581	Biochemistry I	(3)
RXSA 544	Communications and Writing Skills	(3)
RELF 706	Introduction to Adventist Beliefs and Life	(2)
RXSA 540	Introduction to Health Care	(2)
RXEE 561	Pharmaceutical Care I	(2)
RXPS 511	Pharmaceutics I	(3)
RXPS 510	Pharmacy Calculations	(2)
RXR X 507	Professional Development	(0)
RXR X 501	School of Pharmacy Forum	<u>(0)</u>
TOTAL		21

**WINTER 2005**

RXPS 522	Anatomy and Physiology II	(3)
RXPS 582	Biochemistry II	(3)
RELE 705	Ethics in Pharmacy Practice	(2)
RXPS 571	Immunology I	(3)
RXEE 562	Pharmaceutical Care II	(3)
RXPS 512	Pharmaceutics II	(3)
RXPS 515	Pharmaceutics Laboratory I	<u>(.5)</u>
RXR X 507	Professional Development	(0)
RXR X 501	School of Pharmacy Forum	<u>(0)</u>
TOTAL		17.5

**SPRING 2005**

RXPS 523	Anatomy and Physiology III	(3)
RXPS 530	Molecular Biology	(3)
RXEE 563	Pharmaceutical Care III	(3)
RXPS 513	Pharmaceutics III	(2)

RXPS 516	Pharmaceutics Laboratory II	(.5)
RXSA 547	Pharmacy Law	(3)
RXSA 545	Public Health and Lifestyles	(3)
RELT 540	World Religions and Human Health	(3)
RXXR 501	School of Pharmacy Forum	(0)
RXXR 507	Professional Development	<u>(0)</u>
TOTAL		20.5
<b>SUMMER 2005</b>		
TOTAL		0
<b>2004-2005 YEAR TOTAL</b>		
		<b>59</b>
<b>CUMULATIVE TOTAL FOR CLASS OF 2008</b>		
		<b>59</b>

**SUMMER COURSE WORK AND INTERNSHIP**

Didactic course work generally is not taught during the summer term at the School of Pharmacy. Occasionally a special course may be offered for students who take on additional curricular or extracurricular responsibilities. The summer following PY1 is the first opportunity for earning internship hours.

**CLASS OF 2008****PROGRAM OF INSTRUCTION****for 2005-2006 school year (PY2)****AUTUMN 2005**

RXPS 611	Medicinal Chemistry	(3)
RXSA 640	Epidemiology and Biostatistics	(3)
RXPS 610	Basic Pharmacokinetics	(4)
RXTH 670	IPDM I: Introduction to Pharmacology and Therapeutics	(3)
RXTH 671	IPDM II: Electrolytes, Fluids, and Nutritional Balance	(3)
RXPC 665	Physical Assessment	(2)
RXXR 601	School of Pharmacy Forum	(0)
RXXR 604	Professional Development	<u>(0)</u>
TOTAL		18

**WINTER 2006**

RXPS 612	Medicinal Chemistry II	(3)
RXDI 664	Drug Information and Literature Evaluation	(3)
RXTH 691	Combined Recitation I	(2)
RXTH 683	IPDM III: Endocrine and GI Diseases	(4)
RXTH 674	IPDM IV: Renal and Respiratory Disease	(3)
RXSA 646	Principles of Management	(3)
RXXR 601	School of Pharmacy Forum	(0)
RXXR 604	Professional Development	<u>(0)</u>
TOTAL		18

**SPRING 2006**

RXPS 613	Medicinal Chemistry III	(3)
REL R 709	Christian Perspectives on Death and Dying	(2)

RXTH 692	Combined Recitation II	(2)
RXTH 684	IPDM V: Cardiovascular Diseases	(6)
RXPS 620	Microbiology	(3)
RXSA 751	Social and Behavioral Aspects of Pharmacy Practice	(3)
RXXR 601	School of Pharmacy Forum (0)	
RXXR 604	Professional Development	<u>(0)</u>
TOTAL		19
<b>SUMMER 2006</b>		
TOTAL		0
<b>2005-2006 YEAR TOTAL</b>		
		<b>55</b>
<b>CUMULATIVE TOTAL FOR CLASS OF 2008</b>		
		<b>114</b>

**CLASS OF 2008****PROGRAM OF INSTRUCTION****for 2006-2007 school year (PY3)****AUTUMN 2006**

RXPS 714	Medicinal Chemistry IV	(3)
RELE 706	Advanced Ethics	(2)
RXTH 793	Combined Recitation III	(2)
RXTH 770	IPDM VI: Infectious Diseases I	(3)
RXTH 771	IPDM VII: Neurology	(3)
RXPC 761	Pharmaceutical Care Laboratory	(4)
TBD ___	Professional elective	(3)
RXXR 701	School of Pharmacy Forum	(0)
RXXR 704	Professional Development	<u>(0)</u>
TOTAL		20

**WINTER 2007**

RXPS 715	Medicinal Chemistry V	(2)
RXTH 794	Combined Recitation IV	(2)
RXTH 772	IPDM VIII: Infectious Diseases II	(4)
RXTH 773	IPDM IX: Psychiatry and Addiction	(4)
RXPC 762	Pharmaceutical Care Laboratory II	(4)
TBD ___	Professional elective	(3)
RXXR 701	School of Pharmacy Forum	(0)
RXXR 604	Professional Development	<u>(0)</u>
TOTAL		19

**SPRING 2007**

RXPS 716	Medicinal Chemistry VI	(2)
RXTH 795	Combined Recitation V	(2)
RXTH 775	IPDM XI: Oncology Transplant	(2)
RXTH 774	IPDM X: Miscellaneous Conditions	(3)
RXPC 763	Pharmaceutical Care Laboratory III	(4)
TBD ___	_____	(3)
TBD ___	Professional elective	(3)
RXXR 701	School of Pharmacy Forum	(0)
RXXR 704	Professional Development	<u>(0)</u>
TOTAL		19

**SUMMER 2007**

TOTAL 0

**SUMMER 2007****ADVANCED PRACTICE EXPERIENCES**

Advanced Practice Experiences currently are scheduled to begin approximately the first of August after PY3 has been completed. These courses will be counted as part of the Autumn Quarter of PY4.

2006-2007 YEAR TOTAL 58

CUMULATIVE TOTAL FOR CLASS OF 2007 172

**CLASS OF 2008****PROGRAM OF INSTRUCTION**

for 2007-2008 school year (PY4)

**AUTUMN 2007**

Advanced Practice Rotations (3) (18)

TOTAL 18

**WINTER 2008**

Advanced Practice Rotations (2) (12)

TOTAL 12

**SPRING 2008**

Advanced Practice Rotations (1) (6)

Reconnections (3)

TOTAL 9

**SUMMER 2008**

TOTAL 0

2007-2008 YEAR TOTAL 39

CUMULATIVE TOTAL FOR CLASS OF 2006 211

**CLASS OF 2009****PROGRAM OF INSTRUCTION**

for 2005-2006 school year (PY1)

**AUTUMN 2005**

RXPS 521 Anatomy and Physiology I (3)

RXPS 581 Biochemistry I (3)

RXSA 545 Public Health and Lifestyles (3)

RELF 706 Introduction to Adventist Beliefs and Life (2)

RXPC 561 Pharmaceutical Care I (4)

RXPS 511 Pharmaceutics I (3)

RXXR 501 School of Pharmacy Forum (0)

RXXR 507 Professional Development (0)

TOTAL 18

**WINTER 2006**

RXPS 522 Anatomy and Physiology II (3)

RXPS 582 Biochemistry II (3)

RELE 705 Ethics in Pharmacy Practice (2)

RXPS 571 Immunology I (3)

RXEE 562 Pharmaceutical Care II (3)

RXPS 512 Pharmaceutics II (4)

RXPS 515 Pharmaceutics Laboratory I (.5)

RXXR 501 School of Pharmacy Forum (0)

RXXR 507 Professional Development (0)

TOTAL 18.5

**SPRING 2006**

RXPS 523 Anatomy and Physiology III (3)

RXPS 530 Molecular Biology (3)

RXEE 563 Pharmaceutical Care III (3)

RXPS 513 Pharmaceutics III (3)

RXPS 516 Pharmaceutics Laboratory II (.5)

RXSA 547 Pharmacy Law (3)

RELT 540 World Religions and Human Health (3)

RXXR 501 School of Pharmacy Forum (0)

RXXR 507 Professional Development (0)

TOTAL 18.5

**SUMMER 2006**

TOTAL 0

TOTAL (2005-2006 year) (55)

CUMULATIVE TOTAL (Class of 2009) (55)

For general information about the School of Pharmacy, see Section III.

## Phlebotomy—AH (certificate)

MONIQUE K. GILBERT, Program Director

Procedures in phlebotomy are designed to train individuals to collect blood for laboratory analysis, which is necessary for the diagnosis and care of the patient. Ideal for health professionals seeking to expand their current skills, for currently employed phlebotomists, or for those interested in a profession in laboratory medicine, this training program is approved by the California Department of Health, Laboratory Field Services. Successful participants receive a certificate in phlebotomy.

**The program**

The program trains the modern phlebotomist to perform venipuncture, capillary puncture, and CPR; topics include medical terminology, laboratory safety, basic anatomy and physiology, quality-assurance methods, and medicolegal issues of phlebotomy. More than 100 hours of supervised clinical experience are

provided at Loma Linda University Medical Center and other medical affiliates, allowing participants to achieve proficiency in the health care setting.

#### Accreditation

The program is accredited by the California Department of Health, Laboratory Field Services, 2151 Berkeley Way, Annex 12, Berkeley, CA 94707-1011, telephone: 510/873-6449; and by the National Accrediting Agency for Clinical Laboratory Science (NAACLS), 8410 West Bryn Mawr Avenue, Suite 670, Chicago, IL 60631-3415.

#### Professional registration

Upon successful completion of the certificate program, participants receive a certificate in phlebotomy and are eligible to take the national certifying examination offered by the Board of Registry, American Society of Clinical Pathologists (ASCP), 2100 West Harrison Street, Chicago, IL 60612; telephone, 800/621-4142. Successful participants are also eligible to be licensed by the state of California.

#### Admission

To be eligible for admission, the applicant must be 18 years of age or older and have a high school diploma with a minimum grade-point average of 2.0; or GED. All registrants must have current immunizations (measles, mumps, rubella, tetanus) and PPD skin test.

#### How to apply

Prospective students should contact the Department of Clinical Laboratory Science for an application packet with instructions.

#### PROGRAM OF INSTRUCTION

AHCJ 105	Procedures in Phlebotomy	(5)
AHCJ 107	Advanced Phlebotomy	(2)

## Physical Therapist Assistant—AH (A.S.)

JEANNINE STUART MENDES, Program Director

CAROL J. APPLETON, Assistant Program Director for Physical Therapist Assistant; Academic Coordinator of Clinical Education for Physical Therapist Assistant Program

#### FACULTY

Carol J. Appleton  
Bruce D. Bradley  
Lawrence E. Chinnock  
Susan M. Huffaker  
Jeannine Stuart Mendes  
Steven D. Newton  
Ronald M. Rea

The physical therapist assistant is a skilled paraprofessional health worker who, under the supervision of a physical therapist, carries out the patient's treatment program. The extent to which the physical thera-

pist assistant is involved in treatment depends upon the supervising therapist.

A planned patient-care program is carried out by the assistant, following established procedures. Duties of the physical therapist assistant include: training patients in exercises and activities of normal daily living; performing treatment interventions; utilizing special equipment; assisting in performing tests, evaluations, and complex treatment procedures; and observing and reporting the patient's responses.

The other members of the rehabilitation team include the occupational therapist, nurse, speech and hearing therapist, respiratory therapist, recreational therapist, physician, social worker, chaplain, vocational counselor, dietitian, and psychologist. This team has as its objective the optimum functional restoration and rehabilitation of patients disabled by illness or injury.

#### Opportunities

Physical therapy offers a career for men and women who are interested in medical science and who enjoy working with people. Physical Therapist Assistant Program graduates have a wide choice of opportunities with medical groups, hospitals, rehabilitation centers, outpatient clinics, national and state agencies, and school systems. For those who desire to further their education, Master of Physical Therapy, and Doctor of Physical Therapy, and Doctor of Physical Therapy Science programs are available.

#### The program

The Physical Therapist Assistant Program leads to the Associate in Science degree and professional licensure. The program begins with the sophomore year. Instruction begins in June; graduation is the following June. Official program completion, however, is when clinical affiliations are completed—usually by the end of September.

#### Clinical experience

Supervised clinical experience is obtained in a variety of settings during the program. Students complete a two-week practicum and three major clinical assignments, each six weeks in length.

All clinical assignments will be made by the coordinator of clinical education or a designate (or program director). Because of the limited number of local facilities available, assignments cannot be made on the basis of the student's family/marital status or personal preference. Although the department makes an effort to accommodate the student's preference, the student agrees to accept the clinical assignment made by the department at any of the affiliated facilities, whether local or out of state.

#### Accreditation

The program is accredited by the Commission on Accreditation in Physical Therapy Education of the American Physical Therapy Association, 1111 North Fairfax Street, Alexandria, VA 22314; telephone, 703/706-3245.

#### CPR certification

Students are required to have current health care provider cardiopulmonary resuscitation (CPR) certification (adult, child, and infant) for all scheduled clinical experience. American Heart Association certification is recommended. Classes are available on campus

at Life Support Education, University Arts building, 24887 Taylor Street, Suite 102.

**Transportation**

Students are required to have their own transportation to and from clinical sites.

**Professional registration**

Satisfactory completion of the degree requirements and clinical affiliation qualifies the student to sit for the National Physical Therapy Assistant Licensing Examination. Licensure is not required in all states for the physical therapist assistant to practice. Information about licensure or registration in the state in which one wishes to practice can be obtained on the Web at <www.fspt.org/directory.cfm>.

**Professional association**

Students and graduates are eligible for affiliate membership in the American Physical Therapy Association. The objective of the association is to foster development and improvement of service and education. This organization grants student membership at a nominal cost to undergraduates of approved schools. The student is required to become a member of this association while in the program. The national office of the American Physical Therapy Association is at 1111 North Fairfax Street, Alexandria, VA 22314.

**The program objectives**

Upon completion of the program, graduates should be qualified to:

- demonstrate a basic level of knowledge and skills appropriate for the safe and effective practice as a physical therapist assistant.
- demonstrate Christian values, attitudes, and behaviors to themselves, to others, and to their profession.
- demonstrate ethical and legal accountability to themselves and their patients.
- commit to proactive, long-term involvement in professional and personal growth.
- participate as part of the resource personnel assisting the Seventh-day Adventist Church to achieve its global mission.

In addition, the physical therapist assistant faculty and staff have identified four core objectives that are being addressed in each class each quarter. The student will:

- demonstrate effective written, verbal, and nonverbal communication with instructors, classmates, and clinical personnel;
- demonstrate effective problem-solving skills;
- exhibit professionalism to instructors, classmates, and clinical personnel; and
- demonstrate ability to work effectively in a team setting.

**Admission**

Please note: Grades below C are not transferable for credit.

To be eligible for admission, a student must have completed the following prerequisites at a regionally accredited college or university and have a minimum G.P.A. of 2.5 both in science and in nonscience classes.

**PREREQUISITE**

Individuals who already have a bachelor's degree from a regionally accredited college or university need to complete only the prerequisites denoted with an asterisk (\*):

Four units of religion are required only if the applicant has attended a Seventh-day Adventist college or university

Select 4 units from one area: history, literature, philosophy, foreign language, art/music appreciation/ history

\*Human anatomy and physiology with laboratory, complete sequence

\*Introductory physics with laboratory, one quarter/semester

\*Two years high school mathematics with grades of C or above or intermediate algebra in college

\*General psychology

\*Human growth and development or developmental psychology or abnormal psychology

Freshman English composition, complete sequence

\*Speech

Personal health or nutrition or two physical activity courses

Electives to meet the minimum total requirements of 48 quarter units or 32 semester units

**Work/Observation experience**

Twenty hours in an inpatient physical therapy setting, plus an additional sixty hours in an inpatient or outpatient setting—for a total of eighty hours—are required

**PROGRAM OF INSTRUCTION**

**SOPHOMORE YEAR**

PTAS 201	Anatomy	(4)
PTAS 203	Applied Kinesiology	(4)
PTAS 205	Introduction to Physical Therapy	(1)
PTAS 206	Documentation Skills	(1)
PTAS 212	Physical Therapy Procedures	(3)
PTAS 224	General Medicine	(3)
PTAS 225	Neurology	(3)
PTAS 226	Orthopaedics I	(3)
PTAS 227	Therapeutic Exercise	(2)
PTAS 231	Physical Therapy Modalities	(3)
PTAS 236	Applied Electrotherapy	(3)
PTAS 238	Wound Care	(1)
PTAS 241	Applied Pediatrics	(2)
PTAS 243	Applied Geriatrics	(3)
PTAS 251	Orthopaedics II	(3)
PTAS 252	Applied Neurology	(3)
PTAS 261	Physical Therapy Practice	(1)
PTAS 264	Applied Prosthetics and Orthotics	(2)
PTAS 265	Professional Seminar	(1)
PTAS 275	Psychosocial Aspects of Health	(2)
PTAS 291	Physical Therapist Assistant Practicum	(1)
PTAS 293	Physical Therapist Assistant Affiliation I	(3)

PTAS 294	Physical Therapist Assistant Affiliation II	(3)
PTAS 295	Physical Therapist Assistant Affiliation III	(3)
AHCJ 305	HIV/AIDS and the Health Provider	(1)
RELE 456	Personal and Professional Ethics	(2)
RELR 475	Art of Integrative Care	(2)

A minimum grade of C (2.0) is required for all courses in the program.

## Physical Therapy—AH (M.P.T., D.P.T., D.P.T.Sc.)

CAROL J. APPLETON, Academic Coordinator of  
Clinical Education for Progression Master of  
Physical Therapy Program

JEANNINE STUART MENDES, Academic  
Coordinator of Clinical Education for Entry-  
Level Doctor of Physical Therapy Program

LAWRENCE E. CHINNOCK, Program Director for  
Progression Master of Physical Therapy Entry-  
Level Doctor of Physical Therapy

EVERETT B. LOHMAN III, Program Director for  
Postprofessional Master of Physical Therapy,  
Postprofessional Doctor of Physical Therapy,  
and Postprofessional Doctor of Physical Therapy  
Science

### FACULTY—

#### MASTER OF PHYSICAL THERAPY

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Lawrence E. Chinnock  
Mei Lee Chiu  
Gary A. Coleman  
Nicceta Davis  
Christine Eddow  
Intithar S. Elias  
Bonnie J. Forrester  
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Joseph Godges  
Ronald A. Hershey  
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Ardis E. Wazdatskey  
Melanie A. Westberg  
Lily L. Young  
Grenith J. Zimmerman

### ADVISORY COMMITTEE

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Dennis Canig  
Lawrence E. Chinnock  
Liane H. Hewitt  
Craig R. Jackson\*  
Wendy Lantz  
Lee Nattress  
Lyn Nattress  
Theresa O. DeLao

\*ex officio

### FACULTY—

#### ENTRY-LEVEL DOCTOR OF PHYSICAL THERAPY

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Bertha Carol-Poni  
Nicceta Davis  
Christine Eddow  
Bonnie J. Forrester  
Henry Garcia  
Robert F. Landel  
Everett B. Lohman III  
Bradford D. Martin  
Jeannine Stuart Mendes  
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Donna G. Thorpe  
Antonio Valenzuela  
William E. Walthall  
Ardis E. Wazdatskey  
Lily L. Young  
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### ADVISORY COMMITTEE—DOCTORAL

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Liane H. Hewitt  
Craig R. Jackson\*  
Wendy Lantz

Lee Nattress  
Lyn Nattress  
Theresa O. DeLao

\*ex officio

Beyond the Associate in Science degree, physical therapy options include pre-and postprofessional master's and doctoral degrees:

- Progression Master of Physical Therapy;
- Postprofessional Master of Physical Therapy;
- Entry-Level Doctor of Physical Therapy,
- Postprofessional Doctor of Physical Therapy; and
- Postprofessional Doctor of Physical Therapy Science.

Physical therapists evaluate and treat patients with disease, injury, or disabilities. In many states, registered physical therapists work as independent practitioners. The physical therapy techniques are applied to restore strength, flexibility, and coordination; to reduce pain; and generally to prepare the patient to function more effectively at work and in activities of daily living. Agents such as heat, light, electricity, water exercise, and massage are used. While working with patients, psychological and sociological principles are used to motivate and instruct.

Within the profession there are many specialties, including orthopaedics, neurology, pediatrics, geriatrics, cardiopulmonary, hand rehabilitation, and sports physical therapy. Physical therapists work in acute-care and convalescent hospitals, rehabilitation centers, children's centers, private practice, athletic training and sports-medicine programs, research institutions, school systems, and home-care agencies.

#### Professional association

Students and graduates are eligible for membership in the American Physical Therapy Association (APTA). The objective of the association is to foster development and improvement of service and education. This organization grants student membership at a nominal cost to students of approved schools. The student is required to become a member of this association while in the program and is encouraged to read the journal and attend the APTA-sponsored meetings.

#### Professional registration

Satisfactory completion of the progression M.P.T. or entry-level D.P.T. degree requirements and clinical affiliation qualifies the student to sit for all state licensure examinations. Information about the state registries of physical therapists can be obtained at the office of the department chair. All states require that a physical therapist pass the national qualifying examination for licensure to practice. California application form and fee are submitted to the Physical Therapy Board of California, 1418 Howe Avenue, Suite 16, Sacramento, CA 95825, <www.ptb.ca.gov>.

### PHYSICAL THERAPY— PROGRESSION M.P.T.

Progression Master of Physical Therapy (PMPT) Program is specifically for applicants with an associate degree who wish to advance to a master's degree.

Applicants must have graduated from an accredited PTA program and have a minimum of 2500 hours of work experience as a PTA. A minimum G.P.A. of 3.0 is required for prerequisite course work. Individuals who already have earned a bachelor's degree in any field need only complete the prerequisites denoted with two asterisks (\*\*). Admission criteria include: G.P.A., completion of prerequisites, interview, essay, recommendations, and work experience.

#### SPIRITUAL AND CULTURAL HERITAGE (20 quarter/14 semester units minimum)

##### Cultural Heritage

(12 quarter/8 semester units minimum)

Units in cultural heritage must be selected from at least two of the following content areas:

For students entering the program in June 2007, units must be selected from at least three of the following content areas:

Civilization/History

Fine arts

Literature

Modern language

Philosophy

Performing/Visual arts (not to exceed 2quarter units)

##### Spiritual Heritage

Required only if student is attending an Adventist college.

Four quarter credits of religion per year up to 8 quarter credits may apply towards the 20 credits needed in this section.

#### SCIENTIFIC INQUIRY AND ANALYSIS

##### Natural Sciences

Human anatomy and physiology with laboratory, complete sequence (preferred)

OR

General biology (complete sequence)

One additional biology course

Also—select one of the following two options:

Option 1: General chemistry with laboratory (complete sequence)

and

a minimum of 6 quarter units of any physics with laboratory

Option 2: General physics with laboratory (complete sequence)

and

a minimum of 2 academic terms of any sequenced chemistry with laboratory.

Statistics

One additional biology course

##### Social Sciences

(8 quarter/6 semester units, minimum)

Cultural diversity course

General psychology

Human growth and development

**COMMUNICATION**

Freshman composition, complete sequence (must meet transfer requirements to four-year college or university)

One course in basic communication skills (speech)

One basic computer course, which includes word processing and spreadsheets. (Applicant may document proficiency on Computer Literacy Form.)

**HEALTH AND WELLNESS**

Health education (personal)

or

Nutrition

Physical education (personal health or nutrition)

Two activity courses in physical education

**ELECTIVES**

To meet total requirements of 98 quarter units or 66 semester units

**Please note: Grades below C are not accepted for credit.**

**Accreditation**

The program is accredited by the Commission on Accreditation in Physical Therapy Education of the American Physical Therapy Association, 1111 North Fairfax Street, Alexandria, VA 22314; telephone 703/706-3245.

**Clinical experience**

Supervised experience is obtained in a variety of settings and at four different times during the program. In the Summer Quarter of the second year, students complete one three-week practicum. In the Winter Quarter of the second year, students complete one eight-week affiliation. In the final quarter of the program, students complete two eight-week affiliations. All clinical assignments will be made by the academic coordinator of clinical education or a designate. Because of the limited number of local facilities available, assignments cannot be made on the basis of the student's family/marital status or personal preference. Although the department makes an effort to accommodate the student's preference, the student agrees to accept the clinical assignments made by the department at any of the affiliated facilities, whether local or out of state.

**Admission requirements**

To be eligible for admission, the applicant must have a minimum G.P.A. of 3.0, 2500 hours of work experience as a physical therapist assistant, and a minimum of 98 quarter units at a regionally accredited college or university. Admission is a selective process. Criteria used include: G.P.A., completion of subject requirements, interview, essay, recommendations, and work experience. The minimum subject admission requirements in quarter units are listed below. Grades below C are not transferable for credit.

For students with a bachelor's degree prior to enrolling in the Progression Master of Physical Therapy Program, only the prerequisites denoted with an asterisk (\*) are required.

**PROGRAM OF INSTRUCTION****YEAR ONE**

PHTH 436	Kinesiology	(3)
PHTH 438	Manual Muscle Testing	(3)
PHTH 465	Exercise Physiology	(3)
PHTH 495, 496	Research I, II	(3, 2)
PHTH 502, 503	Neurology II, III	(3, 3)
PHTH 504	Pediatric Care I	(3)
PHTH 521-523	Orthopaedics I, II, III	(3, 3, 3)
PMPT 427	Human Life Sequence	(2)
PMPT 476	Therapeutic Exercise	(3)
PMPT 477	Locomotion Studies	(3)
AHCJ 311	Medical Terminology	(2)
AHCJ 328	Portfolio Practicum I	(1)
AHCJ 402, 403	Pathology I, II	(4, 3)
AHCJ 412	Anatomy	(9)
AHCJ 418, 419	Physiology I, II	(4, 3)
AHCJ 443, 444	Neuroanatomy I, II	(4, 2)
AHCJ 538	Histology	(2)
RELF 416	God and Human Suffering	(2)
RELF 440	World Religions	(3)

**YEAR TWO**

PHTH 413	Clinical Neurology	(2)
PHTH 501	Neurology I	(2)
PHTH 511	Clinical Orthopaedics	(2)
PHTH 512	Clinical Psychiatry	(2)
PHTH 515	Hand Rehabilitation for the Physical Therapist	(2)
PHTH 525, 526	General Medicine I, II	(3, 3)
PHTH 534	Soft-Tissue Techniques	(2)
PHTH 561	Physical Therapy Administration	(4)
PHTH 595-597	Applied Research I, II, III	(1, 2, 1)
PMPT 474	Physical Therapy Practicum	(1.5)
PMPT 524	Electrotherapy	(2)
PMPT 534	Physical Therapy Communication and Documentation	(2)
PMPT 535	Hydrotherapy and Massage	(2)
PMPT 583	Physical Therapy Affiliation I	(4)
PMPT 591	Advanced Orthopaedic Studies	(5)
PMPT 592	Advanced Neurologic Studies	(5)
PMPT 593	Advanced General Medicine Studies	(3)
AHCJ 305	HIV/AIDS and the Health Provider	(1)
AHCJ 404	Pharmacology	(1)
AHCJ 405	Dynamics of Learning and Teaching	(1)
AHCJ 421	Psychology of Physical Disability	(2)
AHCJ 426	Introduction to Computer Applications	(2)
AHCJ 498	Portfolio Practicum II	(1)
RELE 457	Christian Ethics and Health Care	(3)
RELF 406	Adventist Beliefs and Life	(2)
RELF 416	God and Human Suffering	(2)

**YEAR THREE**

PMPT 584, 585 Physical Therapy Affiliation II, III (4, 4)

PHYSICAL THERAPY—POST-PROFESSIONAL M.P.T.

**Admission**

To be eligible for admission, the applicant must have earned a bachelor's degree in physical therapy from an accredited program. There is no GRE requirement for acceptance into this program.

**TOEFL score**

A TOEFL score of 550 (213 if computer generated) is required for foreign students. All foreign transcripts, including high school, must be submitted to an approved evaluation service. The list of the four approved services can be obtained from the School of Allied Health Professions admissions office. Results of the evaluation are to be sent to this University directly from the evaluation center. Official foreign transcripts must be sent to the School of Allied Health Professions, directly from school to school, at the time of application.

**The program**

The Postprofessional Master of Physical Therapy Program is designed for individuals with a baccalaureate degree in physical therapy who wish to pursue advanced studies in their profession.

**Practice credentials**

To practice physical therapy in the United States, one must meet the criteria of the state in which s/he wishes to practice. Credentials are evaluated based on the applicable entry-level education. Postprofessional education cannot be used for this purpose.

**PROGRAM OF INSTRUCTION**

PHTH	529	Pathokinesiology of Gait	(3)
PHTH	531	Soft-Tissue Mobilization	(3)
PHTH	545	Orthopaedic Interventions: Mobilization of Peripheral Nerves and Diarthroidal Joints of the Extremities	(3)
PHTH	548	Function-Based Rehabilitation	(3)
PHTH	598	Advanced Specialty Tracks	(3)
AHCJ	505	Educational Psychology for Health Professionals	(3)
AHCJ	509	Teaching and Learning Styles	(3)
AHCJ	511	Biostatistics I	(3)
AHCJ	526	Computer Applications II	(3)
AHCJ	538	Histology	(3)
AHCJ	544	Advanced Functional Neuroanatomy	(3)
AHCJ	591	Research I	(3)
AHCJ	592	Research II	(3)
MFAM	558	Advanced Human Growth and Development	(3)
RELR	575	Art of Integrative Care	(3)

**PHYSICAL THERAPY—ENTRY-LEVEL D.P.T.****The program**

The Entry-Level Doctor of Physical Therapy Program (D.P.T.) is for individuals who have no previous degree in physical therapy. No bachelor's degree is required. The D.P.T. program is three years in length. A minimum G.P.A. of 3.0 is required for prerequisite course work. Individuals who already have an earned bachelor's degree in any field need only complete the prerequisites denoted with two asterisks (\*\*). Additional electives in the areas that have one asterisk (\*) are recommended.

**Accreditation**

The program is accredited by the Commission on Accreditation in Physical Therapy Education of the American Physical Therapy Association, 111 North Fairfax Street, Alexandria, VA 22314; telephone 703/706-3245.

**Clinical experience**

Supervised experience is obtained in a variety of settings and at different times during the program. First-year students complete one two-week practicum assignment during the Spring Quarter. Second-year students complete one three-week assignment during the Autumn Quarter. The major clinical assignments are during the third year. The student will be assigned one three-week clinical rotation and one ten-week affiliation during Summer Quarter, an eleven-week affiliation during Winter Quarter, and one ten-week affiliation during Spring Quarter. The final affiliation is ten weeks in length during Summer Quarter.

All clinical assignments will be made by the academic coordinator of clinical education or a designate. Because of the limited number of local facilities available, assignments cannot be made on the basis of the student's family/marital status or personal preference. Although the department makes an effort to accommodate the student's preference, the student agrees to accept the clinical assignments made by the department at any of the affiliated facilities, whether local or out of state.

**Admission requirements**

To be eligible for admission to the Entry-Level Doctor of Physical Therapy Program, the applicant must have a minimum G.P.A. of 3.0 and must have completed a minimum of 138 quarter units at a regionally accredited college or university. Admission is a selective process. Criteria used include: G.P.A., completion of subject requirements, interview, essay, recommendations, and work experience.

The minimum subject admission requirements in quarter units are listed below.

Grades below C are not transferable for credit.

**SPIRITUAL AND CULTURAL HERITAGE**  
(28 quarter/19 semester units, minimum)

**Spiritual Heritage**

Required only if student is attending an Adventist college. Four quarter credits of religion per year up to 12 quarter credits may apply towards the 28 credits needed in this section.

**Cultural Heritage**  
(16 quarter/11 semester credits minimum)

Credits must be selected from at least two of the following content areas and one course must be at the upper division level. For students entering the program in June 2007, credits must be selected from at least three of the following areas and one course must be at the upper division level:

- Civilization/history
- Fine arts
- Literature
- Modern language
- Philosophy

Performing/visual arts (not to exceed 2 quarter credits, not to exceed 4 quarter units in June 2007).

**SCIENTIFIC INQUIRY AND ANALYSIS**  
(53 quarter/35 semester units, minimum)

**Natural Sciences**

The study of natural sciences must include at least one upper-division course:

\*\*Human anatomy and physiology with laboratory, complete sequence (preferred)

or

\*\*General biology (complete sequence)

\*\*One additional biology course

\*\*Statistics

Also—select one of the following two options:

\*\*Option 1: General chemistry with laboratory (complete sequence)

and

a minimum of 6 quarter units of any physics with laboratory

\*\*Option 2: General physics with laboratory (complete sequence)

and

a minimum of 2 academic terms of any sequenced chemistry with laboratory.

**\*Social Sciences**  
(16 quarter /11 semester units, minimum)

**Required:**

The study of social sciences must include at least one upper-division course:

Cultural diversity course

\*\*General psychology

\*\*Human growth and development

**COMMUNICATION**  
(15 quarter/10 semester units, minimum)

Freshman composition, complete sequence .

\*\*One course in basic communication skills (speech)

\*\*One basic computer course which includes word processing and spreadsheets. (Applicants may document proficiency on Computer Literacy Form.)

**HEALTH AND WELLNESS**  
(3 quarter/2 semester units, minimum)

**Required:**

Health education (personal)

Physical education (two physical activity courses)

**ELECTIVES**

To meet total requirements of 138 quarter credits or 92 semester units. Students must have a minimum of 18 quarter or 12 semester units of upper-division course work. No more than 105 quarter/70 semester credits may be transferred from a community college.

**\*\*OBSERVATION EXPERIENCE**

**Required:**

80 observation hours; 20 must be in an inpatient setting.

Please note: Grades below C are not accepted for credit.

**PROGRAM OF INSTRUCTION**

**YEAR ONE**

PHTH 413	Clinical Neurology	(2)
PHTH 439	Human Life Sequence	(3)
PHTH 434	Physical Therapy Communication and Documentation	(2)
PHTH 435	Hydrotherapy and Massage	(3)
PHTH 436	Kinesiology	(3)
PHTH 437	Therapeutic Procedures	(3)
PHTH 438	Manual Muscle Testing	(3)
PHTH 465	Exercise Physiology	(3)
PHTH 471	Physical Therapy Practicum I	(1)
PHTH 477	Locomotion Studies	(3)
PHTH 484	Therapeutic Exercise	(4)
PHTH 495	Research I	(3)
AHCJ 305	HIV/AIDS for the Health Provider	(1)
AHCJ 311	Medical Terminology	(2)
AHCJ 328	Portfolio Practicum I	(1)
AHCJ 402, 403	Pathology I, II	(4, 3)
AHCJ 412	Anatomy	(9)
AHCJ 418, 419	Physiology I, II	(4, 3)
AHCJ 426	Introduction to Computer Applications	(2)
AHCJ 443, 444	Neuroanatomy I, II	(4, 2)
AHCJ 511, 512	Biostatistics I, II	(3, 3)
AHCJ 538	Histology	(2)
AHCJ 605	Critical Analysis of Scientific Literature	(2)
RELF 406	Adventist Beliefs and Life	(3)
RELF 440	World Religions	(2)

**YEAR TWO**

PHTH 501-503	Neurology I, II, III	(2, 3, 3)
PHTH 504	Pediatric Care I	(3)
PHTH 511	Clinical Orthopaedics	(2)
PHTH 512	Clinical Psychiatry	(2)
PHTH 515	Hand Rehabilitation for the Physical Therapist	(2)
PHTH 521-523	Orthopaedics I, II, III	(3, 3, 3)
PHTH 524	Electrotherapy	(3)

PHTH 525, 526	General Medicine I, II	(3, 3)
PHTH 534	Soft-Tissue Techniques	(2)
PHTH 561	Physical Therapy Administration	(4)
PHTH 572	Physical Therapy Practicum II	(1.5)
PHTH 581	Research Applications I	(2)
AHCJ 404	Pharmacology	(1)
AHCJ 405	Dynamics of Learning and Teaching	(1)
AHCJ 421	Psychology of Physical Disability	(2)
AHCJ 498	Portfolio Practicum II	(1)
AHCJ 505	Educational Psychology for Health Professionals	(3)
AHCJ 551	Professional Systems in Management I	(3)
AHCJ 601	Research-Proposal Writing	(3)
HPRO 508	Aspects of Health Promotion	(2)
RELE 457	Christian Ethics and Health Care	(3)
RELF 416	God and Human Suffering	(2)

**YEARS THREE, FOUR**

PHTH 473	Physical Therapy Practicum III	(1.5)
PHTH 582	Research Applications II	(3)
PHTH 583	Physical Therapy Affiliation I	(5)
PHTH 586-588	DPT Affiliation I, II, III	(5, 5, 5)
PHTH 591	Advanced Orthopaedic Studies	(6)
PHTH 592	Advanced Neurologic Studies	(6)
PHTH 594	Advanced General Medicine Studies	(4)

**PHYSICAL THERAPY—  
POSTPROFESSIONAL D.P.T.****Admission**

The Postprofessional Doctor of Physical Therapy Program is designed for the individual with a degree in physical therapy who wishes to pursue advanced studies in the profession. To be eligible for admission, the applicant must have earned a bachelor's degree in physical therapy from an accredited program, and must have earned a master's degree to begin the program. The applicant must have completed a full research project. Upon evaluation of transcripts, additional corequisites may be required, and sequencing of courses may be modified. There is no GRE requirement for acceptance into this program.

Since some courses are Web based, students admitted into the program must have access to a personal computer (minimum 300 MHz multimedia) with Internet access (minimum 56 kbs [v.90 standard]).

**PROGRAM OF INSTRUCTION**

PHTH 541	Advanced Clinical Practice I	(3)
PHTH 542	Advanced Clinical Practice II	(3)
PHTH 543	Advanced Clinical Practice III	(3)
PHTH 629	Lower-Quarter Biomechanical Relationships	(3)
AHCJ 507	Pharmacology in Rehabilitation	(3)
AHCJ 516	Clinical Imaging	(3)
AHCJ 518	Neurobiology	(3)
AHCJ 527	Medical Screening for Rehabilitation Professionals	(3)

AHCJ 551	Professional Systems in Management I	(3)
AHCJ 605	Critical Analysis of Scientific Literature	(3)
AHCJ 699	Directed Study	(3)
RELR 525	Health Care and the Dynamics of Christian Leadership	(3)
— —	Electives	(9)

**PHYSICAL THERAPY—  
POSTPROFESSIONAL D.P.T.SC.**

The Postprofessional Doctor of Physical Therapy Science Program is designed for the physical therapist who wishes to pursue advanced studies in the area of education and research. To be eligible for admission, the applicant must have completed 75 quarter units beyond the bachelor's degree and must have earned a Doctor of Physical Therapy degree. The applicant must have completed a full research project. Upon evaluation of transcripts, additional corequisites may be required, and sequencing of courses may be modified. There is no GRE requirement for acceptance into this program; however, successful completion of a comprehensive written examination is required.

Since some courses are Web based, students admitted into the program must have access to a personal computer (minimum: 300 MHz multimedia) with Internet access (minimum: 56 kbs [v.90 standard]).

**PROGRAM OF INSTRUCTION**

PHTH 535	Research and Statistics I	(3)
PHTH 536	Research and Statistics II	(3)
PHTH 537	Research and Statistics III	(3)
PHTH 538	Research and Statistics IV	(6)
AHCJ 506	Educational Evaluation and Clinical Assessment	(3)
AHCJ 515	Curriculum Development in Higher Education	(3)
AHCJ 534	Advanced Neurological Rehabilitation	(3)
AHCJ 535	Exercise and Thermoregulation	(3)
AHCJ 556	Administration in Higher Education	(3)
AHCJ 564	Group Process and Dynamics	(3)
AHCJ 569	Computers and Electronics for Clinicians	(3)
AHCJ 599	Directed Teaching	(3)
RELF 557	Theology of Human Suffering	(3)
— —	Electives	(3)

**Physician Assistant  
Sciences—AH  
(M.P.A.)**

KENRICK C. BOURNE, Program Director  
BENNY HAU, Medical Director  
ALLAN M. BEDASHI, Didactic Coordinator

YASMIN C. BRACHO, Assistant Clinical  
Coordinator  
GERALD A. GLAVAZ, Clinical Coordinator  
JULIE Y. LEE, Assistant Didactic Coordinator

#### FACULTY

Allan M. Bedashi  
Kenrick C. Bourne  
Yasmin C. Bracho  
Gerald A. Glavaz  
Benny Hau  
Julie Y. Lee

#### ADVISORY COMMITTEE

Lisa M. Beardsley  
Allan M. Bedashi  
Kenrick C. Bourne  
Lane Braver  
Mark Carr  
Shirani de Alwis-Chand  
Kent Chow  
Neal Dixon  
Gerald A. Glavaz  
Helen R. Greenwood  
Benny Hau  
Craig R. Jackson\*  
Cliff Reeves  
Gail T. Rice  
Richard Rouhe  
Robert L. Wilkins  
Grenith J. Zimmerman

\*ex officio

Physician assistants (PAs) are health professionals with a Master of Physician Assistant degree; they are licensed to practice medicine under physician supervision. Physician assistants are qualified by graduation from an accredited physician assistant educational program and by certification by the National Commission on Certification of Physician Assistants. Within the physician/PA relationship, the PA exercises autonomy in medical decision making and provides a broad range of diagnostic and therapeutic services. The clinical role of a PA includes primary and specialty care in medical and surgical settings in rural and urban areas. The PA's practice is centered on patient care and may also include educational, research, and administrative activities.

#### The program

Loma Linda University offers a professional course of study leading to the Master of Physician Assistant (M.P.A.) degree. The Physician Assistant Sciences Program degree prepares students for medical work as midlevel health care professionals.

The program consists of didactic and clinical phases that run concurrently for eight quarters over a twenty-three-month period. A new class is accepted annually. Students are selected from a variety of clinical backgrounds. Experience in patient care, duration of experience, level of patient contact, and degree of responsibility are considered in the evaluation of each applicant. Graduates from the program are eligible to write the national board examination.

#### Accreditation

The program is fully accredited by the Accreditation Review Commission on Education for the Physician Assistant, Inc. (ARC-PA).

#### Program objectives

Upon completion of the program, the graduate will be qualified to:

1. Obtain detailed and accurate patient histories.
2. Perform appropriate physical examinations.
3. Evaluate patients and make diagnoses.
4. Order, perform, and interpret diagnostic tests.
5. Order and perform selected therapeutic procedures.
6. Develop, implement, and monitor patient-management plans.
7. Present patient data in oral and written forms.
8. Provide continuity of patient care.
9. Assist in surgical procedures.
10. Perform life-saving procedures in emergency situations.
11. Counsel and instruct patients regarding issues of health care management, mental health, therapeutic regimens, normal growth and development, and family planning.
12. Refer patients to appropriate health/mental/ social service agencies in the community.
13. Write drug orders.
14. Conduct a medical literature search.
15. Conduct an investigation of a medical, health, or psychosocial topic; perform a statistical evaluation; and present data in appropriate oral and written formats.

#### Admission

College-level prerequisite courses include the following:

- Human anatomy and physiology with laboratory, complete sequence
  - Introductory chemistry with laboratory, complete sequence (inorganic, organic, and biochemistry);  
or  
one year of general chemistry with laboratory
  - Microbiology with laboratory
  - General psychology
  - General sociology  
or  
Cultural anthropology
  - College algebra
  - English, one year (freshman composition and literature)
1. Recommended—
    - Statistics, medical terminology, and computer literacy
  2. Preference given to—
    - Applicants with documented health care experience
    - Seventh-day Adventists
    - Graduates of Loma Linda University
    - Applicants from underrepresented populations
    - Applicants with documented community service linkages

3. An overall G.P.A. of at least 3.0 or higher and a science G.P.A. of 3.0 or higher on a 4.0 scale.
4. Applications must be submitted through CASPA.
5. Three letters of recommendation are required—one from a practicing M.D., D.O., or P.A.

Please note: Grades below C- are not accepted for credit.

#### How to apply

Applications are accepted between August 1 and January 15. Applications must be made through the Central Application Service for Physician Assistants (CASPA); this service is available at [www.caspaonline.org](http://www.caspaonline.org). Completed applications and all supporting documents must be received by the Physician Assistant Program *no later than January 15*. Required interviews are granted to qualified applicants upon invitation by the admissions committee.

Applicants must complete all prerequisite course work at an accredited college before being admitted to a program in the School of Allied Health Professions.

A minimum score of 550 (paper based) or 213 (computer based from the Tests of English as a foreign Language (TOEFL) must be submitted. Any student with a score on the TOEFL writing test (TWE) of less than 4 will be required to do remedial work during the program and retake the TOEFL test.

#### Housing

On-campus housing is available for men and women. For information on the men's dormitory (Daniell's Residence), call 909/558-4561. For information on the women's dormitory, (Lindsay Hall), call 909/558-4561.

#### Financial aid

Applications for financial aid should be submitted early, even before the student is admitted into the program. Processing of financial aid should be done by January 1. Applications for CAL Grants (California residents only) must be postmarked no later than March 2. These applications are available after December 25. The University's Student Financial Aid Office will help applicants obtain the necessary applications and guide them in the process of applying for aid. Applicants for aid must contact the Office of Financial Aid, Loma Linda University, Loma Linda, CA 92350 at 909/558-4509.

Completed applications and all supporting documents must be received by the Physician Assistant Program no later than January 15. Required interviews are granted by invitation of the Admissions Committee to qualified applicants.

#### Contact Information

Beverly Stocker  
909/558-7295  
[bstocker@sahp.llu.edu](mailto:bstocker@sahp.llu.edu)  
or visit the SAHP Website at [www.llu.edu/sahp/llu/pa](http://www.llu.edu/sahp/llu/pa)

#### PROGRAM OF INSTRUCTION

##### First Quarter (Autumn)

PAST 401	Anatomy and Physiology I	(3)
PAST 404	Biochemistry for PAs	(3)
PAST 406	Clinical Laboratory	(2)

PAST 509	Behavioral Science for PAs	(3)
PAST 521	Research I	(3)
AHCJ 519	Graduate Portfolio	(1)
RELE 505	Clinical Ethics	(3)

##### Second Quarter (Winter)

PAST 402	Anatomy and Physiology II	(3)
PAST 411	Pathology for PAs I	(3)
*PAST 421	Pharmacology for PAs	(3)
PAST 501	Clinical Medicine for PAs I	(5)
PAST 514	Physical Diagnosis I	(3)
PAST 522	Research II	(2)
AHCJ 519	Graduate Portfolio	(complete)

##### Third Quarter (Spring)

PAST 403	Anatomy and Physiology III	(3)
PAST 412	Pathology for PAs II	(3)
PAST 422	Pharmacology for PAs II	(3)
PAST 502	Clinical Medicine for PAs II	(4)
PAST 507	Preventive Medicine Concepts	(2)
PAST 515	Physical Diagnosis II	(3)

##### Fourth Quarter (Summer)

PAST 504	Primary Care Pediatrics	(2)
PAST 505	Women's Health Care	(2)
PAST 506	Clinical Skills for PAs	(4)
PAST ___	Clinical Rotations I	(4)
AHCJ 519	Graduate Portfolio	(complete)

##### Fifth Quarter (Autumn)

PAST 516	PA Professional Issues	(2)
PAST 517	Case Study Writing	(2)
PAST 523	Research III	(2)
PAST ___	Clinical Rotations II	(12)

##### Sixth Quarter (Winter)

PAST 516	PA Professional Issues	(in progress)
PAST 517	Case Study Writing	(complete)
PAST 523	Research III	(in progress)
PAST ___	Clinical Rotations III	(12)

##### Seventh Quarter (Spring)\*\*

PAST 516	PA Professional Issues	(complete)
PAST 523	Research III	(complete)
PAST ___	Clinical Rotations IV	(8)

##### Eighth Quarter (Summer)

PAST ___	Clinical Rotations V	(12)
Incomplete work		(complete)

\*One unit includes a physician-led practicum in diagnosis.

\*\*Research projects presented during this quarter.

## Physiology—SM (M.S., Ph.D.)

STEVEN M. YELLON, Program Coordinator

**FACULTY**

Charles A. Ducsay  
 Raymond D. Gilbert  
 David A. Hessinger  
 J. Mailen Kootsey  
 John Leonora  
 Lawrence D. Longo  
 William J. Pearce  
 Gordon G. Power  
 Robert W. Teel  
 Daisy De León  
 Marino De León  
 Ramon R. Gonzalez, Jr.  
 Raymond G. Hall, Jr.  
 George Maeda  
 William H. Fletcher  
 Lora M. Green  
 Michael A. Kirby  
 Subburaman Mohan  
 John J. Rossi  
 Philip J. Roos  
 Jiping Tang  
 John Zhang

The graduate program in physiology provides a Christian environment in which Ph.D. degree candidates may pursue curricula oriented to their specific interests. Individual attention is assured by maintenance of a small student/faculty ratio. Research opportunities are available in cell and molecular biology; cardiovascular, respiratory, neurobiology, reproductive, endocrine, bone, and neonatal physiology and cancer.

**PREREQUISITE**

Prerequisites for acceptance include results of the GRE General Test. Scores on the Test of English as a Foreign Language (TOEFL) are required from students whose native language is not English. Applicants should have a bachelor's degree, or equivalent from a foreign university, with a strong undergraduate preparation in the biological and physical sciences, including a full year each of general biology, general chemistry, organic chemistry, and physics. Other upper-division sciences and calculus are strongly recommended. Exceptions are considered by the faculty on an individual basis. The program reserves the right to decide on the equivalence of courses presented by the applicant.

Prerequisite to the Ph.D. degree in physiology is the equivalent of an undergraduate major in one field of science or mathematics and a minor in another; undergraduate courses should include zoology.

**Financial aid deadline**

Applications for admission requesting financial support should be completed by March 1.

**Admission**

Applicants with undergraduate degrees as specified above may be admitted to a program of study toward the Doctor of Philosophy or a master's degree.

**Master's credit toward a doctoral degree**

Applicants having completed a master's degree previously at another institution may receive up to 48 quarter units of academic credit toward the doctoral degree. The amount of credit eligible for transfer will depend on the courses taken during the master's

degree and must be approved by the program coordinator.

**PHYSIOLOGY—M.S.**

A minimum of 52 units is required for the M.S. degree, including the core requirements below, according to one of the two options described below.

**Research-emphasis track**

Under this plan, the student carries out research (10 units of PHSL 697) that culminates in a thesis or publishable paper (3 units of PHSL 698). The student must pass an oral examination given by his/her graduate guidance committee after the thesis or publishable paper has been completed.

**Course work-emphasis track**

Under this plan, the student fulfills the total unit requirement by taking an additional 13 units of physiology and/or statistics courses. The student takes a comprehensive written examination over the graduate course work, in lieu of preparing a thesis or publishable paper.

**Core requirements**

Students earning this degree will maintain a B (3.0) grade average. Core courses include the integrated biomedical graduate course IBGS 511, 512, 513 Cellular Mechanisms and Integrated Systems; and the cognate course IBGS 501, 502. Students will take 1 unit of IBGS 605 Integrative Biology Presentation Seminar for each year in residence. Additionally, they will enroll in IBGS 607 Biomedical Graduate Seminar each quarter; but these units will not be counted toward the fulfillment of the total unit requirement.

**PHYSIOLOGY—PH.D.**

For the Ph.D. degree, students must complete a minimum of 82 units, including those listed in the core requirements. Additionally, they must take IBGS 503 Biomedical Grant Writing. At least 10 units of advanced courses in physiology, as well as a course in statistics, must be included. The student will carry out research (20 units of PHSL 697) that culminates in a dissertation or several publishable papers (5 units of PHSL 699). Doctoral students are required to pass both written and oral comprehensive examinations in order to advance to candidacy. They must successfully defend the dissertation to their guidance committee before being awarded the Ph.D. degree.

**Core basic science courses**

IBGS 511, 512, 513	Cellular Mechanisms and Integrated Systems I, II, III	(30)
IBGS 501	Biomedical Communication and Integrity	(2)
IBGS 502	Biomedical Information and Statistics	(2)
IBGS 503	Biomedical Grant Writing	(2)
IBGS 605	Integrative Biology Presentation Seminar	(TBD)
IBGS 607	Integrative Biomedical Graduate Seminar	(TBD)

**Courses**

Courses are to be selected in consultation with the adviser.

## Preventive Care—PH (Dr.P.H.)

The Preventive Care Program is designed to prepare specialists in wellness and lifestyle intervention. Emphasis is placed on academic preparation, practical skills, and administrative abilities in developing, implementing, and evaluating programs and protocols designed to address a wide spectrum of health issues and, in particular, those dealing with chronic disease. These include health-risk appraisal, nutritional assessment and recommendations, exercise testing and prescription, and smoking and other substance-abuse counseling.

The program seeks to demonstrate and elucidate the intimate connection between mind and body. Graduates address the combined influences of nutrition, exercise, stress, substance abuse, and other lifestyle factors on the promotion of health and the prevention of disease. This program is offered by the Department of Health Promotion and Education.

### Learner outcomes

Upon completion of this program, the graduate should be able to:

1. Assess health status, health risk, and nutritional status of individuals.
2. Design and implement wellness and lifestyle intervention protocols addressing nutrition, exercise, stress, and other lifestyle and behavioral factors that are impacting health of individuals or populations.
3. Provide nicotine, alcohol, and other chemical dependency interventions.
4. Support comprehensive health management of individuals by providing the medical behavioral counseling in nutrition, exercise, stress, addictions, and other lifestyle and behavioral areas; and making appropriate referrals.
5. Contribute to the theory and practice of preventive care through research and evaluation in preventive care-clinical interventions.
6. Develop and conduct community and professional seminars and training programs in preventive care and lifestyle medicine.
7. Demonstrate leadership skills in collaboration with community health leaders and agencies for primary-level intervention programs.

### PREREQUISITE

Graduate degree or equivalent in an appropriate field  
Graduate Record Examination (GRE) or MCAT within the past seven years

General chemistry

Organic chemistry

Microbiology

Anatomy and/or physiology

General psychology

### COREQUISITE

ENVH 509	Principles of Environmental Health	(3)
EPDM 509	Principles of Epidemiology I	(3)
HADM 509	Principles of Administration in	

	Public Health	(3)
HPRO 509	Principles of Health Behavior	(3)
HPRO 536	Program Planning and Evaluation	(3)
NUTR 509	Public Health Nutrition (or other basic nutrition course; NUTR 510 recommended)	(3)
PHCJ 605	Philosophy of Public Health	(1)
STAT 509	General Statistics	(3)

### DEGREE REQUIREMENTS

Prior to completing 32 graduate units in the program, student must submit a proposed curriculum outline that includes the preventive care-specialty electives the student plans to pursue. This outline must be approved by the student's adviser prior to submission.

#### Biomedical sciences (38 units)

ANAT 518	Basic Human Histology	(4)
HPRO 501	Human Anatomy and Physiology I	(4)
HPRO 502	Human Anatomy and Physiology II	(4)
HPRO 503	Human Anatomy and Physiology III	(4)
HPRO 519	Pharmacology	(3)
HPRO 531	Pathology of Human Systems I	(3)
HPRO 532	Pathology of Human Systems II	(3)
NUTR 504	Nutritional Metabolism	(5)
NUTR 517	Advanced Nutrition I: Carbohydrates and Lipids	(4)
NUTR 518	Advanced Nutrition II: Proteins, Vitamins, and Minerals	(4)

#### General preventive care (39 units)

HPRO 515	Mind-Body Interaction and Health Outcomes	(3)
HPRO 526	Lifestyle Diseases and Risk Reduction	(3)
HPRO 527	Obesity and Disordered Eating	(3)
HPRO 553	Addiction Theory and Program Development	(3)
HPRO 573	Exercise Physiology I	(3)
HPRO 578	Exercise Physiology II	(3)
HPRO 584	Aging and Health	(3)
HPRO 586	Introduction to Preventive Care	(1)
HPRO 587	Preventive Care-Practice Management	(2)
HPRO 588	Health Behavior Theory and Research	(4)
HPRO 606	Preventive Care Seminar	(2, 2)
HPRO 529	Preventive and Therapeutic Interventions	(3)
<b>or</b>		
NUTR 545	Clinical Nutrition I	(3)
HPRO ___	Elective (chosen in consultation with adviser)	(4)

#### Research and evaluation (13 units)

PHCJ 534	Research Methods	(3)
PHCJ 604	Research Seminar	(2)
STAT 514	Intermediate Statistics for Health-Science Data	(3)
STAT 568	Data Analysis	(3)

STAT 548	Analytical Applications of SAS	(2)
or		
STAT 549	Analytical Applications of SPSS	(2)

**Preventive care specialty (12 units)**

An area of preventive care specialization is chosen in consultation with the student's adviser, taking into consideration the student's previous experience and present interests. These units may be selected from courses offered by the School of Public Health or by other schools within the University; and must reflect a specific preventive care-specialty emphasis, clinical practice focus, or additional statistical or data analysis that will be required by the student's dissertation research.

**Religion (3 units)**

REL_ 5__	Selective	(3)
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**Research/Dissertation (12 units)**

The dissertation research required by this program must be designed to address a practical problem or demonstrate the efficacy of an existing intervention in the area of wellness promotion or lifestyle modification. As a part of the dissertation, the student will be expected to produce at least one publishable paper describing the results of the research. Up to 4 units of the research/dissertation requirement may be met by registering for \_\_\_\_ 692 Research Consultation in the appropriate department.

While enrolled in HPRO 694 Research, the student will, in consultation with faculty advisers, prepare a literature review and develop the methodology of the dissertation project. Students who plan to use an existing database for their research project must take EPDM 512 Multivariate Modeling in Epidemiology as a part of their preventive care-specialty electives. Students may not register for any of the 6 units of HPRO 698 Dissertation until they have passed their comprehensive examinations, successfully defended their proposal, and been advanced to candidacy.

____ 692	Research Consultation	(1-4)
EPDM 512	Multivariate Modeling in Epidemiology	(X)
HPRO 694	Research	(6)
HPRO 698	Dissertation	(6)

**Internship (1400 clock hours)**

Upon completion of the internship experience, the student will present to the faculty of the department a portfolio documenting the achievements and skills in preventive care acquired during both the didactic and the internship phases of the degree program.

HPRO 704	Internship	(1400 clock hours)
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TOTAL UNITS 117

## Prosthodontics, Advanced —SD

(M.S., PD certificate)

CHARLES GOODACRE, Acting Program Director

### FACULTY

Mark Estey  
Charles Goodacre  
B. Dan Hall  
Mathew Kattadiyil  
Jose Torres

The School of Dentistry's advanced dental education Prosthodontics Program is designed to increase the knowledge base and clinical and laboratory skills of the resident in all areas of prosthodontics. In addition to conventional fixed and removable prosthodontics, this program offers considerable experience in implant prosthodontics and aesthetic dentistry, an introduction to maxillofacial prosthetics, and the diagnosis and treatment of patients with temporomandibular dysfunction. Comprehensive treatment-planning seminars with residents and faculty of other advanced dental education programs are designed to prepare the resident to interact with and coordinate the treatment of patients requiring advanced prosthodontic care.

The program begins in July and requires thirty-three months to complete the certificate.

After admission into the program, residents may apply for acceptance to Graduate School for a Master of Science degree in addition to the specialty certificate. The application must be supported by a letter of recommendation from the program director. Acceptance into the M.S. degree program will probably extend the length of study.

### Application deadline

Application for admission should reach the department by September 15 of the year prior to the summer of intended enrollment.

### Tuition

Tuition is \$8,300 per academic quarter and includes insurance and fees.

### DEPARTMENTAL REQUIRED COURSES

PROS 500	Prosthodontic Literature Review	(2)
PROS 501	Removable Partial Prosthodontic Literature Review	(2)
PROS 502	Complete Denture Prosthodontic Literature Review	(2)
PROS 505	Patient Presentation Seminar (Prosthodontic, Implant, Perio)	(1)
PROS 510	Clinical Practice in Prosthodontics	(1980 clock hours)
PROS 515	Practice Teaching	(1)
PROS 525	Dental Materials Science	(2)
PROS 527	Clinical Application of Dental Materials	(2)
PROS 546	Occlusion and Morphology	(2)
PROS 547	Occlusion: Principles and Instrumentation	(2)
PROS 555	Removable Partial Prosthodontics	(2)
PROS 556	TMJ Function and Dysfunction	(1)
PROS 557	Advanced Removable Partial Prosthodontics	(2)
PROS 565	Complete Denture Prosthodontics	(2)
PROS 566	Advanced Complete Denture Prosthodontics	(2)

PROS 575	Fixed Partial Prosthodontics	(2)
PROS 576	Advanced Fixed Partial Prosthodontics I (MC Esthetics)	(2)
PROS 595	Maxillofacial Prosthetics	(2)
PROS 604	Literature Review in Implant Dentistry for Prosthodontists	(2)
PROS 634	Diagnosis and Treatment Planning	(2)
PROS 637	Geriatric Dentistry	(1)
PROS 697A	Research	(1)
PROS 697B	Research	(1)
PROS 698	Thesis (M.S. degree only)	(2)

### INTERDISCIPLINARY REQUIRED COURSES

GRDN 514	Introduction to Biomedical Research	(4)
GRDN 535	Clinical Oral Pathology	(2)
GRDN 555	Temporomandibular Joint Function and Dysfunction	(1)
GRDN 601	Practice Management	(2)
GRDN 609	Professional Ethics	(2)
GRDN 622	Biomedical Science I	(4)
GRDN 623	Biomedical Science II	(4)
IMPD 533	Applied Radiology	(1.5)
IMPD 561	Bioengineering	(2)
IMPD 611	Introduction to Implant Dentistry	(2)
REL_ ___	Religion elective	(3)

## Psychology—ST

(M.A., Psy.D., Ph.D. in clinical psychology; Ph.D. in experimental psychology)

DAVID VERMEERSCH, Director of Clinical Training

### FACULTY

Hector Betancourt  
Kendal C. Boyd  
Todd Burley  
Mary Catherin (Kiti) Freier  
Ivanna K. Guthrie  
Paul Haerich  
Richard Hartman  
Louis Jenkins  
Jerry W. Lee  
Karen Lesniak  
Helen Marshak  
Kelly R. Morton  
Jason Owen  
Johnny Ramirez  
Susan Ropacki  
Janet Sonne  
David A. Vermeersch

### CALIFORNIA STATE UNIVERSITY SAN BERNARDINO FACULTY

As part of a consortial agreement between the Departments of Psychology at Loma Linda University (LLU) and California State University at San Bernardino (CSUSB), a select number of profes-

sors whose primary appointment is at CSUSB have adjunct appointments in psychology at Loma Linda University. These faculty members teach, mentor, and supervise students in research and clinical practice on a regular basis:

David V. Chavez  
Gloria Cowan  
Charles D. Hoffman  
Michael Lewin  
Faith McClure  
Frederick Newton  
Edward Teyber

The School of Science and Technology's Department of Psychology offers a combination of innovative training opportunities in clinical and experimental psychology. The Doctor of Psychology (Psy.D.) and the Doctor of Philosophy (Ph.D.) degrees are offered in the area of clinical psychology and are APA accredited. The Ph.D. and M.A. degrees also are offered with emphases in a number of experimental areas. Combined-degrees programs—Ph.D./M.P.H., Psy.D/M.P.H., and Psy.D./Dr.P.H.—are offered. Other combined-degrees programs—Ph.D./M.A. or Psy.D./M.A. degrees in biomedical and clinical ethics—are offered in coordination with the Faculty of Religion.

The Ph.D. degree in clinical psychology has been informed by the traditional scientist-practitioner model, which emphasizes training in research and clinical practice. The Psy.D. degree, influenced by the practitioner-scholar model, emphasizes training in clinical practice based on the understanding and application of scientific psychological principles and research. The Psy.D./Dr.P.H. combined-degrees program combines training in psychology and health sciences to prepare individuals who will be qualified in the application of psychology to health promotion, preventive medicine, and health care; as well as for clinical practice and research.

The M.A. and Ph.D. degrees in experimental psychology are designed to train a select number of individuals for research and academic careers in basic as well as applied psychology. Applications for the experimental Ph.D. degree are currently accepted in general experimental psychology (e.g., psychophysiology, perception, cognition and performance, and development); and applied social psychology (e.g., cross-cultural and health psychology). Additional areas will become available with the planned expansion of the faculty in coming years.

The specific objectives of the APA-accredited Ph.D. degree program in clinical psychology are to train its students to be scientist-practitioners which, according to the Loma Linda University Ph.D. clinical model, means that they will be given—

- a solid academic foundation,
- high-level training in the empirical methods of science so that they are capable of conducting independent and original research, and
- the skills to be highly competent clinicians from whom research and practice constantly inform each other.

Among the outcome measures used to determine the clinical Ph.D. program's success in achieving the above-mentioned objectives are the following:

1. Academic foundations course evaluations and the comprehensive examination.
2. Training in empirical methods of science—second-year project or master's degree thesis; a doctoral degree dissertation; presentations, publications, and grants; research and teaching assistantships; teaching positions in area colleges; and membership in scientific/professional organizations.
3. Clinical skills—ongoing clinical evaluations; the quality and type of internships obtained; and the final clinical proficiency examination.

The specific objectives of the APA-accredited Psy.D. degree program are to train students to be practitioner-scholars which, according to the Loma Linda University model, means training them with:

- a solid academic foundation,
- the highest level of clinical skills, and
- the ability to apply research relevant to clinical issues and cases.

Among the outcomes measures used to determine the Psy.D. degree program's success in achieving the above-mentioned objectives are the following:

1. Academic foundations course evaluations and the comprehensive examination.
2. Clinical skills ongoing clinical evaluations, the quality and type of internships obtained, and the final clinical proficiency examination.
3. Application of research the doctoral project; involvement in community-based program development, evaluation, and consultation; and membership in professional organizations.

The Psychology Program emphasizes research and practice based on the scientific principles and methods of psychology and related disciplines. This emphasis takes place within the context of an approach to human health and welfare, which is consistent with the institutional motto, "To Make Man Whole." A systematic attempt is made, through the wholeness component of the curriculum, to promote an understanding of human behavior in relation to the psychological, physical, spiritual, and social/cultural aspects of being human. In this way the Psychology Program provides, in addition to the traditional training, a positive environment for the study of cultural, social, and spiritual issues relevant to psychological research and practice in contemporary American society and around the world.

## General requirements

### Doctoral degrees

The following general requirements apply to all doctoral degrees in the Psychology Program. Note that the first three sections—foundations, methodology, and wholeness care—are referred to as the core curriculum.

## CORE CURRICULUM (31 units)

### Core curriculum I: Foundations of psychological science

PSYC 524	History, Systems, and Philosophy of Psychology	(2)
PSYC 544	Foundations of Learning and Behavior	(4)
PSYC 545	Cognitive Foundations	(4)
PSYC 551	Psychobiological Foundations	(4)
PSYC 552	Brain and Behavior	(4)
PSYC 564	Foundations of Social and Cultural Psychology	(4)
PSYC 574	Personality Theory and Research	(4)
PSYC 575	Foundations of Human Development	(4)

### Core curriculum II: Quantitative psychology/research methodology (13/15)

PSYC 501	Advanced Statistics I	(4)
PSYC 502	Advanced Statistics II	(4)
PSYC 504	Research Methods for Clinical Psychologists (Psy.D.)	(4)
PSYC 505	Research Methods in Psychological Science	(4)
PSYC 511	Psychometric Foundations	(3)

### Core curriculum III: Wholeness (19)

An integral part of the mission of Loma Linda University involves meeting the academic needs of students and professionals from different cultural and social realities around the world as well as here at home. The Psychology Program's wholeness curriculum reflects this commitment and is grounded in the University's educational philosophy and wholistic approach to human health and welfare. This approach emphasizes the importance of the physical, spiritual, and sociocultural dimensions of human existence in psychological research and practice. It implies, for instance, recognition of the importance of religion, culture, and the physical and social environment in the lives of those we pledge to serve. This aspect of the curriculum is intended to encourage tolerance for human diversity as well as a genuine interest in the understanding of psychological phenomena of all aspects of being human.

### Psychology of religion, one course selected from RELE, RELF, and RELR prefix (9)

RELT 526	Ethics and Legal Issues in Clinical Psychology	(3)
RELT 557	Theology of Human Suffering	(3)
RELF 615	Seminar in Philosophy of Religion	(3)
RELR 564	Religion, Marriage, and the Family	(3)
RELR 568	Care of the Dying and Bereaved	(3)
RELR 575	Art of Integrative Care	(3)
RELR 584	Culture, Psychology, and Religion	(3)
RELR 585	Psychology of Religion	(3)
PSYC 554	Health Psychology	(4)
PSYC 566	Cross-cultural Psychology	(2)
PSYC 567	Human Diversity	(3)

**Colloquia (3 units)**

The colloquia include lectures by distinguished speakers in the various areas of scientific and professional psychology. Students prepare a critical report based on each of the presentations attended. Enrollment is for 1 unit each year for three years.

PSYC 591A, B, C Colloquia (1, 1, 1)

**Comprehensive examination**

A written comprehensive examination must be taken after completing the core curriculum and minimum specialty area course work. This examination, which will normally occur after the second year of study, is intended to evaluate the candidate's general knowledge and understanding of the various areas of psychological science, as well as his/her ability to integrate and use such knowledge for the purposes of developing research and applications.

**Language requirement: None**

**PSYCHOLOGY—M.S.**

A master's degree in psychology is available to students as they proceed towards their doctoral degree. Separate application to and acceptance by the School of Science and Technology for the master's degree is required.

**Specialty curriculum: clinical**

The requirements of the clinical curriculum apply to all students enrolled in the Psy.D. program, the Psy.D./Dr.P.H. combined-degrees program, and the Ph.D. degree program with a clinical emphasis.

**Clinical psychology: General (16 units)**

PSYC 526	Ethics and Legal Issues in Clinical Psychology	(3)
PSYC 555	Psychopharmacology	(2)
PSYC 571	Adult Psychopathology	(4)
PSYC 572	Child Psychopathology	(2)
PSYC 686	Child, Partner, and Elder Abuse	(2)
PSYC 721	Practicum Preparation	(3)

**Psychological assessment (2 units)**

PSYC 512	Assessment I	(2)
PSYC 512L	Practice Laboratory	(1)
PSYC 513	Assessment II	(2)
PSYC 513L	Practice Laboratory	(1)
PSYC 514	Assessment III	(2)
PSYC 514L	Practice Laboratory	(1)

**Psychological treatment (12 units)**

PSYC 581	Behavioral and Cognitive Therapy	(3)
PSYC 581L	Practice Laboratory	(1)
PSYC 582	Psychodynamic Therapy	(2)
PSYC 582L	Practice Laboratory	(1)
PSYC 583	Humanistic/Phenomenological Approaches to Therapy	(2)
PSYC 583L	Practice Laboratory	(1)
PSYC 583L	Group Therapy	(3)

**Psychological treatment electives (6)**

PSYC 684, 685, 687, 688

**Practicums and internship (20 units)**

PSYC 782	Practicum I	(4)
PSYC 783	Practicum II	(4)
PSYC 784	Practicum III	(4)
PSYC 785	Practicum IV	(4)
PSYC 799, 799L	Internship (1000 to 2000 hours)	(4)

**Clinical proficiency examination**

This examination is taken toward the end of the internship and is intended to demonstrate the student's highest level of competency up to that time. This will include demonstrating skill in:

1. conceptualizing the presenting problem;
2. obtaining information regarding personal history, interpersonal functioning, and present status;
3. synthesizing psychodiagnostic data;
4. justifying diagnostic impressions;
5. applying relevant research to treatment planning;
6. formulating a comprehensive treatment plan;
7. engaging in effective intervention; and
8. evaluating treatment progress and outcome.

Professional, legal, and ethical issues are also covered in this examination.

**PSYCHOLOGY—PSY.D.****Admission**

Applicants must meet the requirements of the School of Science and Technology. In addition to the general test of the Graduate Record Examination (GRE), the psychology subject test is also required of all applicants.

**PREREQUISITE**

Undergraduate preparation should include successful completion of a course in history and systems of psychology; a course in biology (anatomy and physiology is recommended); a course in physics or chemistry; a course in anthropology or sociology; a course in statistics and one course in mathematics; two courses in learning, physiological psychology, cognition, or sensation and perception; two courses in developmental, personality, or social psychology. Students are required to demonstrate proficiency using a computer operating system and at least one of the packages for statistical analysis (e.g., SPSS). Students may take a course offered by the Department of Psychology in order to meet this requirement.

**CLINICAL EMPHASIS**

The course of study for the Doctor of Psychology (Psy.D.) degree includes a minimum of 168 units of academic credit. In addition to the general requirements and the clinical curriculum detailed above, the student will complete the requirements indicated below.

**Professional concentration (16)**

Psy.D. degree students will complete 16 units in an area of interest that reflects a professional concentration. This must include:

PSYC 681	Clinical Supervision: Concepts, Principles, and Functions	(2)
PSYC 683	Management, Consultation, and Professional Practice	(2)
PSYC 781	Second-Year Practicum	(2-8)

The remaining 10 units are chosen by the student.

### Doctoral research

A doctoral project is required of all students in the Psy.D. degree program. This project involves research generally of an applied nature, either qualitative or quantitative; and must be developed in consultation with the student's supervisory committee.

### Course requirements

In preparation for doctoral research, students must complete PSYC 504 Research Methods in Clinical Psychology, PSYC 506 Qualitative Methods in Clinical Psychology, and PSYC 507 Program Evaluation. In addition, students will complete PSYC 696 Psy.D. Research (proposal preparation) for a total of 8 units. Students will complete 4 units of PSYC 698 while working on the project.

### Proposal

A formal proposal must be submitted to and approved by a faculty supervisory committee.

### Defense

Upon completion of the doctoral project, a public defense before the supervisory committee is required.

### Advancement to candidacy

Students may apply for doctoral candidacy upon successful completion of—

- the core curriculum (Parts I, II, III),
- minimum specialty course work,
- the practicum (PSYC 782-787), and
- the comprehensive examination; and
- after acceptance of the doctoral project proposal and upon recommendation of the faculty.

## PSYCHOLOGY—PH.D.

### Admission

Applicants must meet the requirements of the School of Science and Technology. In addition to the general test of the Graduate Record Examination (GRE), the psychology subject test is also required of all applicants.

### Prerequisites

Undergraduate preparation should include successful completion of a course in history and systems of psychology; a course in biology (anatomy and physiology is recommended); a course in physics or chemistry; a course in anthropology or sociology; a course in statistics; a course in mathematics; two courses in learning, physiological psychology, cognition, or sensation and perception; two courses in developmental, personality, or social psychology. Students are required to demonstrate proficiency using a computer operating system and at least one of the packages for statistical analysis (e.g., SPSS). Students may take a course offered by the Department of Psychology in order to meet this requirement.

## CLINICAL EMPHASIS

The course of study for the Doctor of Philosophy degree with a clinical emphasis includes a minimum of 204 units of academic credit. In addition to the general requirements and the clinical curriculum detailed above, the student will complete the requirements that follow.

### Minor concentration (12)

Ph.D. degree students will complete 12 units in an area other than their major concentration relevant to psychological research and therapy. The area of concentration and the courses to be included must be approved by the department.

Examples of possible areas of minor concentration include, but are not limited to: health psychology (or related areas, such as preventive care or health promotion and education); psychology and religion; psychology and culture/ethnic diversity; psychology and biology; development; psychopharmacology; and neuropsychology.

### Doctoral dissertation

A doctoral dissertation is required of all students in the Ph.D. degree program in clinical psychology. This project should involve an original research contribution to the field and must be developed in consultation with the student's supervisory committee.

In preparation for the doctoral dissertation, students must complete PSYC 503 Advanced Multivariate Statistics and 12 units of PSYC 595 Directed Research as a second-year project or thesis. These units normally will be completed by the beginning of the third year of study.

### Advancement to candidacy

Students may apply for doctoral candidacy upon

- completion of the core curriculum (Parts I, II, III);
- completion of minimum specialty course work;
- completion of the practicum (PSYC 782-785);
- successful completion of comprehensive examination;
- acceptance of the doctoral project proposal; and
- recommendation of the faculty.

### Course requirements

In preparation for the dissertation, candidates must complete at least 26 units of doctoral research, PSYC 697; and 4 units of PSYC 699.

### Qualifying examination

Students must complete a qualifying examination prior to advancing to doctoral candidacy. This examination will be a comprehensive written examination (see the department's *Academic Policy Handbook* for details) and a defense of the dissertation proposal.

### Defense

Upon completion of the doctoral dissertation, a public defense before the supervisory committee is required.

## EXPERIMENTAL EMPHASIS

The course of study for the Doctor of Philosophy degree with an experimental emphasis includes a minimum of 122 units of academic credit. These units are distributed across a core curriculum (56 units),

advanced topical seminars and electives (20 units), and research (46 units). The student will complete these units and the other requirements that follow.

**CORE CURRICULUM COURSES (56)**

**A. Foundations of psychological science (24)**

PSYC 524 History, Systems, and Philosophy of Psychology (2)

**Three courses selected from:**

PSYC 544 Foundations of Learning and Behavior (4)

PSYC 545 Cognitive Foundations (4)

PSYC 546 Sensation and Perception (4)

PSYC 551 Psychobiological Foundations and Laboratory (4)

PSYC 552 Brain and Behavior (4)

**B. Quantitative psychology and research methods (16)**

PSYC 501 Advanced Statistics I (4)

PSYC 502 Advanced Statistics II (4)

PSYC 503 Advanced Multivariate Statistics (4)

PSYC 505 Research (4)

**C. Diversity, ethics, wholeness (8)**

\_\_\_\_\_ Ethics for scientists (3)

PSYC 566 Cross-cultural Psychology (2)

**Remaining course to be selected from**

3-unit RELR courses

Other graduate-level religion courses may be substituted as approved by the Academic Affairs Committee.

**D. Teaching of psychology (8)**

PSYC 541 Seminar in the Teaching of Psychology I (2)

PSYC 541L Internship for Teaching of Psychology I (1)

PSYC 542 Seminar in the Teaching of Psychology II (2)

PSYC 542L Internship for the Teaching of Psychology II (1)

PSYC 543 Advanced Seminar in the Teaching of Psychology (2)

Remaining course to be selected in consultation with the adviser.

**ADVANCED TOPICAL SEMINARS AND ELECTIVES (20)**

**A. Concentration courses/seminars in the area of specialization (6 units minimum)**

**B. Topical seminars and colloquia (6 units minimum)**

**RESEARCH (46)**

**A. Supervised research experience (3)**

PSYC 597 Supervised Research (repeated registration to reach total) (8)

**B. Master's thesis (13)**

PSYC 595 Directed Research (repeated registration to reach total) (12)

PSYC 598 Master's Thesis (1)

**C. Doctoral dissertation (30)**

PSYC 697 Doctoral Research (repeated registration to reach total) (26)

PSYC 669 Doctoral Dissertation (4)

**Supervised research experience**

Students will register for one unit of PSYC 597 Supervised Research each year for a total of three years. In addition to their own research, students are expected to become part of and actively contribute to an ongoing laboratory or other research program conducted by department faculty.

**Master's thesis and doctoral dissertation**

A master's degree thesis is required of all students in the Ph.D. degree program. Students must complete a minimum of 12 units of PSYC 595 Directed Research and 1 unit of PSYC 598 Master's Thesis while working on a project. Students may apply to the Master of Arts degree program in the department to receive a degree for this work.

A doctoral dissertation is required of all students in the Ph.D. degree program. This project should involve an original research contribution to the field and should be developed in consultation with the student's supervisory committee.

While working on the dissertation, candidates must complete at least 26 units of doctoral research (PSYC 697) and 4 units of PSYC 699.

Beginning the quarter following the completion of PSYC 505 Research Methods in Psychological Science, all students are expected to enroll in a minimum of 2 units of research (PSYC 595 or PSYC 697) each quarter until completion of the thesis and dissertation.

**Qualifying examination**

Students are expected to take a qualifying examination by the end of their third year of study. This examination consists of a comprehensive written portion and, approximately one week later, an oral defense. The topics covered in the examination will reflect the student's chosen area of concentration selected by the student in consultation with the supervisory committee.

**Defense**

Upon completion of the doctoral dissertation, a public defense before the supervisory committee is required.

**Advancement to candidacy**

Students may apply for doctoral candidacy upon—

1. completion of the core curriculum,
2. successful completion of the comprehensive examination,
3. acceptance of the doctoral dissertation proposal, and
4. recommendation of the faculty.

**Psy.D. project**

All Doctor of Psychology degree students must register for at least 1 unit of project credit. This should

be done in the last quarter of registration prior to completion.

The research and project preparation are under the direction of the student's guidance committee. The student is urged to secure the committee's approval of the topic and research design as early as possible. Such approval must be secured before petition is made for advancement to candidacy.

## Public Administration—ST (D.P.A.)

BEVERLY J. BUCKLES, Program Coordinator

The mission of the program leading to the Doctor of Public Administration degree is congruent with the University motto "To Make Man Whole." Thus, the program encourages in its students the integrated development of the intellectual, physical, social, and spiritual dimensions. Additionally, the program emphasizes the importance of the rights and responsibilities of citizenship and public conscience in the educated person. Students are provided with an advanced curriculum in management, social science, social policy, social ethics, and social research that emphasizes quality of life and the enhancement of human potential through the design and delivery of effective social-service systems and programs. The program is designed to impart to students fundamental theoretical and methodological knowledge and professional skills that will prepare them for advanced management and administrative roles in national and international health and human services, policy analysis and implementation, research, and education.

### The program

The doctoral program in public administration emphasizes the development of scholar-practitioners, administrator-thinkers, guided by the moral foundations and the values and ethics of scientific inquiry and competent administrative practice. The program also:

- Instills in its students a high priority for public philosophy, management know-how, and communications skills that demonstrate respect and appreciation for the needs of diverse at-risk populations, and promote social and economic justice.
- Fosters in its graduates a commitment to apply their intellectual achievements and professional skills to improve the human condition through public institutions and voluntary programs.
- Requires students to demonstrate advanced knowledge of public administration and social science theory, social ethics, and social policy.
- Requires students to demonstrate an understanding of social research methods, statistics, information technology, decision science, and communication.
- Emphasizes the acquisition of applied management and administration skills.
- Promotes student and faculty involvement in social-policy issues at local, regional, national, and international levels.

### Admissions requirements

Students who apply for admission to the program are governed by the policies and procedures established by the School of Science and Technology. Admission requirements to the doctoral program include:

- Master's degree from an accredited institution of higher education, with significant work experience in health and human services, community development and planning, or a related field. Examples would include the master's degree in social work (M.S.W.), nursing (M.S.), business (M.B.A.), public health (M.P.H.), education (M.Ed.), public administration (M.P.A.), and the ministry (M.Div.).
- Evidence of adequate academic preparation in graduate education.
- Strong intellectual abilities.
- Commitment to advancing knowledge and techniques related to public administration.
- Professional experience and achievement that demonstrates competence, organization, leadership, and motivation to complete doctoral education in a timely manner.
- Personal interview.
- Satisfactory performance on the GRE (Graduate Record Examination).
- Curriculum vita.
- Application deadline: Open admissions

### Program of study

The program is structured around three primary requirements: course work, comprehensive examinations, and the doctoral project. The D.P.A. degree requires a minimum of 92 units beyond a master's degree. Three years of full-time work or five years for the part-time option is required to complete the degree.

### Advisement and the doctoral guidance committee

Shortly after admission, doctoral students are assigned an adviser in their area of interest. During the first year of study, the student, the adviser, and the chair of the doctoral program committee consult on a program of study that satisfies the interests and needs of the student and the requirements of the program. The adviser is responsible for guiding the student in completing course work requirements and in adequate preparation for the comprehensive examinations. Generally, the student works most closely with the committee chair and one or two significant faculty mentors on the committee. The others act as additional readers of the doctoral project and participants in the doctoral project presentation.

### Administration

The doctoral program is governed by the School of Science and Technology's Department of Social Work and Social Ecology's Doctoral Program Committee, which meets regularly to admit students to the program, review and plan curriculum, set academic stan-

dards and policies, monitor the progress of students, and plan the future course of the program.

## CORE CURRICULUM

### Social science theory (16 units)

Predominantly follows requirements of Ph.D. in social policy and social research.

SPOL 614	Social Science Concepts and Theories	(4)
SPOL 614	Social Science Concepts and Theories	(4)
SPOL 615	Economic Theory and Social Policy	(4)
SPOL 624	Nature/Society Thought and Social Policy	(4)
SPOL 585	Sociology of Communities	(4)

### Philosophy and ethics (12 units)

Follows requirements of Ph.D. in social policy and social research.

RELT 557	Theology of Human Suffering (or an approved RELT course selected in consultation with the graduate adviser)	(4)
RELE 588	Philosophical Ethics (or an approved RELE course selected in consultation with the graduate adviser)	(4)
RELR 528	Christian Citizenship and Leadership (or an approved RELR course selected in consultation with the graduate adviser)	(4)

### Public administration and policy (40 units)

PUAD 665	Information Technology and Decision Science	(4)
PUAD 668	Philosophy and Theory of Public Interest	(4)
SOWK 683	Advanced Policy Analysis	(3)
PUAD 671	Organizational Behavior	(4)
PUAD 673	Public Administration Management	(3)
PUAD 682	Administrative Law	(3)
PUAD 677	Program Planning, Implementation, and Evaluation	(4)
SOWK 676A	Human Resources Planning and Development	(3)
SOWK 676B	Human Resources Planning and Development	(3)
PUAD 674	Philanthropy and Development Management	(3)
PUAD 675	Public Financial Management and Budgeting	(3)
PUAD 669	Intergovernmental and Public Relations	(3)

### Research methods and statistics (18 units)

SPOL 654	Qualitative Research Methods	(4)
or		
SPOL 655	Quantitative Research Methods	(4)

### One graduate course in advanced statistics (4)

(selected in consultation with the graduate adviser)

SPOL 671	Research Orientation Seminar Series I	(2)
SPOL 672	Research Orientation Seminar Series II	(2)
SPOL 673	Research Orientation Seminar Series III	(2)
PUAD 698	Doctoral Project	(4)

### Selective courses (6 units)

SPOL 664	Applied Research for Social Policy	(2)
SOWK 674	Fiscal and Information Management	(2-3)
SOWK 680	Children and Families Policies and Services	(2)
SOWK 681	Health and Mental Health Policies and services	(2)
SOWK 684	Advanced Policy Project	(2-3)
SOWK 685	International Environment of Social Welfare	(2)
PUAD 670	Seminar in Personnel Mediation and Conflict Resolution	(2)
PUAD 676	Cost-Benefit Analysis	(2)
STAT 515	Grant and Contract Proposal Writing	(2)
INTH 519	Disaster Management	(3)
INTH 526	Population Dynamics	(2)
INTH 547	Refugee Health	(3)
ENVH 557	Geographical Techniques and Environmental Analysis	(3)
RELR 525	Health Care and the Dynamics of Christian Leadership	(3)
RELR 556	Seventh-day Adventist Polity	(3)
RELR 559	Church Leadership and Administration	(3)

TOTAL UNITS 92 units

### Candidacy

The D.P.A. degree student must successfully complete comprehensive written examinations in each of the following areas:

- Public administration and organizational theory
- Public philosophy and ethics
- Research and information analysis
- Examination in area of student's concentration (e.g., human resources management)

### DOCTORAL PROJECT

The doctoral project, for which the public administration student will receive 4 credits, will focus on synthesis and presentation of material developed throughout the entire degree.

To do this, a rigorous analysis and critique of case studies from the student's chosen field will be used. Emphasis will be on the presentation of a professional portfolio focusing on the future of the public service (public and/or nonprofit sectors) field. The portfolio is an exhibit of selected evidence demonstrating that the student has achieved competencies in administration and organization theory, public philosophy, ethics, research, information analysis, and a selected area of administrative specialization (i.e., human relations management).

The doctoral project is a study of an aspect, site, issue, or other element of professional public administration practice. The project portfolio will be designed to present an innovative contribution to the practice of public administration. The parameters of the project are intentionally left wide, allowing the project to be produced as a conventional text portfolio or text in conjunction with another media.

## Public Health Practice—PH (M.P.H.)

The Public Health Practice Program is designed to meet the needs of practicing health professionals who desire to augment their current careers with additional information and skills. Such individuals would include physicians, dentists, nurses, health administrators, and practicing public health professionals. It is not designed for students entering graduate school directly from an undergraduate degree program; nor will it serve as a foundation for a major career change.

### Learner outcomes

Upon completion of this degree, the graduate should be able to:

1. Use public health statistics to correctly interpret data.
2. Evaluate reported studies in terms of rigor, importance, and relevance to professional practice.
3. Apply epidemiological methods to the practice of public health.
4. Incorporate effective management approaches into public health settings.
5. Contribute to health behavior change in various populations.
6. Address environmental health issues in community, agency, and governmental settings.
7. Describe the relevance of assessment, policy development, and quality assurance to public health.
8. Characterize essential public health services and competencies.

### PREREQUISITE

Professional license in a medical or health-related discipline, or a minimum of two years of public health experience

Anatomy and/or Physiology

Introduction to psychology

College algebra

### DEGREE REQUIREMENTS

<b>Public health core courses</b>	<b>(20 units)</b>
ENVH 509 Principles of Environmental Health	(3)
EPDM 509 Principles of Epidemiology I	(3)
HADM 509 Principles of Administration in Public Health	(3)
HPRO 509 Principles of Health Behavior	(3)
REL_ 5__ Religion (RELE 534 recommended)	(3)
PHCJ 605 Philosophy of Public Health	(1)
STAT 509 General Statistics	(4)
<b>Public health practice core</b>	<b>(6 units)</b>
GLBH 517 Cultural Issues in Health Care	(3)
NUTR 509 Public Health Nutrition	(3)
<b>Generalist electives</b>	<b>(27 units)</b>

### Field experience

PHCJ 695 Community Practicum (3)

TOTAL UNITS 56

### Culminating activity

Successful completion of comprehensive examinations is required. The culminating activity shall include a written comprehensive examination (prior to the field experience), field experience (upon completion essential major course work), professional portfolio (upon completion of the field experience), and an exit interview with the department chair (at the conclusion of the program).

## Radiation Sciences—AH (B.S.)

MARK J. CLEMENTS, Program Coordinator

### FACULTY

Laura L. Alipoon  
 Kelly Burk  
 Mark J. Clements  
 Noha S. Daher  
 Carol A. Davis  
 Marie M. DeLange  
 Erma Ezpeleta  
 Brenda S. Holden  
 Barbara Holshouser  
 Norice R. Kisinger  
 Arthur W. Kroetz  
 Steven L. Leber  
 Terese R. Pfeiffer  
 Glenn A. Rouse  
 Andrew L. Sheppard  
 Renee N. S. Mercado

For radiologic technologists educationally prepared beyond the level of the Associate in Science degree, there are numerous career options. Radiology departments in large hospitals offer career opportunities in management, supervision, and research. Excellent opportunities also exist for those who are qualified to teach radiologic technology. In addition, commercial enterprises and state governments continually need technologists with advanced training to serve as customer representatives, technical consultants, and health physicists.

### The program

The Bachelor of Science degree program, which begins at the level of the junior year, emphasizes the more advanced areas in radiologic technology and is designed to prepare graduates for careers in administration, clinical specialties, teaching, or health physics.

Students choosing to study on a part-time basis must complete the junior and senior years within a four-year period.

### Accreditation

Loma Linda University is regionally accredited by the Western Association of Schools and Colleges (WASC), 985 Atlantic Avenue, Suite 100, Alameda, CA

94501; telephone, 510/748-9001; FAX, 510/748-9797; <www.wascweb.org> or <wascsr@wascsr.org>.

### CPR certification

Students are required to have current health care provider cardiopulmonary resuscitation (CPR) certification (adult, child, and infant) for all scheduled clinical experience. American Heart Association certification is recommended. Classes are available on campus at Life Support Education, University Arts building, 24887 Taylor Street, Suite 102.

### The program objectives

Upon completion of the program, the graduate should be qualified to:

1. Demonstrate leadership skills through advanced and multilevel thinking in the areas of administration and education, science, and clinical practice.
2. Develop and refine critical thinking skills to enhance his/her ability to analyze and develop the most effective means of care for patients, to manage a department, or to educate students.
3. Behave in a professional manner in all interactions, including communicating appropriately with patients, colleagues, and others with whom s/he comes in contact.
4. Demonstrate teamwork in the clinical setting and other situations where this concept leads to completion of goals that an individual could not easily meet alone.
5. Continue to improve knowledge and skills by participating in educational and professional activities, sharing knowledge with colleagues, and investigating new and innovative aspects of professional practice.
6. Support the profession's code of ethics and comply with the profession's scope of practice.
7. Utilize Loma Linda University's program as a linkage to other programs and disciplines, as desired.

### Admission

To be eligible for admission, the applicant must be a graduate of an approved associate degree program (or the equivalent) in radiologic technology, radiation therapy, nuclear medicine, or diagnostic ultrasound. A maximum of 70 semester or 105 quarter units from an accredited junior college will be accepted as transfer credit, including units for clinical education. Students who have completed a hospital training program are allowed 55 quarter units of academic credit on the basis of their registry certificate.

### Certification

The applicant must have certification from The American Registry of Radiologic Technologists (ARRT) or equivalent specialty certification. Applicants who are eligible to take the ARRT examination for certification but who have not had opportunity to do so are given provisional status for one quarter. Eligibility to continue is subject to student's obtaining certification. It should be understood that the University will not sign or validate registry documents of students who obtained their training in another program.

### THE PROGRAM

The student in the baccalaureate degree program completes:

- the general studies requirements;
- the radiation technology core requirements;
- and an area of emphasis (administration and education, clinical practice, or science).

Electives to meet the needs of the individual student are selected from existing courses after consultation with the program director.

### PREREQUISITE/COREQUISITE

20 units minimum in humanities (choose minimum of two areas from: history, literature, philosophy, foreign language, art/music appreciation/history)

Included in this minimum, 4 units of religion per year of attendance at a Seventh-day Adventist college or university

Human anatomy and physiology with laboratory, one semester/quarter minimum; or general biology with laboratory, complete sequence

Additional natural science units from: chemistry, geology, mathematics, physics, and statistics

Must have a total of 12 quarter hours, including up to 6 units from anatomy and physiology

Two years high school mathematics with grades of C or above, or intermediate algebra in college

Cultural anthropology or an approved course dealing with cultural diversity

Select 8 quarter units from: economics, geography, political science, psychology, sociology, or anthropology

English composition, complete sequence

Personal health or nutrition

Two physical activity courses

Electives to meet the minimum total requirements of 42 quarter units

### PROGRAM OF INSTRUCTION

#### Core courses and religion studies (33 units)

RTCH 385	Current Issues in Radiation Sciences I	(2)
RTCH 464	Moral Leadership	(2)
RTCH 471	Applied Research Methods	(1)
RTCH 485	Current Issues in Radiation Sciences II	(2)
RTCH 494	Senior Project	(2-3)
RTMR 451	Management of a Radiologic Service	(3)
AHCJ 305	HIV/AIDS and the Health Provider	(1)
AHCJ 308	Professional Communications	(1-2)
AHCJ 328	Portfolio Practicum I	(1)
AHCJ 351	Statistics for the Health Professions	(3)
AHCJ 461	Research Methods	(2)
AHCJ 465	Seminars in Leadership	(2)
AHCJ 498	Portfolio Practicum II	(1)
REL_ ___	Religion electives	(8)

#### Area of emphasis

##### A. Administration and education (10 units)

RTCH 411-412	Student-Teaching Practicum I, II	(2, 2)*
RTCH 413-414	Radiologic Management	

	Practicum I, II	(2, 2)*
RTCH 475	Curriculum Development in Health Sciences	(2)
RTMR 454	Quality Management in Radiation Sciences	(2)
RSTH 471	Instructional Techniques I	(2)

A minimum grade of C (2.0) is required for all classes.

\*Total of 4 units to be chosen from RTCH 411, 412, 413, 414.

### B. Clinical practice (18-41 units)

A six-to-twenty-four month, full-time internship in a second clinical specialty selected from the following areas:

CLINICAL SPECIALTY	UNITS EARNED TOWARD B.S. DEGREE
Medical sonography	38 units
Echocardiography	18 units
Nuclear medicine technology	18 units
Special imaging technology	18 units
Radiation therapy technology	26-41 units

Acceptance into these specialties is separate from acceptance into the baccalaureate program. For more detailed information about admission requirements and the program of instruction, request an outline of the certificate programs in these specialties.

### C. Science (12-15 units)

Selected from the natural sciences in the areas of: biology, anatomy, physiology, medical terminology, and physics.

## Radiation Therapy Technology—AH (B.S., certificate)

MARK J. CLEMENTS, B.S. Program Coordinator

CAROL DAVIS, Clinical Program Director,  
Certificate

Radiation therapy is a multifaceted career that combines working in a highly technical environment with the opportunity to work closely with patients and members of many other professions to provide a high standard of clinical care. Radiation therapy is the therapeutic application of ionizing radiation to malignant and benign conditions. The therapist is responsible for delivering the treatment, which is prescribed by a radiation oncologist; maintaining accurate treatment records; and implementing quality-assurance plans. A radiation therapist must be detail oriented; able to work accurately under pressure; and, most important, able to interact empathically with patients. Individuals who show initiative and are capable of critical thinking and problem solv-

ing make good radiation therapists. The job demand in this well-paying field is currently high.

## RADIATION THERAPY TECHNOLOGY— B.S.

### Program description

This B.S. degree program is designed to accommodate both x-ray technologists and professionals who are currently licensed and working in the field of radiation therapy.

Track A is for ARRT-registered radiologic technologists, registered nurses, or graduates from another accredited allied health program who have fulfilled the prerequisites and who wish to be educated as radiation therapists. It is designed as a full-time, twenty-four month degree course and will fully prepare students to pass the national board examinations at the end of the program.

Track B is designed for radiation therapists who are ARRT registered in radiation therapy and who wish to obtain a baccalaureate degree. It is a twenty-four-month program that is didactic in nature and helps prepare the therapist for duties in the areas of teaching or administration.

Courses will be a combination of Web-based learning and traditional learning; some classes, therefore, may not meet weekly.

### Professional registration and certification

Upon completion of the certificate requirements, the student is eligible to write the qualifying examination for radiation therapy technology of The American Registry of Radiologic Technologists (ARRT).

### Admission

20 units minimum in humanities (choose a minimum of two areas from: history, literature, philosophy, foreign language, art/music appreciation/history)

Included in this minimum, 4 units of religion per year of attendance at a Seventh-day Adventist college or university

Human anatomy and physiology with laboratory, complete sequence or general biology with laboratory, complete sequence

Select additional natural science units from: chemistry, geology, mathematics, physics, and statistics; must have a minimum total of 12 quarter hours, including up to 6 units from anatomy and physiology

Intermediate college algebra

Cultural anthropology or an approved course dealing with cultural diversity

Select 8 quarter units from: economics, geography, political science, psychology, and sociology

English composition, complete sequence

Computers

Personal health or nutrition

Two physical activity courses

Electives to meet the minimum total requirements of 96 quarter units

For total unit requirements for graduation, see **Division of General Studies, LLU GENERAL EDUCATION REQUIREMENTS (Section V)**.

#### Degree requirements

The student in the baccalaureate program completes:

- the General Education requirements;
- the radiation sciences core requirements;
- an area of emphasis (administration and education is the only emphasis offered through distance learning at this time).
- electives selected from existing courses after consultation with the program adviser.

#### PROGRAM OF INSTRUCTION

##### Required core courses and religion studies (30 units)

RTCH	385	Current Issues in Radiation Sciences I	(2)
RTCH	471	Applied Research Methods	(1)
RTCH	494	Senior Project	(2)
RTMR	451	Management of a Radiologic Service	(3)
RTMR	454	Quality Management in Radiation Sciences	(2)
AHCJ	305	HIV/AIDS and the Health Provider	(1)
AHCJ	328	Portfolio Practicum I	(1)
AHCJ	351	Statistics for the Health Professions	(3)
AHCJ	461	Research Methods	(2)
AHCJ	498	Portfolio Practicum II	(1)
EMMC	314	Introduction to 12-Lead ECG Interpretation	(1)
EMMC	484	Legal Issues in Health Care	(2)
RELF	416	God and Human Suffering	(3)
RELF	423	Loma Linda Perspectives	(2)
RELE	457	Christian Ethics and Health Care	(3)

##### Track A (45-46 units)

RTTH	332	Radiation Biology	(1)
RTTH	342	Patient-Care Practices in Radiation Therapy	(2)
RTTH	344	Radiation Therapy Procedures	(2)
RTTH	345	Quality Assurance in Radiation Therapy	(1)
RTTH	348	Radiation Therapy Review	(1)
RTTH	353	Psycho-Oncology	(2)
RTTH	355	Physical Principles of Radiation Therapy	(3)
RTTH	356	Physical Principles of Dosimetry	(3)
RTTH	357	Applied Dosimetry	(2)
RTTH	358	Advanced Dosimetry (with laboratory)	(3)
RTTH	364	Radiation Oncology I	(3)
RTTH	365	Radiation Oncology II	(3)
RTTH	371-374	Radiation Therapy Affiliation I, II, III, IV	(1, 1, 1, 1)
RTTH	381, 382	Topics in Radiation Therapy	(2, 2)
AHCJ	402	Pathology I	(4)
AHCJ	403	Pathology II	(3-4)
AHCJ	404	Pharmacology	(1)
DTCS	301	Human Nutrition	(3)

##### Track B (26 units)

RTCH	411	Student Teaching Practicum I	(2)
RTCH	413	Radiologic Management Practicum I	(2)
RTCH	464	Moral Leadership	(4)
RTCH	470	Curriculum Development in Health Science	(2)
RTTH	353	Psycho-Oncology	(2)
RTTH	358	Advanced Dosimetry (with laboratory)	(3)
AHCJ	402	Pathology I	(4)
AHCJ	403	Pathology II	(3-4)
AHCJ	404	Pharmacology	(1)
AHCJ	465	Seminars in Leadership	(2)
or			
RTCH	464	Moral Leadership	(2)
DTCS	301	Human Nutrition	(3)
RSTH	471	Instructional Techniques I	(2)

#### RADIATION THERAPY TECHNOLOGY—CERTIFICATE

During the twelve-month certificate program of clinical studies in radiation therapy technology, students take formal course work along with instruction in the clinical aspects of radiation therapy. The program begins with the Autumn Quarter. The clinical portion of the program consists of practical demonstrations in the use of radiation therapy equipment and an opportunity to participate, under close supervision, in actual radiation therapy procedures in a variety of radiation oncology departments. The clinical calendar varies from the University calendar in that the clinical schedule is full time (forty clock hours per week), arranged around lectures, and coordinated with the operation of the Loma Linda University Medical Center radiation medicine department.

##### Accreditation

The program is accredited by the Joint Review Committee on Education in Radiologic Technology, 20 North Wacker Drive, Suite 900, Chicago, IL 60606-2901; telephone 312/704-5300.

##### Distance education

The Radiation Therapy Technology Program is offered via distance education at Fresno City College, Fresno, California.

##### CPR certification

Students are required to have current health care provider cardiopulmonary resuscitation (CPR) certification (adult, child, and infant) for all scheduled clinical experience. American Heart Association certification is recommended. Classes are available on campus at Life Support Education, University Arts building, 24887 Taylor Street, Suite 102.

##### Admission

###### PREREQUISITE

To be admitted into the Radiation Therapy Technology Program and to become certified and registered, the applicant must fulfill one of the following two prerequisites:

Be an ARRT-registered radiologic technologist; and/or  
Be a graduate of an accredited radiologic technology  
program;

AND

Must have credits in the following:

Radiation physics  
Human anatomy and physiology with laboratory,  
complete sequence  
Intermediate algebra in college  
Radiation protection (available in professional program  
for those who have not taken it)  
Patient-care methods  
Computers

or

Be a registered nurse or  
Be a graduate of an accredited allied health program  
(minimum training of two years)

AND

Must have credits in the following:

Human anatomy and physiology with laboratory, com-  
plete sequence  
Intermediate algebra in college  
Medical terminology  
Patient-care methods  
Radiation physics  
Radiation protection (available in professional program  
for those who have not taken it)  
Principles of radiography  
Computers

### Observation experience required

A minimum of forty hours of work observation in a  
radiation therapy department is required.

### PROGRAM OF INSTRUCTION

RTTH 332	Radiation Biology	1
RTTH 342	Patient-Care Practices in Radiation Therapy	2
RTTH 344	Radiation Therapy Procedures	2
RTTH 348	Radiation Therapy Review	1
RTTH 355	Physical Principles of Radiation Therapy I	3
RTTH 356	Physical Principles of Radiation Therapy II	3
RTTH 357	Applied Dosimetry	2
RTTH 364, 365	Radiation Oncology I, II	(3, 3)
RTTH 371-374	Radiation Therapy Affiliation I, II, III, IV	(1, 1, 1, 1)
RTTH 381-384	Topics in Radiation Therapy I, II, III, IV	(1-3, 1-3, 1-3, 1-3)
AHCJ 403	Pathology II	(3)
REL_	Religion elective	(2-3)

## Radiologist Assistant—AH (B.S.)

LAURA L. ALIPOON, Program Coordinator

The American Society of Radiologic Technologists (ASRT) supports this midlevel provider, the radiologist assistant (RA). The RA is an advanced-level radiologic technologist who enhances patient care by extending the capacity of the radiologist in the diagnostic imaging-environment position.

According to the American Society of Radiologic Technologists (ASRT), “the radiologist assistant has three primary areas of responsibility—all performed under the supervision of a radiologist:

1. Participate in patient assessment, patient management, and patient education.
2. Perform selected radiology procedures, including, but not limited to, fluoroscopy.
3. Participate in the systematic analysis of the quality of patient care delivered within the radiology environment.”

The radiologist assistant also makes initial observations of diagnostic images but does not provide an official interpretation.

### Program description

The student will receive didactic and clinical mentoring on neonatal, pediatric, adult, and geriatric populations. Courses will be a mix of lecture, discussion, and Web-based learning methods. Students are responsible for finding their own clinical site and radiologist mentor. This is an online program. Students need to be on campus two weeks in the Autumn Quarter and one week Winter, Spring, and Summer quarters.

### The program objectives

Upon completion of the program, the graduate should be qualified to:

1. Develop and refine critical-thinking skills to enhance his/her ability to analyze and develop the most effective means of care for their patients.
2. Demonstrate leadership skill through advanced and multilevel thinking in clinical practice.
3. Synthesize pertinent patient data from diagnostic images and patient interviews to suggest and implement appropriate patient management and clinical pathways.
4. Develop and refine their skills in performing fluoroscopy and other radiology procedures.
5. Exhibit professional behavior in all interactions, including communicating appropriately with patients, colleagues and others with whom they come in contact.
6. Demonstrate teamwork in the clinical setting and other situations where this concept leads to completion of goals that an individual could not easily meet alone.
7. Participate in educational and professional activities, sharing knowledge with colleagues and investigating new and innovative aspects of professional practice.

- 8. Support the profession's code of ethics and comply with the profession's scope of practice.

**Admission**

To be eligible for admission, the applicant must have:

- certification from the American Registry of Radiologic Technologists (ARRT)
- a minimum of two years of full-time radiography work experience
- a Bachelor of Science degree from an accredited institution
- statistics and research methods

Statistics courses must cover: collecting, summarizing, analyzing, presenting and interpreting data, measures of central tendency and variation, probability, binomial and normal distribution, hypothesis testing and confidence intervals, t-tests, chi-square, correlation, and regression. Statistics may be taken on the LLU campus for students located in the vicinity of LLU. Course is not available by distance education.

Research methods must cover: introduction to scientific method in research, the research process, research-report evaluation, proposal writing, literature review, identification of variables, statement of hypotheses, research design, and analysis and presentation of data. Research methods may be taken on the LLU campus for students located in the vicinity of LLU. Course is not available by distance education.

**PROGRAM OF INSTRUCTION**

Entrance to the clinical year is contingent upon the completion of all prior requirements. For the student who has already completed a Bachelor of Science degree, the Radiologist Assistant Certificate Program consists of 58 units.

<b>FIRST YEAR</b>		<b>(42 units)</b>
RTRA 331	Pharmacology I	(2)
RTRA 332	Pharmacology II	(2)
RTRA 344	Medical Anatomy and Physiology	(2)
RTRA 346	Clinical Management and Education	(2)
RTRA 351	Patient Assessment I	(2)
RTRA 352	Patient Assessment II	(2)
RTRA 371	Clinical Internship	(1)
RTRA 372	Clinical Internship	(1)
RTRA 373	Clinical Internship	(2)
RTRA 384	Radiobiology and Health Physics	(3)
RTRA 385	Radiology Procedures and Image Evaluation I	(3)
RTRA 386	Radiology Procedures and Image Evaluation II	(4)
RTRA 387	Radiology Procedures and Image Evaluation III	(4)
RTMR 464	Moral Leadership	(2)
AHCJ 402	Pathology I	(4)
AHCJ 403	Pathology II	(3)
REL_ ___	Religion	(3)

**CLINICAL YEAR (18 units)**

ACLS	Advanced Clinical Life Support	
RTCH 498	Professional Interactions	(2)
RTRA 346	Clinical Management and Education	(2)
RTRA 388	Radiology Procedures and Image Valuation IV	(3)
RTRA 471	Clinical Internship	(2)
RTRA 472	Clinical Internship	(2)
RTRA 473	Clinical Internship	(2)
RTRA 474	Clinical Internship	(2)
RTRA 484	Radiologist Assistant Research Project	(2)
RTRA 488	Comprehensive Review	(1)

\*Statistics and research methods are required if they have not already been taken.

To take research methods at LLU, the student must have taken statistics at LLU or must pass a statistics test.

**Rehabilitation Science—AH (Ph.D.)**

GRENITH J. ZIMMERMAN, Program Director

The School of Allied Health Professions offers the Doctor of Philosophy degree in rehabilitation science. The degree program by design is inclusive of the many rehabilitation professions; and offers opportunities for qualified clinical professionals in allied health to prepare for careers in independent research, teaching, and administration. It is the goal of this program to prepare graduates who will:

- provide vision and direction for the integration of the rehabilitation professions;
- commit themselves to whole-person care;
- advance the theory and practice of rehabilitation science through research;
- acquire and integrate knowledge related to the social and basic medical sciences; and
- assess, develop, and implement interdisciplinary community-based services.

**Admission**

Applicants must meet the following minimum requirements:

1. Bachelor's or master's degree in any allied health profession area or discipline related to rehabilitation science, with a minimum G.P.A. of 3.0 in academic and professional course work.
2. Current licensure/certification, in one of the rehabilitation science professions.

Prospective students are required to submit the following:

1. A formal letter of support from a primary research faculty member whose research interests and availability most closely match those of the applicant. The program director will coordinate meetings between applicants and prospective research faculty.

2. Curriculum vitae, including work history, formal education, continuing education, licensure or certification, professional organizations, honors, awards, publications, presentations, and grants.
3. At least one example of written work (e.g., term paper, course assignment, publications, master's degree research project or thesis).

**Requirements**

(A minimum of 114 units beyond the bachelor's degree is required for students holding a master's or doctoral degree in a professional area; up to 48 graduate level quarter units taken in completion of the professional degree may be applicable to the Doctor of Philosophy degree.) Application of these credits to the Doctor of Philosophy degree must be reviewed by the School of Allied Health Professions Doctor of Philosophy in Rehabilitation Science Committee prior to submission to the School of Allied Health for approval. The student's program course work for the degree must be approved by the Doctor of Philosophy in Rehabilitation Science Committee.

**CURRICULUM**

Three core areas of study constitute the doctoral degree program:

**Selectives (36-48 quarter units)**

**Research and dissertation (36 quarter units)**

**Rehabilitation science and religion (30-42 quarter units, to include 6 units of religion, selected from the following ethical, foundational, and relational courses)**

RELE 525	Ethics for Scientists	(3-4)
RELR 536	Spirituality and Occupation	(3)
RELR 525	Health Care and Dynamics of Christian Leadership	(3-4)
RELF 557	Theology of Human Suffering	(3-4)

**Other religion courses selected in consultation with the program director**

AND

at least 6 units from each of the following domains:

**Domain 1: Political and professional advocacy (6 units minimum)**

SPOL 614	Social Science Concepts and Theories	(4)
RESC 515	Political and Professional Advocacy in Rehabilitation	(3)
#RESC516	Practicum in Advocacy	(1-3)

**Domain 2: Theories and applications in health care systems and delivery (6 units minimum, to include RESC 519)**

RESC 519	Rehabilitation Theories and Applications in Health Care	(3)
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AHCJ 537	Organizational Theory: Structure and Behavior	(3)
AHCJ 536	Health Care Financial Management	(3)
MHIS 575	Market Research Methods in Health Care	(3)
MHIS 602	Health Systems Operations Management	(3)
MHIS 604	Strategic Health Information Systems Management	(3)
AHCJ 545	Legal and Ethical Issues in the Health Professions	(3)

**Domain 3: Determinants of health behavior (6 units minimum, to include HPRO 509 and HPRO 588)**

HPRO 509	Principles of Health Behavior	(3)
HPRO 588	Health Behavior Theory/Research	(3)
EPDM 509	Principles of Epidemiology I	(3)
HPRO 514	Values, Culture, and Health	(3)
HPRO 526	Lifestyle Diseases and Risk Reductions	(3)
INTH 517	Cultural Issues in Health Care	(3)

**Domain 4: Leadership and higher education (6 units minimum)**

AHCJ 505	Educational Psychology for Health Professionals	(3)
AHCJ 509	Teaching and Learning Styles	(3)
AHCJ 515	Curriculum Development in Higher Education	(3)
AHCJ 556	Administration in Higher Education	(3)
AHCJ 557	Professional Systems Management	(3)
AHCJ 564	Group Process and Dynamics	(3)
AHCJ 585	Technology in Education	(3)
AHCJ 599	Directed Teaching	(3)

**SELECTIVES (36-48 units)**

Selected from an approved list of courses in consultation with the program director and the student's research mentor/committee.

**RESEARCH AND DISSERTATION (36 units) (to be divided as follows)**

**Didactic coursework (12 units minimum)**

AHCJ 530	Research and Statistics I	(3)
AHCJ 531	Research and Statistics II	(3)
HPRO 589	Qualitative Research Methods	(3-4)
AHCJ 605	Critical Analysis of Scientific Literature	(3)

Other research and statistics courses in consultation with the program director and research mentor/committee

**Research registration (20 units)**

RESC 697	Research	(1-12)
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**Dissertation registration (4 units)**

RESC 699	Dissertation	(4)
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**Comprehensive examinations**

The written comprehensive examination is designed to establish that the student has a broad understanding of rehabilitation science. A student is eligible to take the written examination after completing a minimum of 30 quarter units of course work, including 6 units from each of the four core domains and 6 units in research and statistics.

The oral examination is designed to establish that the student has adequate foundational information in appropriate content areas, as well as a plan to answer a research question appropriate for a doctoral dissertation. Following successful completion of the written comprehensive examination, the oral examination will be scheduled by the student's research mentor in consultation with the program director. Questions for the examination will be over the student's research proposal and the content areas on which the proposal rests.

**Advancement to candidacy**

The student may apply for admission to doctoral candidacy after (a) passing the written and oral comprehensive examinations; and (b) securing the support of his or her research advisory committee.

**Dissertation**

The candidate's capacity for independent investigation and scholarly achievement must be demonstrated by the presentation and oral defense of an acceptable dissertation, usually resulting in one to three publications.

**General requirements**

For information about requirements and practices to which all graduate students are subject, the student should consult the Policies and General Regulations in Section II and the School of Science and Technology in Section III.

## Religion and the Sciences—FR (M.A.)

RICHARD RICE, Program Coordinator

As the academic study of religion has developed over the past fifty years, the exploration of religion and science has emerged as a discipline of its own. Scholars in the natural sciences, the human sciences, and numerous applied sciences recognize the importance of examining religion from their particular perspectives. And religion scholars appreciate the importance of the questions that the methods and conclusions of the sciences raise for religious belief and practice.

As a Seventh-day Adventist health-sciences university, Loma Linda University rests on the conviction that there is a positive relation between religion and the sciences. Its commitment to a variety of health professional programs reflects the belief that the natural world is God's good creation and that human beings are inherently part of the physical order of things. Its commitment to higher education, including various avenues of graduate study, expresses the belief that all

truth is God's truth, and that the acquisition of truth calls for the diligent application of all our powers. These convictions support the attempt to bring scientific knowledge within the overarching perspective of Christian faith.

This Master of Arts degree is designed for several types of students: those who want a degree in religion and science before pursuing further graduate work in one or the other of these areas; graduate students in the natural and social sciences who would like to combine their other academic interests with a serious study of religion; students in professional programs who also have an interest in the area of religion and science; and individuals who wish to explore the interface of religion and the sciences within the context of serious academic work.

The Religion and the Sciences Program is administered by the Faculty of Religion. It draws on resources from various sectors of the campus, including the Department of Earth and Biological Sciences faculty of the School of Science and Technology; the Department of Psychology faculty of the School of Science and Technology; and the members of other faculties in the University, as well as other scholars and professors with expertise in the area.

The program is designed to encourage and assist students to—

- Understand the various ways people view the relation between science and religion.
- Appreciate the distinctive features of scientific and religious study.
- Appreciate religion and science as contrasting yet complementary approaches to truth.
- Participate in the ongoing conversation surrounding the relation of religion and the sciences.

**Admission**

In addition to meeting admission requirements for the Faculty of Religion, the applicant to the Religion and the Sciences Program must:

1. Propose clear personal and professional goals and ways in which the Religion and the Sciences Program may facilitate their realization.
2. Persuade the Admissions Committee, by previous accomplishments, that s/he is able and willing to reach these goals and to make a significant contribution to the field.

**Course requirements**

In order to receive the Master of Arts degree in religion and the sciences from Loma Linda University, the student will complete a minimum of 48 units of course work covering an appropriate range of courses and seminars as herein specified, with an overall grade point average of B or better, with no grade lower than a C and with no grade in a required course lower than a B-.

**CURRICULUM****(44-52)****Introduction to research**

RELG 504	Research Methods	(4)
SUBTOTAL		4

**Cluster I: Religion**

RELT 539	Christian Understanding of God and Humanity	(4)
RELE 5__	One graduate-level course in ethical studies	(4)
RELR 5__	One graduate-level course in relational studies	(4)
RELT 526	Creation and Cosmology	(4)
SUBTOTAL		16

**Cluster II: Science**

Two or three approved graduate courses, seminars or research projects selected from physical, life, behavioral, social or health sciences.

SUBTOTAL		8-12
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**Cluster III: Seminars**

RELT 615	Seminar in Philosophy of Religion	(4)
PHIL 616	Seminar in the Philosophy of Science	(4)
RELT 617	Seminar in Religion and the Sciences	(4)
SUBTOTAL		12

**Cluster IV: Electives**

One or two approved graduate courses, seminars, or research projects offered at Loma Linda University or another educational institution.

SUBTOTAL		4-8
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**Transfer credits**

Students are permitted to transfer up to 8 units of approved graduate-level courses from other accredited institutions into the Religion and the Sciences Program. In addition, prior or current students in other Loma Linda University postbaccalaureate degree programs are permitted to petition to receive credit for a maximum of 12 units for courses completed in their professional studies that are directly related to religion and the sciences.

**Comprehensive examinations**

A series of comprehensive examinations will cover essential aspects of religion and science.

**Research**

The student will prepare an acceptable thesis or material suitable for publication in relevant scholarly journals.

**Reproductive Health—PH  
(PB certificate)**

The Reproductive Health Program certificate is offered through the School of Public Health's Department of Health Promotion and Education. The purpose of this regular certificate program is to familiarize participants with the complex issues associated

with planning, implementing, and evaluating reproductive health programs for men and women.

**Learner outcomes**

Upon completion of this certificate program, participants will be able to:

- Describe key public health issues in the field of reproductive health.
- Utilize principles of behavior change in the promotion of reproductive health.
- Plan, implement, and evaluate public health programs addressing multifaceted, integrated programs in reproductive health based upon the current operational models.

**PREREQUISITE**

This certificate program is primarily designed for M.P.H. or doctoral degree programs and is offered in conjunction with these programs. Health professionals who have completed a bachelor's degree (or equivalent) from an accredited college or university with a cumulative G.P.A. of 3.0 or greater may be admitted also into the certificate program.

**CERTIFICATE REQUIREMENTS**

HPRO 509	Principles of Health Behavior	(3)
HPRO 536	Program Planning and Evaluation	(3)
HPRO 548	Community and Domestic Violence	(3)
HPRO 550	Women in Development	(3)
HPRO 553	Addiction Theory and Program Development	(3)
HPRO 555	Early-Age Parenthood	(3)
HPRO 567	Reproductive Health	(3)
RELE 534	Ethical Issues in Public Health	(3)
TOTAL UNITS		24

**Respiratory Care—PH  
(B.S., PP B.S., certificate)**

DAVID M. STANTON, Program Director, B.S., Certificate

ARTHUR B. MARSHAK, Director of Clinical Education, B.S.

DAVID LOPEZ, Program Director, Postprofessional B.S.

DAVID M. STANTON, Program Director for Certificate

N. LENNARD SPECHT, Medical Director

**FACULTY—B.S.**

- Raquel M. Calderone-Vizcaino
- Leif Erikson
- Dennis Graham
- Michael Hagelgantz
- Leo M. Langga
- David Lopez
- Arthur B. Marshak
- Curtis Powell

J. Randall Scott  
 Marites Solitaria  
 Charles B. Spearman  
 David M. Stanton  
 Thomas W. Taylor, Jr.  
 Cristy Wang  
 Robert L. Wilkins

**FACULTY—Postprofessional B.S.**

Ruel A. Alipoon  
 Michael Hagelgantz  
 Leo M. Langga  
 David Lopez  
 Michael Lum  
 Traci L. Marin  
 Arthur B. Marshak  
 Mark S. Rogers  
 Richard N. Sample  
 J. Randall Scott  
 Loreen K. Scott  
 Charles B. Spearman  
 N. Lennard Specht  
 David M. Stanton  
 Robert L. Wilkins

**FACULTY—Certificate**

Ruel A. Alipoon  
 Allan M. Bedashi  
 Kenrick C. Bourne  
 Yasmin C. Bracho  
 Raquel M. Calderone-Vizcaino  
 Noha S. Daher  
 Elizabeth J. Dickinson  
 Gerald A. Ellis  
 Laurence A. Feenstra  
 Linda Ferry  
 Gerald A. Glavaz  
 Jeff T. Grange  
 Steven M. Green  
 Benny Hau  
 R. Nadine Knight  
 Leo M. Langga  
 Julie Y. Lee  
 David Lopez  
 Traci L. Marin  
 Arthur B. Marshak  
 Evelyn L. Massey  
 Richard D. Nelson  
 Ehren B. Ngo  
 Mark S. Rogers  
 Richard N. Sample  
 J. Randall Scott  
 Loreen K. Scott  
 Ronald E. Sneider  
 Charles B. Spearman  
 N. Lennard Specht  
 David M. Stanton  
 Thomas W. Taylor, Jr.  
 Robert L. Wilkins

Respiratory care is an allied health profession that promotes health and improvement in the cardiopulmonary function of people with heart and lung abnormalities and disease. Newborn, pediatric, adult, and elderly patients are treated for a wide range of problems—infant respiratory distress syndrome; trauma; cardiopulmonary arrest; conditions brought on by

shock; postoperative surgical complications; and respiratory diseases such as pneumonia, asthma, cystic fibrosis, chronic bronchitis, and emphysema.

The respiratory care practitioner is a member of the health care team in medical centers, skilled-nursing facilities, outpatient rehabilitation programs, physician offices, and in-home care. Many are involved in research and development of new and innovative care and equipment. They are effective communicators and compassionate caregivers, possessing an awareness of cultural sensitivity and diversity. They have leadership roles in patient education, wellness intervention, and development of respiratory care plans. Respiratory care professionals apply critical-thinking skills in cardiopulmonary diagnostics and patient assessment to optimize decision making and delivery of patient care. In a time of high technology, increasing growth of the elderly population, and increasing numbers of patients with asthma and chronic lung disease, there is a greater demand for educated and skilled respiratory care practitioners.

**Professional accreditation, licensure, and credentialing**

Respiratory care program accreditation is provided by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) upon recommendation of the Committee on Accreditation for Respiratory Care (CoARC). Standards and guidelines published by CoARC must be met, relevant to general and respiratory care education and to ongoing program assessment and improvement. Inquiries regarding CAAHEP can be directed to 35 East Wacker Drive, Suite 1970, Chicago IL 60601-2208; telephone 312/553-9355; Web site <<http://www.caahep.org>>; or FAX 312/553-9616. Inquiries regarding CoARC can be directed to 1248 Harwood Road, Bedford, TX 76021-4244; telephone 800/874-5615; or Web site <<http://www.coarc.com>>. The Respiratory Care Program at Loma Linda University is CAAHEP accredited.

Graduates of CAAHEP-accredited respiratory care programs must apply to the State of California Department of Consumer Affairs Respiratory Care Board (RCB) for a license to practice in the state. The RCB requires that graduates of respiratory care programs complete general and respiratory care education courses with grades of “C” or above, resulting in a minimum of an Associate in Science degree in respiratory care. Graduates must successfully complete an examination for licensure, declare felony convictions, and undergo fingerprinting. License denial may occur due to prior felony conviction(s). Inquiries regarding the RCB can be directed to 444 North 3rd Street, Suite 270, Sacramento, CA 95825; telephone 916/323-9983; FAX 916/323-9999; or Web Site <<http://www.rcb.ca.gov>>.

The National Board for Respiratory Care, Inc. (NBRC), provides nationally recognized credentialing examinations for graduates of accredited respiratory care programs. Those who successfully complete the entry-level examination receive the certified respiratory therapist (CRT) credential. This examination currently is required by the state of California for licensure to practice respiratory care. Advanced practitioner examinations are required for the registered respiratory therapist (RRT) credential, neonatal-pediatric

specialist certification (NPS), and certified (CPFT) and registered (RPFT) pulmonary function technologist. NBRC inquiries can be made to 8310 Nieman Road, Lenexa, KS 66214-1579; telephone 913/599-4200; FAX 913/541-0156; or Web site <<http://www.nbrc.org>>.

#### Professional association

The American Association for Respiratory Care (AARC) encourages students and graduates to become members and participate in national meetings and local chapters. The AARC's aim is to foster professional growth, encourage research, and provide services and representation for its members. Further information may be obtained from the national office, 9425 North MacArthur Boulevard, Suite 100, Irving, TX 75063; telephone 972/243-2272; or Web site <<http://www.aarc.org>>.

The California Society for Respiratory Care (CSRC), as an affiliate of the AARC, is a nonprofit professional organization whose mission is to represent and encourage excellence in the art and science of cardiopulmonary support.

The CSRC is committed to health, healing, and disease prevention in the California community. The society extends these concepts to its members, students, health care professionals, and the public through education and clinical practice. Further information may be obtained from the CSRC at 1961 Main Street, Suite 246, Watsonville, CA 95076; telephone 888/730-2772; FAX 831/763-2814; or Web site <<http://www.csrc.org>>.

## RESPIRATORY CARE—B.S.

Loma Linda University offers two Bachelor of Science degree programs in respiratory care. The first program is for students who have had no previous education in respiratory care and who have completed the program prerequisites listed below.

#### The program

The two-year, upper-division program leading to the Bachelor of Science degree is a sequence of professional course work intended to prepare competent respiratory therapists with advanced abilities in clinical care. Course work may be designed toward meeting entrance requirements for the dentistry, medicine, and physician assistant programs.

#### The program objectives

Upon completion of the program, the graduate should:

1. Collect and review pertinent clinical information and suggest and implement diagnostic procedures according to age-specific criteria.
2. Select, obtain, assemble, maintain, and correct malfunctions on all respiratory therapy equipment.
3. Administer medications via aerosol, subcutaneous, and other appropriate routes of delivery, according to age-specific criteria.
4. Apply current and advanced respiratory care concepts and treatment plans in the areas of ventilatory support systems (invasive and noninvasive), medical gas therapy, gas-exchange therapy, airway care, and advanced resuscitation techniques, according to age-specific criteria.

5. Assist the physician in the performance of all diagnostic or therapeutic procedures related to cardiopulmonary function.
6. Function as an efficient member of the interdisciplinary team.
7. Demonstrate advanced knowledge and clinical skill in specialty areas selected from—
  - neonatal/pediatric critical care
  - adult critical care
  - cardiopulmonary diagnostics
  - hyperbaric medicine
  - sleep disorders medicine
  - cardiopulmonary rehabilitation
  - extended care

#### Admission

To be eligible for admission, the applicant must:

1. Be a graduate of a CAAHEP-approved or provisionally approved, or CAHEA-approved advanced practitioner associate degree (or the equivalent) program in respiratory care;
2. Complete the subject requirements noted as prerequisites (students who have not completed these requirements may be accepted on a provisional basis); and
3. Arrange for an interview at the University by appointment (an off-campus interview can usually be arranged for the distant student).

#### PREREQUISITE

20 units minimum in humanities (choose minimum of two areas from: history, literature, philosophy, foreign language, art/music appreciation or art/music history)

Included in this minimum, 4 units of religion per year of attendance at a Seventh-day Adventist college or university

Human anatomy and physiology with laboratory, complete sequence; or general biology with laboratory, complete sequence

Microbiology with laboratory

Introductory chemistry with laboratory, complete sequence; or general chemistry with laboratory, complete sequence

High school-level physics or introductory physics, one quarter/semester in college; or general physics, one quarter/semester in college

Two years high school mathematics with grades of C or above or intermediate algebra in college

General psychology or sociology

Cultural anthropology or an approved course dealing with cultural diversity

Select 4 more quarter units from sociology, economics, geography, political science, psychology

English composition, complete sequence

Speech

Computers

Personal health or nutrition

Two physical activity courses

Electives to meet minimum total requirements of 96 quarter units

For total unit requirements for graduation, see Division of General Studies, LLU GENERAL EDUCATION REQUIREMENTS (Section II).

## PROGRAM OF INSTRUCTION

### YEAR ONE

(Course work to be taken while in the B. S. degree program)

RSTH 304	Cardiopulmonary Anatomy and Physiology	(4)
RSTH 323	Pulmonary Function Methodology	(3)
RSTH 331	Pharmacology I	(2)
RSTH 332	Pharmacology II	(2)
RSTH 334	Patient Assessment	(2)
RSTH 341	Respiratory Therapy Science I	(5)
RSTH 342	Respiratory Therapy Science II	(5)
RSTH 343	Respiratory Therapy Science III	(4)
RSTH 354	Case Studies in Adult Respiratory Care	(2)
RSTH 366	Diagnostic Techniques	(3)
RSTH 381	Cardiopulmonary Diseases I	(2)
RSTH 382	Cardiopulmonary Diseases II	(2)
RSTH 391	Respiratory Therapy Practicum I	(2)
RSTH 392	Respiratory Therapy Practicum II	(2)
RSTH 393	Respiratory Therapy Practicum III	(4)
RSTH 404	Critical Care	(4)
AHCJ 305	HIV/AIDS and the Health Provider	(1)
AHCJ 311	Medical Terminology I	(2)
AHCJ 326	Patient-Care Methods	(2)
AHCJ 328	Portfolio Practicum I	(1)
AHCJ 402	Pathology I	(4)
AHCJ 403	Pathology II	(3)
EMMC 316	12-Lead ECG Interpretation	(2)
REL_ ___	Religion elective	(2)

### YEAR TWO

RSTH 421	Perinatal and Pediatric Respiratory Care	(2)
RSTH 422	Advanced Perinatal and Pediatric Respiratory Care	(2)
RSTH 424	Exercise Physiology and Pulmonary Rehabilitation	(3)
RSTH 434	Advanced Patient Assessment	(2)
RSTH 441	Respiratory Therapy Science IV	(3)
RSTH 444	Case Studies in Neonatal/Pediatric Respiratory Care	(2)
RSTH 464	Case Management in Respiratory Care	(2)
RSTH 466	Advanced Diagnostic Techniques	(2)
RSTH 471	Instructional Techniques I	(2)
RSTH 474	Cardiopulmonary Health Promotion and Disease Prevention	(2)
RSTH 481	Research in Cardiopulmonary Sciences	(1)
RSTH 494	Respiratory Care Practicum IV	(2)
RSTH 495	Respiratory Care Practicum V	(2)
RSTH 496	Respiratory Care Practicum VI	(3)

AHCJ 461	Research Methods	(2)
AHCJ 465	Seminars in Leadership	(2)
AHCJ 498	Portfolio Practicum II	(1)
EMMC 315	Cardiology	(3)
RELE 457	Christian Ethics and Health Care	(2)
REL_ ___	Religion elective	(2)
REL_ ___	Religion elective	(2)

A minimum of 192 quarter units are required for the Bachelor of Science degree in respiratory care.

## RESPIRATORY CARE— Postprofessional B.S.

Loma Linda University offers two Bachelor of Science degree programs in respiratory care. The second program is for students who have an Associate in Science degree in respiratory care from a CAAHEP-accredited respiratory care program and who wish to earn a Bachelor of Science degree in respiratory care. This program is designated the postprofessional Bachelor of Science degree in respiratory care.

### The program

The two-year, upper-division program leading to the Bachelor of Science degree is a sequence of professional course work intended to graduate individuals who have acquired advanced knowledge in the respiratory care profession, including assessment, therapeutic interventions, and management of patients with cardiopulmonary-related disorders; and who uphold the standards of the mission and goals of the School of Allied Health Professions.

### The program goals

The goals of the program are to:

1. Provide therapists to the respiratory care and medical communities who have advanced-practice training in cardiopulmonary care and fundamental knowledge in the areas of leadership and education.
2. Provide an undergraduate program for two-year-level respiratory therapists that enhances and broadens their knowledge in cardiopulmonary health care sciences and general studies, and allows progression into graduate programs.

### The program objectives

Upon completion of the program, the graduate should:

1. Apply fundamental and advanced adult, pediatric, and neonatal respiratory care concepts and treatment plans in the areas of pathophysiology, diagnostics and advanced interventions, gas-exchange therapy, medical gas therapy, airway care, and ventilatory support systems (invasive and noninvasive).
2. Apply problem-solving skills in the areas of advanced pulmonary physiology, related diagnostics, and comprehensive pulmonary rehabilitation programs.
3. Perform fundamental and advanced patient assessment and diagnostic skills for various cardiopulmonary diseases.

4. Develop fundamental skills to conduct and interpret research in the health care arena.
5. Develop fundamental skills in leadership.
6. Develop fundamental skills in topic presentation to the health care profession and patient-care community, using appropriate lecture and demonstration techniques.

**Admission**

To be eligible for admission, the applicant must:

1. Be a graduate of a CAAHEP-approved or provisionally approved, or CAHEA-approved advanced practitioner associate degree (or the equivalent) program in respiratory care;
2. Complete the subject requirements noted as prerequisites (students who have not completed these requirements may be accepted on a provisional basis); and,
3. Arrange for an interview at the University by appointment (an off-campus interview can usually be arranged for the distant student).

**PREREQUISITE**

20 units minimum in humanities (choose a minimum of two areas from: history, literature, philosophy, foreign language, art/music appreciation, or art/music history)

Included in this minimum, 4 units of religion per year of attendance at a Seventh-day Adventist college or university

Human anatomy and physiology with laboratory, complete sequence; or general biology with laboratory, complete sequence; or general zoology with laboratory, complete sequence

Microbiology with laboratory

Introductory chemistry with laboratory or general chemistry with laboratory

High school-level physics; or introductory physics, one quarter/semester in college; or general physics, one quarter/semester in college

Two years high school mathematics with grades of C or above or intermediate algebra in college

General psychology or sociology

Cultural anthropology or an approved course dealing with cultural diversity

Select 4 more quarter units from sociology, psychology, economics, geography, political science

English composition, complete sequence

Speech

Computers

Personal health or nutrition

Two physical activity courses

Electives to meet minimum total requirements of 96 quarter units

For total unit requirements for graduation, see Division of General Studies, LLU GENERAL EDUCATION REQUIREMENTS (Section II).

**PROGRAM OF INSTRUCTION**

**Fall Quarter (17)**

RSTH	301	Advanced Respiratory Therapy Science	(3)
RSTH	422	Advanced Perinatal and Pediatric Respiratory Care	(2)
RSTH	434	Advanced Patient Assessment	(2)
AHCJ	305	HIV/AIDS and the Health Provider	(1)
AHCJ	328	Portfolio Practicum I	(1)
AHCJ	351	Statistics for the Health Professions	(3)
AHCJ	465	Seminars in Leadership	(2)
AHCJ	498	Portfolio Practicum II	(1)
RELF	406	Adventist Beliefs and Life	(2)

**Winter Quarter (17)**

RSTH	424	Exercise Physiology and Pulmonary Rehabilitation	(3)
RSTH	431	Senior Project I	(2)
RSTH	451	Respiratory Care Affiliation I	(2)
RSTH	466	Advanced Diagnostic Techniques	(2)
RSTH	471	Instructional Techniques I	(2)
AHCJ	402	Pathology I	(4)
AHCJ	461	Research Methods	(2)

**Spring Quarter (17)**

RSTH	432	Senior Project II	(2)
RSTH	464	Case Management in Respiratory Care	(2)
RSTH	481	Research in Cardiopulmonary Sciences	(1)
EMMC	315	Cardiology	(3)
EMMC	316	12-Lead ECG Interpretation	(2)
AHCJ	403	Pathology II	(3-4)
RELE	457	Christian Ethics and Health Care	(2)

**Summer Quarter (4)**

RSTH	433	Senior Project III*	(4)
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**Electives**

\*The Senior Project is a culminating body of work, developed by the student in consultation with the program director and presented to the department faculty. Work may be a research paper, clinical presentation, management project, or other project approved by the program director.

**RESPIRATORY CARE—Certificate**

**CPR certification**

Students are required to have current health care provider cardiopulmonary resuscitation (CPR) certification (adult, child, and infant) for all scheduled clinical experience. American Heart Association certification is recommended. Classes are available on campus at Life Support Education, University Arts building, 24887 Taylor Street, Suite 102.

**Admission**

To be eligible for admission, the applicant must have completed a minimum of 96 quarter units (64 semester units) from an accredited college or university, or its equivalent from a foreign education program.

**PREREQUISITE**

Human anatomy and physiology or general biology with laboratory, complete sequence

Microbiology with laboratory

Introductory chemistry with laboratory, complete sequence; or general chemistry with laboratory, complete sequence

High school-level physics or introductory physics, one quarter/semester in college; or general physics, one quarter/semester in college

Two years of mathematics selected from: algebra I (elementary), algebra II (intermediate), or geometry. Course work may be taken in high school or college.

General psychology

English composition, complete sequence

Introduction to computers (high school or college)

**Recommended course work**

Speech

**Required minimum grade**

All course work must have a grade of C (2.0) or better.

**Professional eligibility**

Upon completion of the program, graduates are eligible to pursue all credentialing examinations offered by the National Board for Respiratory Care (NBRC). Inquiries to NBRC can be made to 8310 Nieman Road, Lenexa, KS 66214-1579; telephone 913/599-4200; e-mail: <nbrc-info@nbrc.org>; or Web site <<http://www.nbrc.org>>.

**PROGRAM OF INSTRUCTION**

<b>YEAR ONE</b>	<b>(Course work to be taken while in the B.S. degree program)</b>	
RSTH 304	Cardiopulmonary Anatomy and Physiology	(4)
RSTH 323	Pulmonary Function Methodology	(3)
RSTH 331	Pharmacology I	(2)
RSTH 332	Pharmacology II	(2)
RSTH 341	Respiratory Therapy Science I	(5)
RSTH 342	Respiratory Therapy Science II	(5)
RSTH 343	Respiratory Therapy Science III	(4)
RSTH 354	Case Studies in Adult Respiratory Care	(2)
RSTH 366	Diagnostic Techniques	(3)
RSTH 381	Cardiopulmonary Diseases I	(2)
RSTH 382	Cardiopulmonary Diseases II	(2)
RSTH 391	Respiratory Care Practicum I	(2)
RSTH 392	Respiratory Care Practicum II	(2)
RSTH 393	Respiratory Care Practicum III	(4)
RSTH 404	Critical Care	(4)
AHCJ 305	HIV/AIDS and the Health Provider	(1)

AHCJ 311	Medical Terminology I	(2)
AHCJ 326	Patient-Care Methods	(2)
EMMC 316	12-Lead ECG Interpretation	(2)

**YEAR TWO**

RSTH 421	Perinatal and Pediatric Respiratory Care	(2)
RSTH 422	Advanced Perinatal and Pediatric Respiratory Care	(2)
RSTH 424	Exercise Physiology and Pulmonary Rehabilitation	(3)
RSTH 434	Advanced Patient Assessment	(2)
RSTH 441	Respiratory Therapy Science IV	(3)
RSTH 444	Case Studies in Neonatal/Pediatric Respiratory Care	(2)
RSTH 494	Respiratory Care Practicum IV	(2)
RSTH 495	Respiratory Care Practicum V	(2)
RSTH 496	Respiratory Care Practicum VI	(3)
EMMC 315	Cardiology	(3)
RELE 457	Christian Ethics and Health Care	(2)

**Equivalency examination/Evaluation of credit**

Applicants who have comparable education or experience may be able to gain credit toward the certificate by equivalency examination or evaluation of credit on an individual basis. Loma Linda University reserves the right to assess the respiratory care knowledge base and competencies of each applicant by assessment examination(s).

**A LOMA LINDA UNIVERSITY GRADE-POINT AVERAGE OF C (2.0) IS REQUIRED FOR ALL COURSES IN THE PROGRAM.**

(See Section V for course descriptions).

**School Counseling—ST  
(PB certificate)**

IAN CHAND, Director of Clinical Training

CHERYL SIMPSON, Program Coordinator for School Counseling Certificate and M.S. in counseling

**FACULTY**

Jennifer Andrews  
Gerald Corey  
Lolita Domingue  
Curtis Fox  
Suzanne Hanna  
Douglas Huenergardt  
Carmen Knudson-Martin  
Craig Lambdin  
Randall Lee Roberts  
Cheryl Simpson  
Randall Walker  
Colwick Wilson

**PROGRAM FACULTY**

Karen Carlson  
Lynne Hattendorf

Gayle Helenski  
Sandra May-Leggitt  
Claudia Ronaldson  
Lorraine Thompson

### SCHOOL COUNSELING CERTIFICATE

The School Counseling Certificate Program is one of two programs in the School of Science and Technology's Department of Counseling and Family Sciences, offered through the Department of Marital and Family Therapy, leading to school counselor certification. School counseling programs are accredited by the California Commission on Teacher Credentialing within the California State Department of Education. Students enrolled in the M. S. degree in marital and family therapy must enroll for an additional 25 units and 600 hours of field experience in school counseling. In addition, they must successfully complete all published program requirements to qualify for the pupil personnel services (PPS) credential in school counseling. Students enrolled in department's Master of Science degree in counseling may also qualify for this credential.

School counseling began as a profession in the early 1900s when vocational guidance emerged as a response to America's industrial revolution and to the advisement needs of veterans with educational benefits. Over the next century, school counselors became an integral part of the mental health community as more responsibility for at-risk children, adolescents, and young adults was shifted to educational institutions. Today, more than ever, students are in need of support as they maximize their potential to serve an ever changing world.

### ACCREDITATION AND ADVISORY BOARD

The School Counseling Certificate Program is accredited by the Western Association of Schools and Colleges (WASC) and by the California Commission on Teacher Credentialing (CCTC) governed by the State Department of Education in Sacramento, California. The program is also guided by an advisory board of professionals who are actively employed in local school districts and who serve as contract instructors as needed.

### THE PROGRAM

#### General admission and program information

Students are admitted in Fall and Winter quarters. With special permission, a student may be permitted to enter Spring or Summer Quarter. Program requirements for admission are as follows:

- Applicants must be enrolled in Loma Linda University's M.S. in marital and family therapy degree program or graduated from an accredited master's degree program in marital and family therapy. Applications must be submitted to the Dean of the School of Science and Technology in accordance with published policies.
- Applicants must have a bachelor's degree from a regionally accredited institution in any field.
- Candidates must have a minimum 3.0 grade point average (on a 4-point scale) for the last 45 quarter

credits (30 semester units) of course work completed before applying for admission.

- Applicants must submit two letters of recommendation supporting admission to graduate work in school counseling. Letters will not be accepted from relatives or friends.
- Verification of state health and criminal clearance must be on file with the department prior to application for field placement.
- Candidates must take the California Test of Basic Skills (CBEST) no later than the second quarter following enrollment. A passing score on all sections is required for the Pupil Personnel Services (PPS) credential in School Counseling and must be on file with the department prior to candidate recommendation to the state.
- Candidates must apply for field experience and meet all prerequisites outlined in the field experience manual prior to placement.
- Candidates will take a comprehensive examination.

#### Institutional and interdisciplinary fit

Guided by the University's mission of whole-person health care, California's new standards for school counseling, and the expanding nature of professional collaboration in mental health, school counseling curriculum has been organized into the following three domains:

- I. Educational foundations and belief systems,
- II. Theoretical and cognitive competence,
- III. Counseling competence and commitment to service.

Graduate students are expected to combine the knowledge and skills learned in these domains with an understanding of the University's mission to formulate a well thought-out, clearly articulated personal belief system that embodies the student's ethical values. Development of this personal epistemology requires that the student examine his or her understanding of the sources of meaning, purpose, hope, and practice. These issues include the following:

- Beliefs about the nature, origin, and future of humans
- Equality and inclusion
- Honoring personal and cultural values with sensitivity toward diversity
- Relationships to transitions and communities of faith
- Integrity toward self and others
- Sources of strength and renewal
- Generosity of spirit
- Competence and conscientiousness

#### CURRICULUM DOMAIN I:

##### Educational foundations and belief systems

Foundational courses in learning theory, educational psychology, sociocultural competence, research, and statistics are considered foundational to building competence as a school counselor.

These foundational courses include the following.

COUN 501 or MFAM 501 Research Tools and Methodology I: Quantitative (3)

COUN 502 or MFAM 502 Research Tools and Methodology II: Qualitative	(3)
COUN 545 or MFAM 545 Gender Perspectives	(2)
COUN 547 or MFAM 547 Social Ecology of Individual and Family Development	(3)
*COUN 574 Psychological Foundations of Education	(4)
MFAM 535 Case Presentation and Professional Studies	(4)
RELR 564 Religion, Marriage and the Family	(3)
Prerequisite: Statistics	(3)

**CURRICULUM DOMAIN II:****Theory and cognitive competence**

Candidates are challenged with a variety of theoretical constructs from which to develop an approach to counseling that is compatible with their own belief systems and personhood. They are expected to learn how to deconstruct theories, critically evaluate them, and create a foundation upon which to build their professional skills and relationships. The courses that address theoretical dimensions include:

*COUN 575 Counseling Theory and Applications	(3)
COUN 556 or MFAM 556 Psychopathology and Diagnostic Procedures	(3)
COUN 568 or MFAM 568 Groups: Process and Practice	(3)
*COUN 576 Exceptional and Medically Challenged Children	(3)
*COUN 577 Assessment in Counseling	(3)
COUN 584 or MFAM 584 Advanced Child and Adolescent Development	(3)
COUN 674 or MFAM 674 Human Sexual Behavior	(3)
Prerequisite: Statistics	(3)

**CURRICULUM DOMAIN III:****Counseling competence and commitment to service**

The counseling program is based on the assumption that counseling competence develops from the foundational knowledge, personal epistemologies and theoretical understandings learned in curriculum domains I and II. Another assumption is that competence embraces the concept of service. Activities involving case study and field experience are designed to emphasize service and the development of altruism. By helping K-12 pupils sense the dimensions of personal need and worth in others, candidates grow in their ability to respond with compassion and empathy and cultural competence. As educators, school counselors help K-12 students in their personal development, career preparation, and academic achievement in order to become lifelong learners. Courses include:

COUN 515 or MFAM 515 Crisis Intervention Counseling	(3)
*COUN 578 College and Career Counseling	(3)
*COUN 678 Consultation and Leadership	(3)
*COUN 679 School Counseling: History and Practice	(3)
COUN 614 or MFAM 614 Law and Ethics	(3)

COUN 624 or MFAM 624 Individual and Systems Assessment	(3)
COUN 638 or MFAM 638 Family Therapy and Chemical Abuse	(3)
COUN 644 or MFAM 644 Child Abuse and Family Violence	(3)
*COUN 680A/B/C/D Field Experience and Supervision in School Counseling	(600 hours including 400 done in public schools) (3)

\*Asterisk indicates School Counseling Certificate/Credential courses that must be taken in addition to the requirements for the M.S. degree in marital and family therapy.

## Social Policy and Social Research—ST (Ph.D.)

BEVERLY J. BUCKLES, Program Coordinator

The Social Policy and Research Program offered by the School of Science and Technology, extends the distinctive principles of whole-person care beyond the individual to include the care of communities and social institutions. Students are provided with an integrative approach to an advanced curriculum in social science, social policy, Christian ethics, and social research. Emphasis is placed on providing students with the theoretical and methodological knowledge and professional skills needed to conduct innovative and interdisciplinary research. Graduates of the program are prepared for advanced administrative and research roles in national and international health and human services, policy development and analysis, and education.

**Admission requirements**

Admission to the program is governed by the policies and procedures established by the School of Science and Technology. Admission requirements to the doctoral program include:

- Master's degree from an accredited institution of higher education. Examples would include such disciplines as social work (M.S.W.), nursing (M.S.), business (M.B.A.), public health (M.P.H.), education (M.Ed.), and the ministry (M.Div.);
- Evidence of adequate academic preparation in graduate education. This includes a minimum cumulative G.P.A. of 3.0 (4.0 scale) for graduate/postgraduate work;
- Strong intellectual abilities, including a background in social science and statistics;
- Commitment to advancing knowledge and research related to social policy;
- Professional experience and achievement that demonstrates competence, organization, leadership, and motivation to complete doctoral education in a timely manner;
- Personal interview;

- Sample of writing in the form of a published article, academic or professional research paper, or an essay prepared for admission to the program;
- Satisfactory performance on the Graduate Record Examination (GRE), defined as a minimum verbal and quantitative score of 1000, and an analytical writing score of 4.0 for admission with regular status. Students with lower scores may be considered for provisional status.); and
- Curriculum vitae or other description of education and employment history.

#### Program of study

The program is structured around three primary requirements: course work, comprehensive examinations, and the dissertation.

### CORE CURRICULUM— SOCIAL SCIENCE, SOCIAL POLICY, AND CHRISTIAN ETHICS (33 units)

The required core courses in social policy analysis emphasize the distinctive concepts, theories, and models of the various social science disciplines, ethical theory, and Christian theology. These courses are designed to strengthen the student's interdisciplinary perspectives and integrative skills as applied to common social policy problem. Nine courses are required.

#### Social science (12 units)

SPOL 614	Social Science Concepts and Theories	(4)
SPOL 615	Economic Theory and Social Policy	(4)
SPOL 624	Nature/Society Thought and Social Policy	(4)

#### Social policy (9 units)

SOWK 683	Advanced Policy Practice	(3)
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Two courses in a selected area of social-policy specialization (6)

#### Christian ethics (12 units)

RELF 557	Theology of Human Suffering	(4)
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or  
an approved RELF course selected in consultation with the graduate advisor.

RELE 588	Philosophical Ethics	(4)
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or  
an approved RELE course selected in consultation with the graduate adviser.

RELR 528	Christian Citizenship and Leadership	(4)
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or  
an approved RELR course selected in consultation with the graduate adviser

### Social Work—ST (M.S.W., Ph.D.)

JAMES F. DYER, JR., Program Coordinator, M.S.W.

DIANNA SIMON, Program Coordinator, Ph.D.

#### FACULTY

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Terrence J. Forrester  
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G. Victoria Jackson  
Sigrid James  
Julia Lambson  
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William Loveless  
Froylana Miller  
John Ryan  
Christiane Schubert  
Dianna Simon  
Frank Tetley  
Ignatius I. Yacoub  
Debbie Wright

The profession of social work centers on the improvement of the quality of life for people and the enhancement of human potential for full productive participation in society. With this philosophy at its core, the master's degree in Social Work Program offered by the School of Science and Technology emphasizes ecological systems, a perspective that focuses on the interaction of a person or system in relation to his/her environment. Reflecting this stance is Loma Linda University's philosophy, "To Make Man Whole," and its heritage as an international leader in the delivery of services in health care and related facilities. It is the combination of these influences that has guided the development of the foundation curriculum, professional concentrations, and selection of practicum sites for the Master of Social Work Program.

#### SOCIAL WORK—M.S.W.

##### Mission

The mission of the Master of Social Work Program is to prepare competent, ethical, and compassionate social work professionals who will possess the knowledge, values, and skills to equip them for a dedicated life of advanced practice in health and mental health institutions and agencies.

##### Goals

The goals of the Master of Social Work Program are:

- To provide quality graduate social work education that instills in students the common knowledge, ethics, values, and skills of the profession;
- To provide a foundation curriculum to support students' development and application of a generalist practice;
- To provide quality graduate social work education that instills in students respect for diversity, populations at risk, and the promotion of social and economic justice;
- To provide advanced curricula in behavioral health concentrations in clinical social work practice, and policy planning and administration;

- To strengthen the student's academic experience through strong collaborations with area agencies and institutions;
- To be responsive in addressing the educational needs of social work in health and mental health institutions and agencies in the surrounding community; and
- To express through curriculum and co-curricular activities the University's mission of wholeness.

**Accreditation**

The Master of Social Work Program is accredited by the Council on Social Work Education to provide graduate-level social work education.

**PREREQUISITE**

Graduate social work education builds on a broad liberal arts (general education) foundation. The program assesses the liberal arts foundation of students applying to the M.S.W. degree program from two perspectives: \*

**1. Foundation concepts and/or skills in each of the following:**

- Interviewing and counseling (3)
- Human biology: (3)
- Human growth and development\* (3)
- Cross-cultural issues (3)
- Introductory statistics (3)

Unit values represent the quarter system of measurement. Content from multiple courses may be used to meet most requirements.

**2. A balance of course work in four liberal arts areas:**

- Humanities (e.g., history, philosophy, literature, art, music, etc.) (20-24)
- English and communication skills (e.g., oral and written communication media, etc.) (8-12)
- Mathematics and natural sciences (e.g., mathematics, human biology, physiology, etc.) (12-16)
- Social sciences (e.g., psychology, sociology, anthropology, human development, ethnic studies, economics, political science or government, etc.) (12-16)

Students not meeting the minimum number of units in any of the foregoing areas are required to complete additional course work prior to enrolling in the related M.S.W. classes.

Table 1 outlines the time frame for completion of prerequisites.

Note: All prerequisite requirements must be completed before advancement to candidacy (prior to beginning the advanced curriculum).

**TABLE 1  
SEQUENCING OF PREREQUISITE  
REQUIREMENTS**

<b>Courses</b>	<b>Time/place</b>
Interviewing and counseling	Prior to SOWK 578 and 757A-C
Human development	Prior to SOWK 511, 512
Cross-cultural issues	Prior to SOWK 511, 512

Human biology Prior to SOWK 511, 512  
Introductory statistics Prior to SOWK 549

**Admission requirements**

Following are the admission requirements for the Master of Social Work Program:

- Applicants must have a bachelor's degree from an accredited university or college (official transcripts are evidence of courses completed). The department assesses the liberal arts preparation of each of its applicants in two areas:
  - (a) the balance of course work in four broad liberal arts areas, and
  - (b) specific course work considered preparatory to the program's foundation (first year) courses (see also Liberal Arts Requirements in *M.S.W. Student Handbook*).
- Applicants must submit a completed application, including a personal statement, application fee, all college and/or university transcripts, and three letters of recommendation at least (one from an academic source and one from a work supervisor).
- Applicants must meet the minimum academic and professional compatibility criteria established by the program, which includes:
- Applicants must have a cumulative grade point average of 3.0 or above (on a 4.0 scale) (special consideration may be given to applicants with grade point averages as low as 2.85 if the last part of their college work shows significant improvement). Applicants whose cumulative grade point average does not meet the minimum requirements stated above may receive further consideration for admission to the M.S.W. program by providing a satisfactory GRE score, or two years related employment experience. Work experience must be verified by employers' statements on official agency stationery.
- Applicants must show evidence of professional compatibility, personal qualifications and motivation to complete a graduate program by obtaining a passing score on the admissions interview with the Department's Admissions Committee. Evaluation criteria for the interview includes:
  - verbal communication skills;
  - critical thinking ability;
  - values congruent with the social work profession;
  - appreciation of human diversity
  - evidence of reflective learning; and
  - comportment.

No academic credit is given for life experience or previous work experience for any part for the Master of Social Work program (i.e., field practicum or courses in the professional foundation or advanced curricula).

**Curriculum**

The 78-unit curriculum of the M.S.W. degree program provides the mix of academic, experiential, and research experiences essential for M.S.W. degree students. Students must maintain a program grade-point average of 3.0 (or a letter grade of B on a 4.0 scale) and meet the knowledge, skill, and professional per-

formance competencies outlined by the program. The minimum acceptable grade for required (core) courses is a B- (2.7). Grades in selective courses must be a minimum of a C (2.0). Courses with grades falling below the standards set for required and selective courses must be repeated. Students are financially responsible for the cost of repeating courses where grades obtained do not meet the minimum standards.

### General overview

The program begins with the professional foundation content (first-year courses) common to all graduate social work education. Courses during this first year of study provide content in human behavior in a cross-cultural environment, social welfare policy and services, practice theory and skills, social research, and practica. These content areas are strengthened by the integration of social work values and ethics; as well as knowledge of special populations (i.e., issues of gender, race, class, disability, and oppression).

### Program options

Alternate program options have been designed to address the varying needs of students. As such, the program offers a full-time two-year option, a three-year part-time option, and a four-year part-time option.

### Advanced standing

The M.S.W. degree program does not admit students with advanced standing. Rather, it recognizes the knowledge and skills of individuals who have received a baccalaureate degree from an accredited social work program. This recognition indicates that the candidate may have already met the proficiency outcomes expected of M.S.W. degree students who have completed the foundation curriculum. Such candidates may transfer up to 30 course units of first-year course work and 280 hours of first-year field practicum. Criterion for course transfers is available through the department. The curriculum for students who are granted these transfers still requires two academic years of residency. The students will have additional time to complete their thesis or advanced research course work for socialization into the profession, as well as opportunity to take advantage of the rich interdisciplinary options available at Loma Linda University. Students may petition to accelerate the completion of the M.S.W. degree with a minimum of four quarters in full-time residence. The unit load for each of these quarters cannot exceed 15 units, nor are students allowed to transfer foundation courses when content is required by California state law. In addition, students who have difficulty applying foundation skills in their practicum (regardless of their baccalaureate degree) may have course transfers revoked or denied.

### Transfer students

Individuals transferring from other accredited M.S.W. degree programs may transfer units for didactic course work in accordance with University policy. Field practicum experiences are nontransferable.

### M.S.W. degree advanced curriculum

The advanced curriculum of the program begins with course work that supports integration of the foundational first year with the program's advanced curriculum. As part of the advanced curriculum, students

take core courses required of all students and then select one of two concentrations.

## PROFESSIONAL CONCENTRATIONS IN BEHAVIORAL HEALTH

The Social Work Program offers two concentrations for professional practice, which are the focus of the second-year study: clinical practice; and policy, planning, and administration.

### Clinical-practice concentration

The clinical-practice concentration requires mastery of advanced-practice roles, modes of intervention, and methods used in clinical health and mental health settings. Study includes the integration of clinical-practice theories, diagnostic assessment, problem-solving skills and techniques; as well as the impact of policy upon the availability of treatment, treatment modalities, and expectation of outcomes. Students' experiences and knowledge are expanded through the selection of practicum sites and selectives concerning special population and problem areas. These include, but are not limited to, children at risk, geriatric dilemmas, mental disorders, substance abuse, and family conflict. The integration of cultural diversity as a factor guiding the analysis and intervention with clinical populations is incorporated into the totality of the concentration.

### Policy, planning, and administration concentration

The policy, planning, and administration concentration is designed to prepare students for management roles in health and mental-health care organizations. It focuses on giving students understanding and skill in:

- interdisciplinary practice;
- systems establishment and maintenance to assist individuals, families, and groups managing health and illness in context of the life cycle;
- social change promotion in health and mental health care organizations; and
- health and mental health policy analysis.

In this way, students have an opportunity to integrate and explore health and mental-health practices and policies from their underlying value base; and to explore the impact of cultural definitions on health, illness, and systems designs.

## CENTRAL ACADEMIC PROCESSES AND COGNATES

### Professional practica

Professional practica experiences (field practica) are regarded as an integral part of the M.S.W. degree program because these offer students opportunities to integrate and apply theoretical and research knowledge with social work practice and intervention skills in institutional or agency settings. Practica are designed (and selected) to provide maximum learning opportunities under the supervision of a qualified field instructor. As such, experiences are patterned to build upon one another, presenting the increasing challenges present in the continuum of generalist to advanced social work practice. Students complete 21 units of professional practica—which includes 1,080 hours of

field work in a qualified setting and 120 hours of concurrent integrated seminar for a total of 1,200 hours.

Emphasis during SOWK 757A,B,C Professional Foundation Practicum and Seminar (9 professional practica units requiring 480 hours of practicum and 60 hours of seminar) is placed on achieving generalist social work knowledge, values, and skills, including developing rapport with agency personnel and clients, acquiring interviewing skills, and obtaining beginning-level psychosocial assessment and intervention capabilities. The content of the concurrent seminar further supports this perspective as it provides students with opportunities to integrate their practicum experiences with their developing professional identity.

The SOWK 787A,B,C Advanced Professional Practicum and Seminar (12 units of professional practica units requiring 600 hours of practicum and 60 hours of seminar) reflect students' choice of concentration and provide the depth and breadth of learning opportunities that underpin the acquisition of advanced-practice capabilities. More specifically, advanced professional practica experiences are expected to promote increased insight and understanding of agency and/or client systems as these build on the professional foundation skills achieved during the first year of study.

### Research

The M.S.W. degree program includes completion of course work in applied research. An individually authored thesis option is available for students meeting program criteria. These study options aim to develop knowledge for the advancement of social work practice and provide guided experiences in the conduct of research applicable to a variety of professional and academic settings. Guidelines for these options are provided by the School of Science and Technology and the department.

### Professional foundation processes and cognates

Two academic review processes take place during the first year of the M.S.W. degree program. These are:

#### 1. M.S.W. advancement G.P.A.

The M.S.W. advancement G.P.A. provides an initial predictor used for gatekeeping. The first 12 units completed towards the M.S.W. degree, including units acquired during nonmatriculation, must be completed with a G.P.A. of 3.0. Students who fail to achieve at this level may be dismissed from school. Students receive orientation to the process and requirements of the M.S.W. advancement G.P.A. during the student orientation conducted prior to the Fall Quarter.

#### 2. Qualifying review

When all foundation course work is completed, students are required to pass the program's qualifying review. The intent of this process is to:

- assist faculty and students in assessment of strengths and areas for improvement;
- provide feedback;
- foster an environment of self-evaluation; and
- encourage heightened participation in individualized academic development.

Ultimately, the results of this review help both the student and faculty to develop learning objectives for

the concentration year. A specific orientation is held to explain the expectations, format, and scheduling of the qualifying review process.

### Advanced curriculum cognate—wholeness portfolio

All students complete a wholeness portfolio during SOWK 787A,B,C Advanced Professional Practicum and Seminar. This review of the student's individualized objectives and professional development during the second year of study—combined with a discussion of his/her plans for employment and further growth—is seen as a capstone academic experience that facilitates closure and the final stage of reflection and review in the development of a scholar-practitioner.

### PROGRAM OF STUDY

#### Professional foundation courses (required of all students) (40)

RELE 522	Bioethics for Social Work	(4)
GSCJ 515	Graduate Research Writing	(2)
SOWK 511	Human Behavior in a Cross-cultural Environment I*	(3)
SOWK 512	Human Behavior in a Cross-cultural Environment II*	(3)
SOWK 515	Social Policy I*	(3)
SOWK 615	Social Policy II*	(3)
SOWK 547	Research Methods I*	(3)
SOWK 549	Research Methods II*	(3)
SOWK 517	Foundation Practice I: Individuals*	(3)
SOWK 518	Foundation Practice II: Groups*	(3)
SOWK 519	Foundation Practice III: Organizations and Communities*	(3)
SOWK 520	Foundation Practice IV: Families	(3)
SOWK 671	Foundation Practice V: Social Work Administration*	(3)
SOWK 578	Field Orientation	(1)

(\*Indicates courses eligible for waiver by students with a B.S.W. degree accredited by CSWE. University policies regarding time limits for transfer credits apply.)

#### Professional foundation cognates (required of all students)

SOWK 757A,B,C Professional Foundation Practicum and Seminar	(3, 3, 3)
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[Professional practicum and seminar units not calculated into degree units. Students pay program fees for professional practicum units instead of tuition.]

#### Qualifying review

(required of all students following the completion of foundation courses and SOWK 757 A,B,C.)

#### ADVANCED CURRICULUM (required of all students) (38)

SOWK 613	Human Behavior in a Cross-cultural Environment III	(3)
SOWK 660	Advanced Theory and Practice for Working with Ethnically Diverse Clients	(3)

- SOWK 682 Legal and Ethical Aspects of Health and Mental Health (3)  
 SOWK 695A,B,C Advanced Research Methods (2, 2, 2)

**Thesis option is available for students meeting program criteria.**

- Policy selective (see selective options) (2)  
 General selectives (see selective options and restrictions) (2, 2, 2)

### Concentrations

(students take courses in one of the following concentrations)

#### Clinical practice

- SOWK 661 Time-Limited Services and Interventions (3)  
 SOWK 663 Advanced Social Work Practice with Individuals (3)  
 SOWK 665 Advanced Social Work Practice with Groups (3)  
 SOWK 667 Advanced Integrative Practice (3)  
 SOWK 675 Supervision (3)

#### Policy, planning, and administration

- SOWK 672 Organizations and Systems (3)  
 SOWK 673 Program Planning and Evaluation (3)  
 SOWK 676A Human Resources Planning and Development (3)  
 SOWK 676B Human Resource Planning and Development Seminar (3)  
 SOWK 683 Advanced Policy Practice (3)

#### Advanced curriculum cognates (required of all students)

SOWK 787A,B,C Advanced Professional Practicum and Seminar (4, 4, 4)  
 Professional practicum and seminar units not calculated into degree units. Students pay program fees for professional practicum units instead of tuition.

#### Wholeness portfolio

(completed by all students during SOWK 787A,B,C.)

#### Selective courses

(All students take a total of 8 units of selectives, including a 2-unit policy selective. Students receiving specialized grant funding should check with program for additional requirements and/or restrictions on selective choices.)

#### Policy selective

- (All students must take *one* of the following to meet the policy selective requirement.)  
 SOWK 680 Children and Families Policies and Services (2)  
 SOWK 681 Health and Mental Health Policies and Services (2)

#### General selective courses

Students choose 6 units of selectives that support their concentration and areas of interest. Students choose selectives from the following categories.

#### Population groups

- SOWK 650 Treatment with Children and Adolescents in Trauma (2)  
 SOWK 652 Social Problems within Minority Populations\*\* (2)  
 SOWK 653 Interventions with Special-Needs Children (2)  
 SOWK 654 Therapeutic Interventions with Older Adults (2)  
 SOWK 658 Children's Psychotherapy (2)  
 SOWK 659 Interventions with the Chronically Mentally Ill (2)  
 SOWK 666 Women's Clinical Issues and Treatment\*\* (2)  
 SOWK 668 Men's Clinical Issues and Treatment\*\* (2)  
 SOWK 669 Child and Adolescent Clinical Issues and Treatment (2)  
 MFAM 638 Family Therapy and Chemical Abuse (2)  
 MFAM 658 Reality Family Therapy (2)  
 MFAM 664 Family Therapy and Child Abuse (2)  
 MFAM 665 Structural Family Therapy (2)

#### Problem areas

- SOWK 649 Social Work and Health Care (2)  
 SOWK 651 Health Care Interventions with High-Risk Families and Communities (2)  
 SOWK 656 Religion and Spirituality in Direct Practice (2)  
 SOWK 674 Fiscal and Information Management\*\* (2)  
 SOWK 676B Human Resources Planning and Development Seminar (2)  
 SOWK 677 Advanced Integrative Seminar in Psychotherapy (2)  
 SOWK 684 Advanced Policy Project\*\* (2)  
 SOWK 685 International Environment of Social Welfare (2)

**\*\*Courses offered as special sessions, depending on student interest and minimum enrollment.**

Note: Students wishing to take courses that are not included in the above list of approved selectives must obtain an academic variance through the department's Academic Standards Committee prior to enrolling in the course.

## CLINICAL SOCIAL WORK—PH.D.

The School of Science and Technology's Department of Social Work and Social Ecology is an interdisciplinary academic unit committed to the University's mission of human wholeness and to the belief that one's fullest development is achieved when all aspects of an individual's life are in balance. Both conceptually and pragmatically the programs in the Department of Social Work and Social Ecology are guided by an overarching ecological (bio-psycho-social-spiritual) perspective that employs scientific methods of problem analysis and program design. A key component in this framework is the importance of considering the relationships among behavioral, sociopolitical, economic,

and environmental problems. The result is an interdisciplinary teaching, learning, and practice environment designed to create interventions that will improve the functions of the individuals, families, groups, organizations, and communities. As such, priority has been given to creating an academic milieu favorable to educating competent, ethical, and compassionate professionals and scholars who are capable of respecting and addressing the needs of diverse populations.

#### Mission and objectives

This doctoral program aims to provide social workers with advanced knowledge to become researchers, educators, and clinicians capable of applying this knowledge to every practice context in professional clinical social work. It purposefully instills a high appreciation for knowledge development and dissemination, and demonstrates respect and appreciation for the needs and issues inherent in human diversity, promotion of social and economic justice, and clinical populations-at-risk.

- To prepare graduates for leadership roles in social work education.
- To prepare graduates to analyze clinical issues and treatment alternatives as a basis for decision-making; and
- To prepare graduates to be researchers engaged in the development of knowledge regarding the biopsychosocial-spiritual dynamics of human behavior.

#### Admission requirements

The Clinical Social Work Program is open to students who demonstrate leadership and scholarly potential. Admission to the program is governed by the policies and procedures established by the School of Science and Technology. An admission committee of social work faculty oversees the admission process, reviews applications and recommends students for admission to the program. Admission requirements to the doctoral program include:

- Master's degree in social work from an accredited institution of higher education.
- A minimum cumulative G.P.A. of 3.0 (4.0 scale) for graduate/postgraduate work.
- Commitment to advancing knowledge and research related to clinical social work.
- Professional experience and achievement that demonstrates competence, organization, leadership, and motivation to complete doctoral education in a timely manner.
- Personal interview; geographical circumstances may determine an individualized process.
- A sample of writing regarding a clinical treatment topic in the form of a published article, academic or professional research paper, or an essay prepared for admission to the program.
- Satisfactory performance on the Graduate Record Examination (GRE) defined as a minimum combined verbal and quantitative score of 1000, and an analytical writing score of 4.0 for admission with regular status. Students with lower scores may be considered for provisional status.); and
- Curriculum vitae or other description of education, employment history, and experience in clinical practice.

- Prerequisite preparation. If an applicant has not had adequate clinical treatment experience, additional clinical course work of 6-12 units will be required. (Students needing to meet this requirement take CSWK 688 Clinical Treatment Practicum)

#### Transfer credits

As master's level clinical training is a prerequisite for admission to this program, transfer of previous course work is limited.

#### Program of study

This program is structured around three primary requirements: course work, comprehensive examinations, and dissertation. The Ph.D. in clinical social work degree requires a minimum of 104 credit units beyond the M.S.W. The curriculum is designed to accommodate the needs of college and university faculty. The program should be completed in three consecutive summers consisting of two 6-week sessions. A more traditional curriculum model is also available that allows students to take some research and ethics courses during the regular academic year. Students can obtain curriculum planning guides for the both program options from the program coordinator.

### CORE CURRICULUM

<b>Research methods, statistics</b>		<b>(68 units)</b>
PSYC 501	Advanced Statistics I	(4)
PSYC 502	Advanced Statistics II	(4)
PSYC 503	Advanced Multivariate Statistics III	(4)
SPOL 654	Qualitative Research Methods	(4)
SPOL 655	Quantitative Research Methods	(4)
CSWK/SPOL 671, 672, 673 Research Orientation		(2, 2, 2)
CSWK/SPOL 681, 682, 683 Research Seminar		(2, 2, 2)
CSWK/SPOL 697 Research		(24)
CSWK/SPOL 699 Dissertation		(12)

#### Requirements incorporated into the research cognates:

Successful completion of a written qualifying examination  
 Successful completion of a dissertation proposal  
 Successful oral defense of a completed dissertation

<b>Theory</b>		<b>(6 units)</b>
CSWK 676	Advanced Clinical Theory I: Psychoanalytic and Attachment	(3)
CSWK 677	Advanced Clinical Theory II: Ego Psychology, Self Psychology, and Object Relations	(3)

#### Clinical social work

		<b>(12 units)</b>
CSWK 684	Advanced Developmental Psychopathology I: Children and Adolescents	(3)
CSWK 685	Advanced Developmental Psychopathology II: Adult Lifespan	(3)
CSWK 686	Advanced Clinical Practice: Clinical Assessment, Diagnosis, and Paradigms of Practice	(3)
CSWK 687	Methods of Teaching and Evaluation in Clinical Social Work Education	(3)

**Philosophy and clinical ethics (12 units)**

RELR 535	Spirituality and Mental Health	(4)
RELE 505	Clinical Ethics	(4)
RELR 568	Care of the Dying and Bereaved or	(4)
RELR 584	Culture, Psychology and Religion	(4)

**Selective courses (6 units)**

CSWK 688	Independent Study in Clinical Social Work	(1-6)
SOWK 648	Dual Diagnosis	(2)
SOWK 677	Advanced Integrative Seminar in Psychotherapy	(2)
PSYC 511	Psychometric Foundations	(2)
PSYC 604	Advance Topics in Multivariate Analysis	(2)
PSYC 512	Assessment I	(2)
PSYC 574	Personality Theory and Research	(4)
PSYC 544	Foundations of Learning and Behavior	(4)
PSYC 545	Cognitive Foundations	(4)
PSYC 567	Ethnic Diversity and Community Issues	(2)
PSYC 556	Biofeedback	(4)
PSYC 568	Sex Roles and Gender Issues	(2)
MFAM 548	Men and Families	(2)
MFAM 644	Child Abuse and Family Violence	(3)
MFAM 669	Human Sexual Behavior	(3)
STAT 515	Grant and Contract Proposal Writing	(2)
INTH 518	Women in Development	(3)
INTH 519	Disaster Management	(3)
INTH 526	Population Dynamics	(2)
INTH 547	Refugee Health	(3)
RELR 525	Health Care and the Dynamics of Christian Leadership	(3)
RELR 556	Seventh-day Adventist Polity	(3)
RELR 559	Church Leadership and Administration	(3)
AHCJ 556	Faculty Procedures: Selection, Development and Evaluation	(3)

**Qualifying examination**

Students must pass a qualifying examination that consists of three parts: written comprehensive examination usually taken at the completion of all clinical course work; a research theory paper; and a research methodology paper.

**Candidacy**

Students who successfully complete all course work and pass the qualifying examination apply for Ph.D. candidacy. The candidacy period is spent in full-time dissertation research.

**Dissertation**

The candidate will, under the direction of a guidance committee, satisfactorily:

- Complete a written dissertation proposal.
- Conduct a significant research project reflective of the guidelines of this program.
- Write the dissertation.
- Defend the dissertation at an oral examination.

## Spanish Studies for Health Care Professionals

CLARA RAMIREZ, Program Coordinator

Graduates of Loma Linda University have a long history of service, domestically and around the world. The purpose of this certificate program is to provide general education that articulates with community service, mission electives, or short mission trips in the United States and international settings. The certificate is consistent with WASC recommendations that baccalaureate programs actively foster an understanding of diversity and ensure breadth for all students in the areas of cultural, aesthetic, social, political, scientific, and technical knowledge expected of educated persons in this society. Course work in the cultural studies certificate enables the student to engage the population served at a deeper level than possible without skills in language and knowledge of Hispanic history, literature, and society. The theoretical, structured course in service learning provides a philosophical and theological basis for service, as well as an opportunity to reflect on and integrate the various components.

The 22-unit certificate is available only to students who are concurrently enrolled in a degree program of the University or to those who complete a minimum of 17 of the required 22-quarter units at Loma Linda University. For undergraduate students, the courses also contribute to meeting GE requirements. Courses include language (8 units); literature, history and social sciences (4 units); diversity (4 units); and a service-learning course. For the certificate in Spanish Studies, an immersion language and culture program is required, as well as an international service project with a Spanish-speaking population. The Christian-service course units are the two bookends of the certificate. The first unit includes a theoretical, theological, and philosophical basis for service and provides the outline for the portfolio. In the second unit, the student completes the portfolio that integrates and summarizes the entire experience.

Spanish-language proficiency at the high-elementary or low-intermediate level is required and will be assessed by examination. All courses except the capstone portfolio course are currently available on campus. For students concurrently enrolled in an LLU program, all courses may be transferred in except for RELR 404 Christian Service and the 80 clock hours of service learning. Spanish language, Spanish literature and history, and diversity courses must be taken for a letter grade, with a minimum G.P.A. of 2.0 for the certificate.

The certificate integrates the three core values of Loma Linda University to promote spiritual life and wholeness, diversity, and community service and global outreach. These three values are essential to the Loma Linda University experience.

**Spanish language (8 units)**

SPAN 101	Elementary Spanish I	(4)
SPAN 102	Elementary Spanish II	(4)
SPAN 103	Elementary Spanish Conversation and Composition	(4)

SPAN 201	Intermediate Spanish I	(4)
SPAN 202	Intermediate Spanish II	(4)
SPAN 203	Intermediate Spanish Conversation and Composition	(4)

**Immersion language and culture program (4 units)**

SPAN 123	Practicum in Spanish I	(4)
SPAN 128	Practicum in Spanish II	(4)
SPAN 129	Practicum in Spanish III	(4)

**Spanish literature, history (4 units)**

SPAN 118	Spanish Literature I	(4)
SPAN 119	Spanish Culture/Civilization	(4)
SPAN 122	Tradition and Paradox of Latin American Women	(4)

**Diversity (4 units)**

SPAN 430	Diversity in the Twenty-First Century (also counts as humanities credit)	(4)
ANTH 304	Biocultural Anthropology	(4)
ANTH 306	Language and Culture	(4)

**Service-learning/Clinical practice (2 units must include portfolio)**

RELR 404	Christian Service I	(1 or 2)
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**Service-learning experience 80 clock hours**

Service-learning courses and clinical practice provide an opportunity for students to serve in a Spanish-speaking community in California, elsewhere in the U.S., or abroad within their major.

All courses with the prefix of SPAN, ANTH, and RELR count as humanities credit for General Education.

## Special Imaging Technology—AH (CT/MRI certificate)

Steven L. Leber, Program Coordinator

**FACULTY**

The Special Imaging Technology Program (computed tomography/magnetic resonance imaging) is nine months in length. Technologists spend forty hours per week in a combination of clinical and didactic training.

**Computed tomography (CT)/magnetic resonance imaging (MRI)**

Students in the CT/MRI Special Imaging Program spend nine months in clinical and formal course work. Each student spends four and one-half months in each of the modalities. The program begins once a year, in Autumn Quarter (near the end of September). The clinical portion of the program consists of practical demonstrations in the use of CT and MRI equipment and an opportunity to participate, under close supervision, doing CT and MRI procedures.

**PREREQUISITE**

- Be an ARRT-registered radiologic technologist
- Be a certified radiologic technologist (CRT, state of California)
- Have current CPR certification

**Observation experience**

Sixteen hours of observation, eight hours each in CT and MRI, are required. A form to document this experience is provided in the application packet or may be obtained by calling the Department of Radiation Technology.

**Schedule**

The program is full time and requires forty hours per week of the student's time in clinical and didactic learning experience. Clinical rotations are normally scheduled during daytime hours, Monday through Friday; but several four-week evening rotations are required. Didactic classes are held once each week during daytime hours at Loma Linda University. Students at affiliated sites will be required to drive to the campus for classes each week. Students are given vacation, holiday, and sick time appropriate to the total length of the program.

**Professional registration and certification**

Upon completion of the didactic and clinical requirements of the program, students will receive their certificate of completion. Once the student has completed the competency requirements for the American Registry of Radiologic Technologists (ARRT), the student is eligible to write the qualifying examination for computed tomography and/or magnetic resonance imaging of the ARRT. It is possible that a student may not be able to complete all of the competencies now required by the ARRT. If this is the case, it is the responsibility of the student to find an appropriate site to finish the required competencies after completing the program before writing the ARRT examination.

**PROGRAM OF INSTRUCTION**

RTSI 361, 362	MRI Physics I, II	(2, 3)
RTSI 364	Patient Care in Special Imaging	(2)
RTSI 367	Cross-sectional Radiographic Anatomy	(3)
RTSI 369	CT Physics	(3)
RTSI 371-373	Special Imaging Affiliation I, II, III	(1, 1, 1)
RELE 457	Christian Ethics and Health Care	(2)

A minimum grade of C (2.0) is required for all courses in the program.

# Speech-Language Pathology/ and Audiology—AH

(A.S., speech-language pathology assistant;

B.S., speech-language pathology and audiology;

Post-B.S. certificate, speech-language pathology;

M.S., speech-language pathology)

JEAN B. LOWRY, Program Director for M.S. and Certificate programs, Speech Language Pathology

PAIGE SHAUGHNESSY, Academic Coordinator for Clinical Education, Speech-Language Pathology and Audiology Program

KAREN MAINESS, Program Director for Associate in Science, Speech-Language Pathology Assistant

## FACULTY

Melissa K. Backstrom-Gonzales  
 Noha S. Daher  
 Yoomi S. Kim  
 Keiko I. Khoo  
 Jean B. Lowry  
 Karen J. Mainess  
 Jan McFarland  
 Brian D. Sharp  
 Paige Shaughnessy  
 Susan Steffani

## FACULTY—M.S.

Melissa K. Backstrom Gonzales  
 Keiko I. Khoo  
 Paige S. Shaughnessy  
 Karen J. Mainess  
 Jan B. Mcfarland  
 Susan A. Steffani

Speech-language pathologists evaluate and treat children and adults with communication disorders. Difficulties in the areas of speech, language, fluency, swallowing, and voice are associated with a variety of disorders—including developmental delay, hearing impairment, cleft palate, cerebral palsy, stroke, and head injury. Audiologists are concerned with prevention, identification, assessment, and rehabilitation of hearing disorders. Students who choose these professions should have an interest in working with people.

Speech-language pathology assistants work under the direction of a qualified speech-language pathologist. The assistant's duties include conducting non-skilled therapeutic activities and assisting in therapy, as directed by the supervising speech-language pathologist.

## Opportunities

Employment opportunities for speech-language pathologists and audiologists exist in speech and hearing clinics, public schools, hospitals, universities,

health departments, skilled-nursing facilities, home-health agencies, rehabilitation centers, industry, and private practice. These environments allow for considerable flexibility relative to personal interest within the profession. There is ample opportunity for employment.

Employment opportunities for speech-language pathology assistants include working with children in schools; or with children and adults in private clinics, hospitals, or skilled-nursing facilities.

## Graduate program

A program leading to the Master of Science degree in speech-language pathology is described in this CATALOG.

## SPEECH-LANGUAGE PATHOLOGY—CERTIFICATE

### PREREQUISITE

Any individual with a bachelor's degree from an accredited institution is eligible for the certificate (prerequisite) program. This program permits completion of undergraduate prerequisites before entering the graduate program. The individual must have a bachelor's degree from an accredited institution, with a G.P.A. of 3.0; and GRE scores will be required before admission to the graduate program. It is recommended that the applicant take the GRE before applying to the certificate program. Completion of the certificate program does not guarantee admission into the graduate program.

### PROGRAM OF INSTRUCTION

SPPA 276	Communication across the Lifespan	(4)
SPPA 314	Language Analysis for Speech-Language Pathologists	(4)
SPPA 317	Acoustic and Physiological Phonetics	(2)
SPPA 318	Transcription Phonetics	(3)
SPPA 324	Language Disorders of Children	(4)
SPPA 334	Phonological and Articulation Disorders	(4)
SPPA 376	Anatomy of Speech-Hearing Mechanism	(4)
SPPA 424	Adult Language Pathology	(4)
SPPA 434	Disorders of Fluency	(2)
SPPA 435	Voice Disorders	(2)
SPPA 444	Organic Speech Disorders	(4)
SPPA 477	Bilingualism and Biculturalism II	(2)
SPPA 485	Procedures and Materials in Speech-Language Pathology	(4)
SPPA 486	Diagnostic Methods in Speech-Language Pathology	(4)

Students who plan to complete a Clinical Rehabilitative Services Credential—Language, Speech, and Hearing will need to take the following additional course:

PSYC 305	Psychological Foundations of Education	(4)
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NOTE: Students who plan to complete the requirements for the Certificate of Clinical Competence from the American Speech-Language-Hearing Association will need to have their undergraduate course work reviewed by the faculty adviser.

## SPEECH-LANGUAGE PATHOLOGY ASSISTANT—A.S.

The Speech-Language Pathology Assistant Program leads to the Associate in Science degree and prepares the student for professional registration as a speech-language pathology assistant (SLPA). The SLPA program at Loma Linda University is generally completed in two years. Students enter as sophomores, after having completed approximately one year of course work at any accredited college or university prior to acceptance into the program.

In January 2000, the State of California Board of Examiners in Speech-Language Pathology and Audiology, and the American Speech-Language-Hearing Association issued regulations for training, credentialing, licensing, and supervision for a new category of paraprofessional, i.e., the speech-language pathology assistant (SLPA). The program has been approved by the California State Department of Consumer Affairs and the Speech-Language Pathology and Audiology Board.

For more information, please contact the Department of Speech-Language Pathology and Audiology.

## SPEECH-LANGUAGE PATHOLOGY AND AUDIOLOGY—B.S.

The Speech-Language Pathology and Audiology Program, leading to the Bachelor of Science degree, begins with the Autumn Quarter of the junior year. The freshman and sophomore years, which are taken at an accredited college/university afford the fundamentals of a liberal education. The emphasis in the junior and senior years is on professional courses and practical experience.

### Clinical experience

Supervised clinical practicum is an integral part of the student's education. Completion of specific theoretical courses precedes placement for practicum. Clinical practicum is available for students who have a G.P.A. of 3.0 or above in the major courses.

### Accreditation

The program is approved by the Council on Academic Accreditation of the American Speech-Language-Hearing Association, 10801 Rockville Pike, Rockville MD 20852; telephone 301/897-5700.

### Preparation for credential

The Speech-Language Pathology and Audiology Program is approved by the Commission on Teacher Credentialing to prepare students for the California Clinical Rehabilitative Services Credential in Language, Speech, and Hearing. Requirements for this credential include the completion of specific academic and clinical work at the graduate level.

A student preparing for a career in California schools should consult the department regarding specific course and practicum requirements for this credential.

### The program objectives

Upon completion of the program, the graduate should be qualified to:

1. Demonstrate a basic knowledge of the human communication processes, including:
  - the anatomic and physiologic bases for the normal development and use of speech, language, and hearing;
  - the physical bases and processes of the production and perception of speech, language, and hearing;
  - the linguistic variables related to normal development of speech, language, and hearing.
2. Demonstrate a basic knowledge of the major types of human communication disorders.
3. Demonstrate ethical behavior in his/her personal and professional life.
4. Demonstrate a commitment to the communicatively handicapped community and to the betterment of humankind.

and

5. Seek employment for positions that require a college degree or are indirectly related to speech-language pathology and audiology.

or

6. Seek admission to a graduate program in speech-language pathology or audiology or related disciplines.

### Professional licensure and certification

In most states, including California, graduate study is required before entering the profession. After satisfactorily completing the Master of Science degree, the graduate is eligible to take the qualifying examination for licensure in the state of California and for the Certificate of Clinical Competence. After completing a one-year clinical fellowship, the graduate is eligible to apply for California licensure and for certification by the American Speech-Language-Hearing Association (ASHA).

### Student professional association

Students are eligible for membership in the National Student Speech-Language-Hearing Association. The student is encouraged to become a member, read the journals, and attend local meetings. The national office address is the National Student Speech-Language-Hearing Association, 10801 Rockville Pike, Rockville, MD 20852.

### Admission

To be eligible for admission, the applicant must have completed a minimum of 96 quarter units at an accredited college or university. The student completes—

- the General Education requirements and
- the speech-language pathology and audiology core. Electives to meet the needs of the individual student are selected from existing courses after consultation with the department chair.

**PREREQUISITE**

Select a minimum of 20 units in humanities (choose a minimum of two areas from: history, literature, philosophy, foreign language, art/music appreciation/history)

A minimum of 4 units of religious studies is required per year of attendance at a Seventh-day Adventist college or university.

Select a total of 12 quarter units natural sciences, including one biological science (anatomy and physiology recommended), one physical science (introductory physics recommended). Select from chemistry, geology, biology, physics, mathematics. (No more than 6 units may count toward one area.)

Two years of high school mathematics with grades of C or above or intermediate algebra in college

General psychology

Cultural anthropology or an approved course dealing with cultural diversity

Human growth and development or developmental psychology

English composition, complete sequence

Speech or interpersonal communication

Personal health or nutrition

Two physical activity courses

Electives to meet a minimum total requirement of 96 quarter units

For total unit requirements for graduation, see Division of General Studies, LLU GENERAL EDUCATION REQUIREMENTS (Section V).

**PROGRAM OF INSTRUCTION**

**Core courses**

SPPA 276	Communication across the Lifespan	(4)
SPPA 284	Introduction to Speech-Language Pathology and Audiology	(3)
SPPA 304	Hearing Science	(4)
SPPA 314	Language Analysis for Speech-Language Pathology	(4)
SPPA 317	Acoustic and Physiological Phonetics	(2)
SPPA 318	Transcription Phonetics	(3)
SPPA 324	Language Disorders of Children	(4)
SPPA 334	Phonological and Articulation Disorders	(4)
SPPA 376	Anatomy of Speech-Hearing Mechanism	(4)
SPPA 477	Bilingualism and Biculturalism II	(2)
AHCJ 305	HIV/AIDS and the Health Provider	(1)
AHCJ 328	Portfolio Practicum I	(1)
AHCJ 351	Statistics for the Health Professions	(3)
AHCJ 461	Research Methods	(2)
AHCJ 498	Portfolio Practicum II	(1)
PSYC 305	Psychological Foundations of Education	(4)
PSYC 404	Psychological Tests and Measurements	(3)
PSYC 460	The Exceptional Individual	(3)
PSYC 479	Human Neuropsychology	(4)

**Select 22 units from:**

SPPA 217	Beginning Sign Language	(3)
SPPA 375	Assistive Technology	(2)
SPPA 377	Bilingualism and Biculturalism I	(2)
SPPA 424	Adult Language Pathology	(4)
SPPA 426	Behavior Management Applications with Special Populations	(2)
SPPA 434	Disorders of Fluency	(2)
SPPA 435	Voice Disorders	(2)
SPPA 444	Organic Speech Disorders	(4)
SPPA 445	Techniques for ESL and Accent Modification	(2)
SPPA 454	Hearing Problems and Basic Audiometry	(4)
SPPA 467	Speech-Language Pathology and Audiology Practicum	(1-4)
SPPA 485	Procedures and Materials in Speech Pathology	(4)
SPPA 486	Diagnostic Methods in Speech-Language Pathology	(4)

A minimum grade of C (2.0) is required for all courses in the program.

**SPEECH-LANGUAGE PATHOLOGY—M.S.**

The purposes of the Speech-Language Pathology Program leading to the Master of Science degree are to offer preparation for careers in the professional practice of speech-language pathology, to provide a basis for graduate study and research at a more advanced level, and to encourage the development of capacity for independent growth. The courses are designed to increase understanding in the basic sciences of communication; to develop competence in the practice of speech-language pathology and audiology; and to promote a sense of responsibility toward the speech, language, and hearing handicapped and toward the community.

The clinical services of the Department of Speech-Language Pathology and Audiology, Loma Linda University Medical Center, and affiliated facilities provide opportunity to obtain breadth of experience in a variety of settings. Study in related disciplines at the advanced level is available through course offerings in the professional schools of the University.

**Admission**

Acceptable undergraduate preparation includes a bachelor's degree in speech-language pathology and audiology or in communicative disorders. Applicants are admitted for the first year of prerequisites through the School of Allied Health Professions.

Graduate study in speech-language pathology leads to the Master of Science degree. The program provides opportunity for the graduate (a) to satisfy all academic and clinical requirements for the Certificate of Clinical Competence and the California License in Speech-Language Pathology, or (b) to prepare for doctoral study or careers in related fields. The program does not offer a master's degree in audiology.

The Speech-Language Pathology Program is accredited by the Council on Academic Accreditation of The American Speech-Language and Hearing Association. The program is approved by the

Commission for Teacher Credentialing to prepare students for the California Clinical Rehabilitative Services Credential in Language, Speech, and Hearing. This credential is a requirement for working as a speech, language, and hearing specialist in California public schools. Course requirements for the credential vary from those listed for the degree. Credential requirements may be obtained by contacting the department. The student's undergraduate course work must be evaluated in accordance with state of California credential requirements.

The program of study consists of completing (a) required graduate-level courses, (b) supervised clinical practice, and (c) research or comprehensive examinations.

Students completing both the degree and requirements for the California Clinical Rehabilitative Services Credential will complete 48 academic quarter units and 6 units of student teaching.

### Degree requirements

The following are requirements for the Master of Science degree specific to this program:

1. A minimum of one quarter in residence as a graduate student.
2. A minimum of 57 quarter units of graduate credit, including: SPPA 523, 525, 535, 554, 564, 567, 575, 585, 587, 588, 597, 598, 682, 684, 685, 679, 687 (3 units minimum), 688, 697, religion (3 units minimum).
3. Evidence that the student has completed 400 clock hours of supervised clinical practice, 25 clock hours of observation, 375 clock hours of direct client/patient contact with 325 of these hours being at the graduate level. Transfer students who have met the clinical experience requirements for certification must complete an additional 50 clock hours of practicum.
4. Master's thesis/project or comprehensive examinations.
5. For thesis or project, demonstrated working knowledge of statistics or successful completion of a graduate statistics course.

#### Option A: Research

Option A requires completion of 1-6 units of SPPA 698 Thesis and an oral examination; or completion of 2-4 units of SPPA 697 Research and a presentation of the research. Typically a student will complete a total of 6 units of thesis and/or research.

#### Option B: Comprehensive examinations

Option B requires completion of a written comprehensive examination.

### GENERAL REQUIREMENTS

For information about requirements and practices to which all graduate students are subject, the student should consult the Policies and General Regulations in Section II and the School of Science and Technology in Section III.

### Courses

Courses are to be selected in consultation with the adviser.

## Tobacco-Control Methods—PH (Online and on-campus certificate)

Loma Linda University School of Public Health has developed the Tobacco-Control Methods Program to train health professionals in tobacco research and control methods, integrating theory and field-based experience. This is the only graduate-level certificate of its kind in the field of tobacco control offered in the U.S. This certificate is for practicing professionals who want to add to their skills and knowledge and be better equipped to work in the area of tobacco control as practitioners and researchers in tobacco-use prevention and treatment.

The program is offered entirely online; however, traditional classes can be taken at Loma Linda University in the ten-week quarter format. The program is made possible through a grant from the Association of Schools of Public Health and the American Legacy Foundation.

### PROPOSED CERTIFICATE COURSES

GLBH/HPRO 525	The Tobacco Pandemic: Public Health Implications	(3)
GLBH/HPRO 525	The Public Health Response to the Tobacco Pandemic I	(3)
GLBH/HPRO 584	The Public Health Response to the Tobacco Pandemic II	(3)
HPRO 536	Program Planning and Evaluation	(3)
or STAT 515	Grant- and Contract-Proposal Writing	(3)
STAT 564	Survey and Advanced Research Methods	(3)
or EPDM 568	Epidemiology of Developing Countries	(3)

For more information, contact the dean of the School of Public Health, Department of Health Promotion and Education.

## Wellness Management—PH (B.S.P.H.)

The Wellness Management Program leading to the B.S.P.H. degree prepares individuals to manage and operate wellness centers in many different settings, such as universities, industrial and corporate facilities, spas, and health clubs. Graduates will understand how fitness helps people maintain and improve their health. They will be skilled in designing programs to meet the needs of people of differing ages and skill levels.

For course descriptions and faculty and department information, please consult the Department of Health Promotion and Education in the School of Public Health.

**Learner outcomes**

Upon completion of this degree, the graduate should be able to:

1. Identify, obtain, and manage resources needed to implement and evaluate wellness programs.
2. Use basic concepts of management to plan, budget, and organize programs that address short- and long-term wellness issues.
3. Apply the concepts and principles of public health practice to development of intervention strategies for programs in wellness.
4. Collaborate with lay people and health professionals, and community, government, and health organizations in planning and implementing wellness programs.
5. Perform wellness assessments, evaluate wellness needs of clients, then teach and counsel clients in the areas of need.
6. Put into practice competencies and skills in the fundamental areas of wellness management.
7. Function within the structure of a public health agency and a wellness organization at the operational level.

**THE PROGRAM**

**REQUIRED LOWER-DIVISION COURSES**  
(may meet some GE requirements)

Human anatomy and physiology with laboratories, complete sequence

Introductory physics with laboratory, one quarter/semester

College algebra

General psychology

One additional behavioral science course, such as anthropology or sociology

Select 12 units in humanities

(choose a minimum of two areas from: civilization/history, fine arts, literature, modern languages, performing/visual arts, or philosophy). Must include an approved course dealing with cultural diversity.

Religion courses (Four units are required for every year of attendance at a Seventh-day Adventist college.)

Basic accounting or financial management course

Basic college computer course

Freshman English, complete sequence

Speech

One physical education course

Highly recommended: a course in introductory biochemistry

and/or introductory organic chemistry

**MAJOR CORE REQUIREMENTS**

AHCJ 305	HIV/AIDS and the Health Provider	(1)
AHCJ 311	Medical Terminology	(2)
HPRO 415	Consumer Health	(3)
HPRO 416	Health through the Life Span	(4)
HPRO 417	Biomechanics	(4)
HPRO 418	Introduction to Human Disease	(3)
HPRO 421	Administration of Wellness Programs	(4)
HPRO 424	Health Appraisal and Wellness Testing	(4)
HPRO 425	Exercise Science	(3)
HPRO 426	Fitness for Special Populations	(4)
HPRO 431	Psychology and Sociology of Sport	(3)
HPRO 432	Injury Prevention	(2)
HPRO 433	Athletic Training	(3)
HPRO 436	Programs in Health Promotion	(4)
NUTR 474	Nutrition and Fitness	(3)
HPRO 495	Wellness Programs Laboratory	(3, 3, 3)
HPRO 498A/B	Senior Project	(1, 3)

## The Combined-Degrees Programs of the University

A number of combined-degrees programs are offered, each intended to provide additional preparation in clinical, professional, biomedical sciences or basic areas related to the student's field of interest. The Combined-Degrees Programs provide opportunity for especially well-qualified and motivated students to pursue professional and graduate education; and to prepare for careers in clinical specialization, teaching, or investigation of problems of health and disease in man.

For admission to Combined-Degrees Program, students must have a baccalaureate degree; and must already be admitted to the schools offering their chosen combined-degrees programs.

Students may be required to interrupt their professional study for two or more years (as needed) for courses and research for the graduate degree sought.

The student's concurrent status is regarded as continuous until the program is completed or until discontinuance is recommended. The usual degree requirements apply.

Interested and qualified students may choose from the following combined degrees offered by the University:

### Dentistry—SD *with* Master of Science—ST D.D.S./M.S.

The D.D.S./M.S. is a combined-degrees program leading to the Doctor of Dental Surgery and the Master of Science degrees. It is open to qualified students of dentistry. The student who is interested in establishing a broader professional base in science or who is looking toward a career in teaching or research may take an interim leave from the School of Dentistry after the first professional year, register in the School of Science and Technology, and fulfill professional degree requirements subsequent to or concurrent with completing course work and research for the Master of Science degree.

### Medicine—SM *with* Master of Science—SM *or* Doctor of Philosophy—SM M.D./M.S. or M.D./Ph.D.

The M.D./Ph.D. Combined-Degrees Program is jointly sponsored by the School of Medicine and the School of Science and Technology and includes many of the features of the Medical Scientist Program. Students in the combined-degrees program complete the first two years of the standard medical curriculum. This is followed by three or more years of graduate course work and research to qualify for a Ph.D. degree, or at least one year for an M.S. degree, before commencing the last two years of the medical school curriculum—the clinical training—for the Doctor of Medicine degree. Majors are offered in anatomy, biochemistry, microbiology and molecular genetics, physiology, or pharmacology.

For the M.D./Ph.D. and M.D./M.S. Combined-Degrees Programs, the prerequisites and Graduate Record Examination requirements are similar to those described for the Medical Scientist Program. Biochemistry is not required.

**DOUBLE LISTING**

For convenience in locating a combined-degrees program, the program name is listed twice—the *second time in italics and with its two programs reversed*.

Program curriculum information will be listed only in the first listing.

**Anatomy—SM***with***Medicine or Dentistry—SM or SD**

M.S./M.D., M.S./D.D.S., Ph.D./M.D., or Ph.D./D.D.S.

Combined-degrees programs allow qualified students to work on combined M.D./Ph.D. (medicine with anatomy) or D.D.S./Ph.D. (dentistry with anatomy) degrees. Details are provided in Dentistry and Medicine program descriptions earlier in Section IV.

**Biochemistry—SM***with***Medicine—SM**

M.S. or Ph.D./M.D.

Consult Biochemistry and Medicine programs in Section IV

**Biology or Geology—ST***with***Medicine or Dentistry—SM or SD**

M.S./M.D. or M.S./D.D.S.

For students selecting a combined-degrees program with a Master of Science degree in biology or geology, up to 12 units of credit for basic science courses and up to 6 units of research and/or graduate courses completed as part of the electives of the professional curriculum may be applied to the master's degree program.

For students selecting a combined-degrees program with a Doctor of Philosophy degree in biology, up to 30 units of credit for basic science courses and up to 30 units of research and/or graduate courses, but not more than 36 units completed as part of the electives of the professional curriculum, may be applied to the Doctor of Philosophy degree program.

The animal physiology and the statistics requirements would be met by the professional curriculum.

**Biomedical and Clinical Ethics—FR**  
*with***Dentistry—SD**

M.A./D.D.S.

MARK F. CARR, Program Coordinator, Biomedical and Clinical Ethics, Faculty of Religion

TOM ROGERS, Program Coordinator, School of Dentistry

The combined-degrees program in biomedical and clinical ethics and dentistry is designed to fit the schedule of D.D.S. students. Ethics in dentistry is an emerging academic interest, and this program aims to evolve the Loma Linda University dental school into one of a very select few in the nation known for their expertise in ethical issues. This program requires 48 units of credit.

**Academic structure**

Students pursuing this combined-degrees program must proceed through the standard D.D.S. curriculum without interruption from the M.A. degree course work.

During the *first year* of enrollment in the D.D.S. degree program, students will be made aware of the combined-degrees option. A scholarship for one student will be advertised at both the local and national levels and, if received, will fund the combined-degrees program for that student. Towards the conclusion of the Spring Quarter, students interested in the combined-degrees program should apply to the program in conjunction with an application for the scholarship.

In the *second year* of study, the student should take only two courses in the M.A. degree program: RELG 504 Research Methods and RELE 524 Christian Bioethics are recommended.

The student's *third year* will consist mainly of ethics course work.

The *fourth year* concludes the required courses. During this year, the student must complete the comprehensive in the Spring Quarter and a publishable paper research option, which will be examined by Faculty of Religion professors.

**Faculty**

The faculty for the combined-degrees program in biomedical and clinical ethics and in dentistry is drawn from Loma Linda University's Faculty of Religion and School of Dentistry.

**COURSE REQUIREMENTS**

Students in this combined-degrees program will complete all of the requirements for both degrees with greater efficiency by taking a number of courses that fulfill requirements for both degrees and by careful selection of elective courses. Approval for both degree programs should be sought from the student's advisers for both degrees.

**M.A. degree requirements** (48 units)

Transferred from standard dentistry course work (12)

Taken throughout the final three years of dental school (36)

<b>CORE REQUIREMENTS</b>	<b>(36)</b>
<b>SECOND YEAR</b>	<b>(8 units)</b>
RELG 504 Research methods	(4)
RELE 524 Christian Bioethics	(4)
<b>THIRD YEAR and FOURTH YEAR</b>	<b>(4 units)</b>
RELE 548 Christian Social Ethics	(4)
RELE 554 Clinical Ethics Practicum I	(4)
RELE 555 Clinical Ethics Practicum II	(4)
RELE 577 Theological Ethics	(4)
RELE 588 Philosophical Ethics	(4)
RELE 589 Biblical Ethics	(4)
RELE 697 Independent Research	(4)

<b>D.D.S. COURSES TO COMPLETE M.A. DEGREE IN BIOETHICS</b>	<b>(12 units)</b>
RELR 715 Christian Dentist in Community	(2)
RELE 734 Christian Ethics for Dentists	(2)
RELF 718 Adventist Heritage and Health	(2)
RELR 749 Personal and Family Wholeness	(2)
RELR 775 Art of Integrative Care	(2)
One additional selective from the RELF course offerings	(2)

**Biomedical and Clinical Ethics—FR  
with  
Medicine—SM  
M.A. /M.D.**

MARK F. CARR, Program Coordinator for Faculty of Religion program in Biomedical and Clinical Ethics

**FACULTY**

The faculty for the combined-degrees program in biomedical and clinical ethics and in medicine is drawn from Loma Linda University's Faculty of Religion and School of Medicine.

The combined-degrees program in biomedical and clinical ethics and in medicine (M.A./M.D.) is designed to fit the schedule of medical students. This program requires 48 units of work:

- Twelve units transferred from standard course work in medicine.
- Thirty-six additional units taken throughout the four years of medical school.

**Benefits of taking the program include:**

- Additional field of expertise within clinical practice.
- Unique interface between clinical and academic perspectives in bioethics.
- Excellent preparation for Ph.D. degree programs in ethics or bioethics.

**Course requirements**

Students in this combined-degrees program will complete all of the requirements for both degrees with greater efficiency by taking a number of courses that fulfill requirements for both degrees and by careful selection of elective courses. Approval for the selective courses should be sought from the student's advisers for both degrees.

Designed to fit the schedule of medical students, this program requires forty-eight units of credit.

- Twelve units transferred from standard medicine course work.
- Thirty-six additional units taken throughout the four years of medical school.

<b>CORE REQUIREMENTS</b>	<b>(36)</b>
<b>FIRST YEAR</b>	<b>(16 units)</b>
<b>Fall Quarter</b>	
RELE 588 Philosophical Ethics	(4)
<b>Winter Quarter</b>	
RELE 548 Christian Social Ethics	(4)
<b>Spring Quarter</b>	
RELE 577 Theological Ethics	(4)
<b>Summer Quarter</b>	
RELE 589 Biblical Ethics	(4)

*Note: No LLU School of Medicine classes are scheduled for the Summer Quarter at the end of the first year; thus a student may take up to three of the required courses, if offered, during the Summer Quarter.*

<b>SECOND YEAR</b>	<b>(16 units)</b>
<b>Fall Quarter</b>	
RELG 504 Research Methods	(4)
<b>Winter Quarter</b>	
RELE 554 Clinical Ethics Practicum I	(4)
<b>Spring Quarter</b>	
RELE 555 Clinical Ethics Practicum II	(4)
<b>Summer Quarter</b>	
RELE 524 Christian Bioethics	(4)

<b>THIRD AND FOURTH YEARS</b>	<b>(4 units)</b>
In addition to the preceding 32 units, students will select 4 units from one of the following electives:	
RELT 617 Seminar in Religion and the Sciences	(4)
RELR 584 Culture, Psychology, and Religion	(4)
RELG 697 Independent Research	(4)

## Biomedical and Clinical Ethics—FR *with*

### Nursing, Advanced Practice—SN M.A./M.S.

MARK F. CARR, Program Coordinator, Biomedical and Clinical Ethics

LOIS VAN CLEVE, Associate Dean, Graduate Program in Nursing

The 80-unit M.S./M.A. combined-degrees program in advanced-practice nursing and biomedical and clinical ethics, jointly directed by the School of Nursing and the Faculty of Religion, is designed to facilitate more efficient completion of two graduate degrees for students with strong interest both in nursing and ethics. Students who complete this program will be prepared to make significant, interdisciplinary contributions to both fields. Students are required to gain separate acceptance into the M.A. degree in biomedical and clinical ethics and the M.S. degree in advanced practice nursing programs.

#### GROWING FAMILY

or

#### ADULT AND AGING FAMILY (45)

NRSG 508	Nursing in Community Systems	(2)
NRSG 515	Health Policy: Issues and Process	2)
NRSG 516	Advanced-Practice Role Development	(2)
NRSG 544	Teaching and Learning Theory	(3)
NRSG 546	Curriculum Development in Higher Education	(3)
NRSG 547	Management: Principles and Practice	(3)
NRSG 604	Nursing in Family Systems	3)
NRSG 651	Advanced Physical Assessment	(3)
NRSG 684	Research Methods	(4)
NRSG 680	Intermediate Statistics	(3)
PHSL 533	Physiology I	(4)

Note: Some NRSG courses are offered only during alternate years

#### Advanced Practice Nursing

*either*

*NRSG 624	Adult and Aging Family I	(4)
*NRSG 626	Adult and Aging Family II	(3)
*NRSG 628	Clinical Practicum: Adult and Aging	(6)

*or*

*NRSG 645	Growing Family I	(4)
*NRSG 646	Growing Family II	(3)
*NRSG 617	Clinical Practicum: Growing Family	(6)

Electives from biomedical and clinical ethics (10)

## BIOMEDICAL AND CLINICAL ETHICS (48)

RELG 504	Research Methods	(4)
RELE 554	Clinical Intensive I	(4)
RELE 555	Clinical Intensive II	(4)
RELE 577	Theological Ethics	(4)
RELE 588	Philosophical Ethics	(4)
RELE 589	Biblical Ethics	(4)
RELE 624	Scripture and Ethics	(4)
RELE 524	Christian Bioethics	(4)
RELE 548	Christian Social Ethics	(4)
Electives in religion or ethics		(3)

## Biomedical and Clinical Ethics—FR *with*

### Psychology—ST

#### M.A./Psy.D. or Ph.D.

MARK F. CARR, Program Coordinator, Biomedical and Clinical Ethics

LOUIS E. JENKINS, Chair, Department of Psychology

This program combines study for the M.A. degree in biomedical and clinical ethics (offered by the Faculty of Religion) with either the Psy.D. or Ph.D. degree in psychology (offered by the Department of Psychology of the School of Science and Technology). The purpose of the combined-degrees program is to facilitate more efficient completion of graduate programs in ethics and psychology for the student with interests in both areas. Students who complete the program should be prepared to make significant interdisciplinary contributions to the fields of psychology and of ethics. In order to enter this combined-degrees program, students must gain separate acceptance to the M.A. degree program in ethics and to one of the doctoral programs in psychology. Information about admission to these programs is available from the School of Science and Technology.

The faculty for the combined-degrees program in biomedical and clinical ethics and in psychology is drawn from the Faculty of Religion and from the Department of Psychology in the School of Science and Technology.

#### Course requirements

Students in this combined-degrees program will complete all of the requirements for both degrees with greater efficiency by taking a number of courses that fulfill requirements for both degrees. Approval for selective courses should be sought from the students' advisers for both degrees.

**BIOMEDICAL AND CLINICAL ETHICS—  
M.A. CURRICULUM**

The total number of units required for the M.A. degree is 48. The following courses constitute the core requirements for students completing the M.A. degree in biomedical and clinical ethics when taken with psychology as part of the combined-degrees program:

<b>CORE REQUIREMENTS</b>			<b>(36)</b>
RELE	524	Christian Bioethics	(4)
RELE	548	Christian Social Ethics	(4)
RELE	554	Clinical Ethics Practicum I	(4)
RELE	555	Clinical Ethics Practicum II	(4)
RELE	577	Theological Ethics	(4)
RELE	588	Philosophical Ethics	(4)
RELG	504	Research Methods	(2)
RELR	584	Culture, Psychology, and Religion	(3)
RELR	585	Psychology of Religion	(3)
PSYC	505	Research Methods in Psychological Science	(4)

In addition to the preceding 36 units, students completing the M.A. degree will choose 12 units from the following list of selectives:

<b>SELECTIVES</b>			<b>(12)</b>
PSYC	524	History, Systems, and Philosophy of Psychology	(4)
PSYC	526	Ethics and Legal Issues in Clinical Psychology	(2)
PSYC	536	Seminar in Psychology and Religion	(2)
PSYC	551	Psychobiological Foundations	(4)
PSYC	564	Foundations of Social Psychology and Culture	(4)
PSYC	566	Cross-cultural Psychology	(2)
PSYC	567	Ethnic Diversity and Community Issues	(2)
PSYC	568	Sex Roles and Gender Issues	(2)
PSYC	574	Personality Theory and Research	(4)
PSYC	575	Foundations of Human Development	(4)

**PSYCHOLOGY—  
PH.D. OR PSY.D. CURRICULUM**

Students completing one of the doctoral programs in Psychology will complete all of the course requirements as listed in the School of Science and Technology, 2 units of minor concentration, which will be fulfilled by 12 of the selective units listed above. See the Psychology Program for full information.

**Biomedical and Clinical Ethics—FR  
with  
Social Policy and Social Research—ST  
M.A./Ph.D.**

MARK F. CARR, Program Coordinator, Biomedical and Clinical Ethics

ROBERT GARDNER, Doctoral Degree Program Coordinator, Department of Social Work and Social Ecology

**FACULTY**

The faculty for the combined-degrees program in biomedical and clinical ethics and in social policy and social research is drawn from the Faculty of Religion and from the Department of Social Work in the Loma Linda University School of Science and Technology.

**Purpose of the program**

The purpose of this M.A./Ph.D. combined-degrees program in biomedical and clinical ethics and in social policy and social research is to facilitate more efficient completion of two graduate degrees for students with strong interests in both bioethics and social policy. Students who complete this combined program will be prepared to make significant interdisciplinary contributions to the field of social policy and ethics. Individuals working in the area of social policy must be able to undertake and publish research on social problems. This requires the ability to apply ethical theory to real-world policy scenarios. Graduates will be able to provide leadership to the social policy arena by conducting interdisciplinary research on various issues and agendas that have significant moral implications. Participants in the combined program will utilize the important resource networks within the University (ethics, social sciences, health professions) and those organizations and persons working on solutions to social problems.

**Course requirements**

To enter the proposed program, students must gain separate acceptance to both graduate programs. Students complete all the core requirements for each degree and complete approved electives for both degrees by taking course work in bioethics and social policy, authorized by their respective advisers in both programs. To the extent possible, research projects in both programs focus on the interface of ethics and social policy. All other degree requirements, such as comprehensive examinations and theses or papers, are to be completed as prescribed in the two programs.

**ETHICS CORE** (48 units)

RELG	504	Research Methods	(4)
RELE	554	Clinical Ethics Practicum I	(4)
RELE	555	Clinical Ethics Practicum II	(4)
RELE	577	Theological Ethics	(4)
RELE	588	Philosophical Ethics	(4)
RELE	589	Biblical Ethics	(4)
RELE	524	Christian Bioethics	(4)
RELE	548	Christian Social Ethics	(4)

**Social policy core courses that apply:**

SPOL 614	Social Science Concepts and Theories	(4)
SPOL 615	Economic Theory and Social Policy	(4)
SPOL 624	Nature/Society Thought and Social Policy	(4)
SPOL 654	Qualitative Research Methods	(4)
TOTAL UNITS		48

**SOCIAL POLICY AND SOCIAL RESEARCH CORE (105)****Social science**

SPOL 614	Social Science Concepts and Theories	(4)
SPOL 615	Economic Theory and Social Policy	(4)
SPOL 624	Nature/Society Thought and Social Policy	(4)

**Social policy**

SOWK 683	Advanced Policy Analysis	(3)
Two courses in a selected area of social policy specialization		(6)

**Research**

SPOL 654	Qualitative Research Methods	(4)
SPOL 655	Quantitative Research Methods	(4)
PSYC 501	Advanced Statistics I	(4)
PSYC 502	Advanced Statistics II	(4)
PSYC 503	Advanced Multivariate Statistics	(4)
SPOL 664	Applied Research for Social Policy	(2)
SPOL 665	Information Technology and Decision Science	(4)
SPOL 671, 672, 673	Research Orientation I, II, III	(2, 2, 2)
SPOL 681, 682, 683	Research Seminar I, II, III	(2, 2, 2)

**Dissertation**

SPOL 697	Research	(20)
SPOL 699	Dissertation	(12)
Bioethics core courses for transfer credit (all are available)		(12)
TOTAL UNITS		103
TOTAL UNITS FOR JOINT PROGRAM		135

$$(105 + 48 - 16 = 137 \text{ units})$$

**Biomedical Science—ST***with***Dentistry—SD****D.D.S. /Ph.D.**

The D.D.S./Ph.D is a combined-degrees program leading to the Doctor of Dental Surgery and the Doctor of Philosophy degrees. This biomedical sciences program provides opportunity for well-qualified and motivated students to pursue both a professional and a graduate education and to prepare for careers in clinical specialization, teaching, or investigation in health and human disease. The student who has a baccalaureate degree and the approval of the Biomedical Advisory Committee may enter the combined-degrees program and work concurrently toward both degrees. A minimum of six years is required to complete this combined-degrees program, offered cooperatively by the School of Dentistry and the School of Science and Technology.

*Dentistry—SD**with**Biology—ST***D.D.S./M.S.***(See program in Biology with Dentistry.)***Clinical Ministry—FR***with***Marital and Family Therapy—ST****M.A./M.S.**

SIROJ SORAJJAKOOL, Program Coordinator,  
Clinical Ministry

MARY E. MOLINE, Coordinator, Marital and  
Family Therapy

**FACULTY**

The faculty for the combined-degrees program in clinical ministry and marital and family therapy is drawn from the Faculty of Religion and from the Department of Counseling and Family Sciences, Loma Linda University School of Science and Technology.

The combined Master of Arts degree program in clinical ministry and Master of Science degree program in marital and family therapy (MFAM) have many common subject areas, such as the spiritual and clinical emphasis in caring for the whole person. The joining of the two degree programs provides the student with the added Christian clinical counseling skills needed to minister to many spiritual and mental health problems. The MFAM degree also prepares the student for a clinical license. Licensure allows the student in the M.A./M.S. combined-degrees program more options for practice, including private practice. The student's ability to provide more services to the community—in

addition to the traditional areas of practice, such as hospitals, churches, and schools—is increased.

The primary objectives of the combined-degrees program in clinical ministry and marital and family therapy are to:

1. Produce skilled professionals in clinical ministry and marital and family therapy in a family clinical ministry track.
2. Expose students to the currently available content material in the fields of clinical ministry and marital and family therapy.
3. Provide for supervised field and clinical training that will give students the opportunities to apply and integrate theoretical knowledge toward the development of clinical ministry and family therapy skills and competencies.
4. Provide activities by which students can develop the personal and professional maturity required to identify with the spiritual preventive and curative aspects of clinical ministry and marital and family therapy.

The family clinical ministry track provides the basis for doctoral work in mental health and religious studies. Outstanding students are encouraged to explore possibilities for further studies.

**Course requirements**

In order to receive the Master of Arts in clinical ministry and the Master of Science in marital and family therapy degrees from Loma Linda University, the student will complete a minimum of 102 units of course work as specified, with an overall grade point average of B or better, with no grade lower than C and with no grade in a core course lower than a B-. The required curriculum is as follows:

**CORE REQUIREMENTS (102)**

**FIRST YEAR**

**Post-Summer Session (intensive)**

MFAM 535	Case-Presentation and Professional Seminar	(4)
TOTAL UNITS		4

**Fall Quarter**

MFAM 515	Crisis-Intervention Counseling	(3)
MFAM 551	Family Therapy: Theory and Practice I	(3)
MFAM 556	Psychopathology and Diagnostic Procedures I	(3)
MFAM 614	Laws and Ethics	(3)
FMST 514	Cross-cultural Counseling and Family Values	(2)
TOTAL UNITS		14

**Winter Quarter**

MFAM 536	Case-Presentation Seminar	(2)
MFAM 534A	Clinical Training (50 hours)	
MFAM 547	Social Ecology of Individual and Family Development	(3)
MFAM 553	Family Systems Theory	(3)
MFAM 644	Child Abuse and Family Violence	(3)
TOTAL UNITS		11

**Spring Quarter**

MFAM 501	Research Tools and Methodology I	(3)
MFAM 534A	Clinical Training (50 hours)	
MFAM 537	Case-Presentation Seminar	(2)
MFAM 564	Family Therapy: Theory and Practice II	(3)
MFAM 584	Treatment of Child and Adolescent Problems	(3)
TOTAL UNITS		11

**Summer Quarter**

MFAM 568	Group Process Theory and Procedures: Theories in Marital and Family Therapy	(3)
MFAM 534B	Clinical Training (100 hours)	
RELR 584	Culture, Psychology, and Religion	(3)
TOTAL UNITS		6

**SECOND YEAR**

**Fall Quarter**

MFAM 502	Research Tools and Methodology II	(3)
MFAM 552	Couples Therapy: Theory and Practice	(3)
MFAM 634A	Advanced Clinical Training (50 hours)	
TOTAL UNITS		6

**Winter Quarter**

MFAM 524	Psychopharmacology and Medical Issues	(3)
MFAM 624	Individual and Systems Assessment	(3)
MFAM 634A	Advanced Clinical Training (50 hours)	
RELR 568	Care of the Dying and Bereaved	(3)
RELR 565	Introduction to Pastoral Theology and Methodology	(3)
TOTAL UNITS		12

**Spring Quarter**

MFAM 545	Gender Perspectives	(2)
MFAM 634A	Advanced Clinical Training (50 hours)	
MFAM 669	Human Sexual Behavior	(3)
MFAM ___	Required Modality Elective	(2)
RELR 567	Introduction to Pastoral Counseling	(3)
TOTAL UNITS		10

## THIRD YEAR

## Fall Quarter

MFAM 634A	Advanced Clinical Training	(50 hours)
MFAM 635	Case-Presentation Seminar	(2)
RELE 524	Christian Bioethics	(3)
RELR 564	Religion, Marriage, and the Family	(4)
TOTAL UNITS		9

## Winter Quarter

MFAM 634A	Advanced Clinical Training	(50 hours)
MFAM 636	Case-Presentation Seminar	(2)
MFAM 638	Family Therapy and Chemical Abuse	(3)
RELR 574	Introduction to Preaching	(3)
RELT 558	Old Testament Thought	(3)
TOTAL UNITS		11

## Spring Quarter

MFAM 545	Gender Perspectives	(2)
MFAM 634A	Advanced Clinical Training (50 hours)	
MFAM 669	Human Sexual Behavior	(3)
MFAM ___	Required Modality Elective	(2)
RELR 567	Introduction to Pastoral Counseling	(3)
TOTAL UNITS		10

## FOURTH YEAR

## Fall Quarter

MFAM 634A	Advanced Clinical Training (50 hours)	
MFAM 635	Case-Presentation Seminar	(2)
RELE 524	Christian Bioethics	(3)
RELR 564	Religion, Marriage, and the Family	(4)
TOTAL UNITS		9

## Winter Quarter

MFAM 634A	Advanced Clinical Training	(50 hours)
MFAM 636	Case-Presentation Seminar	(2)
MFAM 638	Family Therapy and Chemical Abuse	(3)
RELR 574	Introduction to Preaching	(3)
RELT 558	Old Testament Thought	(3)
TOTAL UNITS		11

## Spring Quarter

MFAM 634A	Advanced Clinical Training	(50 hours)
MFAM 637	Case-Presentation Seminar	(2)
RELT 557	Theology of Human Suffering	(3)
RELT 559	New Testament Thought	(3)
TOTAL UNITS		8

*Dentistry—SD*  
with  
*Anatomy—SM*  
D.D.S./Ph.D.

(*See program in Anatomy with Dentistry.*)

*Dentistry—SD*  
with  
*Biology—ST*  
D.D.S./M.S.

(*See program in Biology with Dentistry.*)

*Dentistry—SD*  
with

*Biomedical and Clinical Ethics—FR*  
D.D.S./M.A.

(*See program in Biomedical and Clinical Ethics with Dentistry.*)

*Dentistry—SD*  
with

*Biomedical Sciences—ST*  
D.D.S./Ph.D.

(*See program in Biomedical Sciences with Dentistry.*)

*Dentistry—SD*  
with  
*Geology—ST*  
D.D.S./M.S.

(*See program in Biology or Geology with Dentistry.*)

Dentistry—SD  
*with*  
Health Education—PH  
M.P.H. /D.D.S.

(*Consult individual Dentistry and Health Education programs in Section IV.*)

*Dentistry—SD*  
with  
*Medicine—SM*  
D.D.S./M.D.

(*Consult individual Dentistry and Medicine programs in Section IV.*)

**Dentistry—SD***with***Public Health—PH****D.D.S. /M.P.H.**

The D.D.S./M.P.H. is a combined-degrees Doctor of Dental Surgery and Master of Public Health program. It is open to the qualified student of dentistry who wants to influence and manage the future as a skilled leader—in public or private sectors—from large health care systems to mission hospitals, from research laboratories to primary care. The Master of Public Health degree can be taken, within a twelve-month period after either the second or third year of the D.D.S. program, in any of the following majors:

- biostatistics
- environmental and occupational health
- community wellness
- epidemiology
- health administration
- health education
- international health
- maternal and child health
- nutrition.

*Geology—ST*

with

*Medicine or Dentistry—SM or SD*

M.S./M.D. or M.S./D.D.S.

*(See program in Biology.)**Health Education—PH*

with

*Dentistry—SD*

M.P.H./D.D.S.

*(See program in Dentistry with Health Education.)***Health Education—PH***with***Marriage and Family Counseling—ST****M.P.H. /M.S.****PREREQUISITE**

Demonstrate college-level conceptualization and writing skills

Relevant community service or public health experience, as documented by record of employment

**COREQUISITE**

(may be taken during first two quarters of program, in addition to units required for degree)

Anatomy and physiology/Physiology (one course or course sequence)

Behavioral science (two courses, one of which is an introductory psychology course)

**DEGREE REQUIREMENTS****Public health core courses (20 units)**

ENVH 509	Principles of Environmental Health	(3)
EPDM 509	Principles of Epidemiology I	(3)
HADM 509	Principles of Administration in Public Health	(3)
HPRO 509	Principles of Health Behavior	(3)
RELE 534	Ethical Issues in Public Health	(3)
PHCJ 605	Philosophy of Public Health	(1)
STAT 509	General Statistics	(4)
or		
— —	Advanced statistics from MFAM program	(4)

**Health education core courses (23 units)**

HPRO 535	Health Education-Program Administration	(3)
HPRO 536	Program Planning and Evaluation	(3)
HPRO 537A	Community Programs Laboratory A	(1)
HPRO 537B	Community Programs Laboratory B	(1)
HPRO 538	Health Education Program Development	(3)
HPRO 539	Policy and Issues in Health Education	(3)
HPRO 589	Qualitative Research Methods	(4)
NUTR 509	Public Health Nutrition	(3)
or		
NUTR 534	Maternal and Child Nutrition	(3)

**Concentration and/or electives (6 HPRO units + 12 MFAM units)**

HPRO 523	Maternal and Child Health	(3)
HPRO 524	Adolescent Health	(3)
HPRO 525	Topics in Health Promotion	(3)
HPRO 526	Lifestyle Diseases and Risk Reduction	(3)
HPRO 527	Obesity and Disordered Eating	(3)
HPRO 528	Controversial Health Practices	(3)
HPRO 542	Health and Dependency Counseling	(3)
HPRO 543	Writing for Health Professionals	(3)
HPRO 548	Community and Domestic Violence	(3)
HPRO 553	Addiction Theory and Program Development	(3)
HPRO 555	Early-Age Parenthood	(3)
HPRO 556	Interventions for High-Risk Infants and Children	(3)
HPRO 573	Exercise Physiology I	(3)
HPRO 578	Exercise Physiology II	(3)
HPRO 584	Ageing and Health	(3)

**Field experience**

HPRO 798B Field Practicum (400 clock hours)

TOTAL UNITS 61

**Culminating activity**

Students are required to demonstrate the ability to integrate the five areas of public health: administration, epidemiology, statistics, environmental health, and health behavior. The culminating activity is comprised of a written examination, field experience, professional portfolio, and exit interview with the department chair.

Students who do not meet minimum standards of performance on the culminating activity are subject to academic review or remedial course work to address deficiencies in preparation; or they may be asked to withdraw from the program.

**Health Education—SD**

*with*

**Medicine—PH**

M.P.H. /M.D.

*(Consult individual Health Education and Medicine programs in Section IV.)*

**Health Education—PH**

*with*

**Nursing—SN**

M.P.H. /M.S.

**PREREQUISITE**

Demonstrate college-level conceptualization and writing skills

Relevant community service or public health experience, as documented by record of employment

**COREQUISITE**

(may be taken during first two quarters of program, in addition to units required for degree)

Anatomy and physiology/Physiology (one course or course sequence)

Behavioral science (two courses, one of which is an introductory psychology course)

**DEGREE REQUIREMENTS**

**Public health core courses (16 units)**

ENVH 509	Principles of Environmental Health	(3)
EPDM 509	Principles of Epidemiology I	(3)
HADM 509	Principles of Administration in Public Health	(3)
HPRO 509	Principles of Health Behavior	(3)
RELE 534	Ethical Issues in Public Health	(3)
PHCJ 605	Philosophy of Public Health	(1)

**Health education core courses (19-23 units)**

HPRO 535	Health Education Program Administration	(3)
HPRO 536	Program Planning and Evaluation	(3)
HPRO 537	Community Programs Laboratory	(2,1)
HPRO 538	Health Education-Program Development	(3)
HPRO 539	Policy and Issues in Health Education	(3)
HPRO 589	Qualitative Research Methods	(4)
HPRO 590	Qualitative Data Analysis	(1)
NUTR 509	Public Health Nutrition	(3)
or		
NUTR 534	Maternal and Child Nutrition	(3)
or		
NUTR 536	Nutrition and Aging	(3)

**Core graduate nursing courses (13 28 units)**

NRSG 516	Advanced-Practice Role Development	(2)
NRSG 546	Curriculum Development in Higher Education	(3)
NRSG 547	Management: Principles and Practices	(3)
NRSG 651	Advanced Physical Assessment	(3)
NRSG 604	Nursing in Family Systems	(3)
NRSG 680	Intermediate Statistics	(3)
NRSG 684	Research Methods	(4)
PHSL 533	Physiology I	(4)
RELE 524	Christian Bioethics, or other religion course	(3)

**Advanced practice nursing (13 units)**

<b>OPTION 1</b>		
NRSG 624	Adult and Aging Family I	(4)
NRSG 626	Adult and Aging Family II	(3)
NRSG 628	Clinical Practicum: Adult and Aging	(6)
<b>OPTION 2</b>		
NRSG 645	Growing Family I	(4)
NRSG 646	Growing Family II	(3)
NRSG 617	Clinical Practicum: Growing Family	(6)

**Field experience**

HPRO 798	Field Practicum	(100 clock hours)
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TOTAL UNITS 80

**Culminating activity**

Students are required to demonstrate the ability to integrate the five areas of public health: administration, epidemiology, statistics, environmental health, and health behavior. The culminating activity is comprised of a written examination, field experience, professional portfolio, and exit interview with the department chair.

Students who do not meet minimum standards of performance on the culminating activity are subject to academic review or remedial course work to address deficiencies in preparation; or they may be asked to withdraw from the program.

*Health Education—PH*  
with  
*Psychology, Clinical—ST*  
M.P.H./Psy.D.  
(See program in Dentistry with Health Education.)

**Health Education—PH**  
*with*  
**Psychology, Clinical—ST**  
M.P.H./Psy.D.

The Master of Public Health (M.P.H.) degree curriculum in health education is taught through the School of Public Health. The Doctor of Psychology (Psy.D.) degree program in clinical psychology is taught in the School of Science and Technology. Information regarding the Doctor of Psychology degree curriculum is available from the School of Science and Technology. Below is the curriculum for the Master of Public Health degree only.

**PREREQUISITE**

Demonstrate college-level conceptualization and writing skills

Relevant community service or public health experience as documented by record of employment

**COREQUISITE**

(may be taken during first two quarters of program, in addition to units required for degree)

Anatomy and physiology/Physiology (one course or course sequence)

Behavioral science (two courses, one of which is an introductory psychology course)

**DEGREE REQUIREMENTS**

**Public health core courses (20 units)**

ENVH 509	Principles of Environmental Health	(3)
EPDM 509	Principles of Epidemiology I	(3)
HADM 509	Principles of Administration in Public Health	(3)
HPRO 509	Principles of Health Behavior	(3)
RELE 534	Ethical Issues in Public Health	(3)
PHCJ 605	Philosophy of Public Health	(1)
STAT 509	General Statistics	(4)
or		
STAT —	Advanced statistics from Psy.D. program	(4)

**Health education core courses (23 units)**

HPRO 535	Health Education-Program Administration	(3)
HPRO 536	Program Planning and Evaluation	(3)
HPRO 537A	Community Programs Laboratory A	(1)

HPRO 537B	Community Programs Laboratory B	(1)
HPRO 538	Health Education Program Development	(3)
HPRO 539	Policy and Issues in Health Education	(3)
HPRO 589	Qualitative Research Methods	(4)
NUTR 509	Public Health Nutrition	(3)
or		
NUTR 534	Maternal and Child Nutrition	(3)

**Concentration and/or electives (6 HPRO units + 12 Psy.D. units)**

HPRO 505	Public Health Communication	(3)
HPRO 514	Values, Culture, and Health	(3)
HPRO 523	Maternal and Child Health	(3)
HPRO 524	Adolescent Health	(3)
HPRO 525	Topics in Health Promotion	(3)
HPRO 526	Lifestyle Diseases and Risk Reduction	(3)
HPRO 527	Obesity and Disordered Eating	(3)
HPRO 528	Controversial Health Practices	(3)
HPRO 542	Health and Dependency Counseling	(3)
HPRO 543	Writing for Health Professionals	(3)
HPRO 548	Community and Domestic Violence	(3)
HPRO 553	Addiction Theory and Program Development	(3)
HPRO 555	Early-Age Parenthood	(3)
HPRO 556	Interventions for High-Risk Infants and Children	(3)
HPRO 564	Mental Health and Society	(3)
HPRO 573	Exercise Physiology I	(3)
HPRO 578	Exercise Physiology II	(3)
HPRO 584	Aging and Health	(3)

**Field experience**

HPRO 798B	Field Practicum	(400 clock hours)
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TOTAL UNITS 61 + Psy.D. program units

**Culminating activity**

Students are required to demonstrate the ability to integrate the five areas of public health: administration, epidemiology, statistics, environmental health, and health behavior. The culminating activity is comprised of a written examination, field experience, professional portfolio, and exit interview with the department chair.

Students who do not meet minimum standards of performance on the culminating activity are subject to academic review or remedial course work to address deficiencies in preparation; or they may be asked to withdraw from the program.

*Marital and Family Therapy—ST*  
with

*Clinical Ministry—FR*  
M.S./M.A.

(*See program in Clinical Ministry with Marital and Family Therapy.*)

*Marriage and Family Counseling—ST*  
with

*Health Education—FR*  
M.S./M.P.H.

(*See program in Health Education with Marriage and Family Counseling.*)

**Maternal and Child Health—PH**  
*with*

**Social Work—ST**  
M.S.W./M.P.H.

The combined-degrees program in social work and public health reaffirms the heritage of these two professions working together. Simultaneously it addresses the requisite knowledge and skills increasingly needed by professionals working in maternal and child health in low-income communities. As such, the curricula of the M.S.W. degree and M.P.H. degree in maternal and child health have been merged to offer a combined-degrees program with both depth and breadth to address the myriad of intervention and community issues affecting this population.

Combined-degrees students must meet all the requirements of each of the participating programs. If completed separately, the M.S.W. degree is 78 units and the M.P.H. degree is 52 units, for a total of 130 units. In this combined-degrees option, 24 units of the 130 units are counted by both the M.S.W. and M.P.H. degrees programs; this reciprocity reduces the total number of units required to 106. Interested students should obtain from the department a curriculum plan showing the integration of the M.S.W. degree and M.P.H. degree programs.

**Medical Scientist Program—SM/ST**  
M.D./Ph.D.

Loma Linda University is committed to fostering the investigative skills of its medical students. Students interested in pursuing careers in academic medicine and medical research may wish to enroll in one of the combined-degrees programs.

The Medical Scientist Program is designed to develop a student's independence and competence as an investigative scientist and clinician. It provides students with a broad educational base for the practice of medicine and medically related research. The program is administered jointly by the School of Medicine and the School of Science and Technology. During the first three years of the program, students follow an integrated curriculum that includes medical courses, graduate education, and research training.

In the first year the curriculum includes a course sequence—taught by an interdisciplinary faculty—that integrates aspects of biochemistry, genetics, molecular biology, cell physiology, and cell and molecular ultrastructure into a rigorous survey of cellular biology. In addition to this foundation, students learn of new developments in the basic sciences and biomedical sciences through weekly seminars and monthly correlative sessions. During subsequent years, formal courses continue to broaden and integrate into a meaningful whole an understanding of the clinical consequences of cellular events.

Beginning in the fourth year and continuing for two or more years, students pursue full-time research on a project of their own design within the graduate programs of human anatomy, biochemistry, microbiology and molecular genetics, physiology, or pharmacology. Research training within these programs is available in nationally recognized research laboratories in the School of Medicine. After completing the Ph.D. degree, students return to the medical curriculum for the two years of clinical training required to obtain the Doctor of Medicine degree.

For acceptance into the Medical Scientist Program, graduation from an accredited college is required. Students must simultaneously submit applications to the School of Medicine. Scores on the general test of the Graduate Record Examination are required. The Department of Biochemistry requires and the Department of Physiology and Pharmacology recommends a basic course in calculus and two quarters of physical chemistry. Students who have completed at least 8 units in biochemistry may qualify for reduced biochemistry course work in the Medical Scientist Program.

For information regarding tuition waivers and scholarships, contact the director of the Medical Scientist Program.

*Medicine—SM*  
with

*Anatomy—SM*  
M.D./M.S. or Ph.D.

(*See program in Anatomy with M.D.*)

*Medicine—SM*  
with

*Biochemistry—SM*  
M.D./M.S. or Ph.D.

(*See program in Biochemistry with M.D.*)

*Medicine—SM*  
with

*Biology—ST*  
M.D./M.S.

(*See program in Biology with M.D.*)

*Medicine—SM*  
with  
*Biomedical and Clinical Ethics—ST*  
M.D./M.A.  
(See program in Biomedical and Clinical Ethics  
with M.D.)

*Medicine—SM*  
with  
*Dentistry—SD*  
D.D.S./M.D.  
(Consult individual M.D. and D.D.S. programs in  
Section IV.)

*Medicine—SM*  
with *Geology—ST*  
M.D./M.S.  
(See program in Geology with M.D.)

*Medicine—SM*  
with  
*Health Education—PH*  
M.D./M.P.H.  
(See program in Health Education with M.D.)

*Medicine—SM*  
with  
*Microbiology—SM*  
M.D./M.S. or Ph.D.  
(Consult individual M.D. and Microbiology  
programs in Section IV.)

*Medicine—SM*  
with  
*Pharmacology—SM*  
M.D./Ph.D.  
(Consult individual M.D. and Pharmacology  
programs in Section IV.)

*Medicine—SM*  
with  
*Physiology—SM*  
M.D./M.S. or Ph.D.  
(Consult individual M.D. and Physiology  
programs in Section IV.)

*Microbiology—SM*  
with  
*Medicine—SM*  
M.S. or Ph.D./M.D.  
(Consult individual Microbiology and M.D.  
programs in Section IV.)

*Nursing, Advanced Practice—SN*  
with

*Biomedical and Clinical Ethics—FR*  
M.S./M.A.  
(See program in Biomedical and Clinical Ethics  
with Nursing)

*Nursing, Advanced Practice—SN*  
with  
*Health Education—PH*  
M.S./M.P.H.  
(See program in Nursing with Health Education)

**Nursing, Advanced Practice—SN**  
*with*

**Public Health—PH**

M.S./M.P.H.

ELIZABETH BOSSERT, Associate Dean, Graduate  
Program in Nursing

The M.S./M.P.H. combined-degrees program in advanced-practice nursing and public health prepares students for leadership roles in population-focused primary health care, with emphasis on clinical specialization and/or teaching. The combined-degrees program is designed for individuals who wish to integrate advanced-practice nursing with population-based public health perspectives. The student may select a curriculum that prepares him/her for teaching, certification by the American Nurses Association as a clinical specialist in community health (CSCCH), and/or certification by the National Commission for Health Education as a certified health education specialist (CHES). Students must meet admission and graduation requirements for the School of Nursing and the School of Public Health.

**GROWING FAMILY (55)**

or

**ADULT AND AGING FAMILY (55)**

NRSG 515	Health Policy: Issues and Process	(2)
NRSG 516	Advanced-Practice Role Development	(2)
*NRSG 546	Curriculum Development in Higher Education	(3)
NRSG 547	Management: Principles and Practice	(3)
NRSG 604	Nursing in Family Systems	(3)
NRSG 651	Advanced Physical Assessment	(3)
NRSG 681	Research Methods	(4)
PHSL 533	Physiology I	(4)
RELE 524	Christian Bioethics or other religion course	(3)

**Advanced-practice nursing**

*either*

*NRSG 624	Adult and Aging Family I	(4)
*NRSG 626	Adult and Aging Family II	(3)
*NRSG 628	Clinical Practicum: Adult and and Aging Family	(6)

or

*NRSG 645	Growing Family I	(4)
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- \*NRSNG 646 Growing Family II (3)
- \*NRSNG 617 Clinical Practicum: Growing Family (6)
- Selectives from public health (12)**

**PUBLIC HEALTH EDUCATION (51)**

- ENVH 509 Principles of Environmental Health (3)
- EPDM 509 Principles of Epidemiology I (3)
- HADM 509 Principles of Administration (3)
- HPRO 509 Health Behavior Change (3)
- RELE 534 Ethical Issues in Public Health (3)
- PHCJ 605 Philosophy of Public Health (1)

- STAT 509 General Statistics (4)
- or
- NRSNG 680 Intermediate Statistics (3)

**Health education**

- HPRO 535 Health Education Program Administration (3)
- HPRO 536 Program Planning and Evaluation (3)
- HPRO 537 Community Programs Laboratory (60 clock hours) (1, 1)
- HPRO 538 Health Education Program Development (3)
- HPRO 539 Issues in Health Education (3)
- HPRO 589 Qualitative Research Methods (4)
- HPRO 590 Qualitative Data Analysis (1)
- NUTR 509 Public Health Nutrition (3)
- or
- NUTR 534 Maternal and Child Nutrition (3)
- or
- NUTR 536 Nutrition and Aging (with 1 unit independent study) (2 +1)
- HPRO 798 Field Practicum (100 clock hours)

**Nursing selectives (12-13)**

Note: Some NRSNG courses are offered only during alternate years

*Pharmacology—SM*  
with  
*Medicine—SM*  
Ph.D./M.D.  
(Consult individual programs in Section IV.)

*Physiology—SM*  
with  
*Medicine—SM*  
M.S. or Ph.D./M.D.  
(Consult individual programs in Section IV.)

*Preventive Care—PH*  
with  
*Psychology, Clinical—ST*  
Dr.P.H./Psy.D.  
(See program in Psychology, Clinical with Preventive Care.)

*Psychology—ST*  
with  
*Biomedical and Clinical Ethics—FR*  
Ph.D. or Psy.D./M.A.  
(See program in Biomedical and Clinical Ethics with Psychology.)

*Psychology—ST*  
with  
*Public Health—PH*  
Psy.D./Dr.P.H.  
(Consult individual programs in Section IV.)

*Psychology, Clinical—ST*  
with  
*Health Education—PH*  
Psy.D./M.P.H.  
(See program in Psychology, Clinical with Health Education.)

**Psychology, Clinical—ST**  
*with*  
**Preventive Care—PH**  
Psy.D./Dr.P.H.

The Doctor of Public Health (preventive care) with Doctor of Psychology (clinical) degree program (Dr.P.H./Psy.D.) is designed for individuals who wish to combine public health science with clinical psychology.

**Admission requirements**

For acceptance into the Doctor of Public Health/Doctor of Psychology combined-degrees program, the applicant must meet the respective prerequisites of both degrees.

**COURSE OF STUDY**

The course of study for the combined degrees Doctor of Public Health/Doctor of Psychology consists of a minimum of 225 units, as outlined below.

**COREQUISITE**

- ENVH 509 Principles of Environmental Health (3)
- EPDM 509 Principles of Epidemiology I (3)
- HADM 509 Principles of Administration in Public Health (3)
- HPRO 509 Principles of Health Behavior (3)
- HPRO 536 Program Planning and Evaluation (3)
- PHCJ 605 Philosophy of Public Health (1)

**DEGREE REQUIREMENTS****Biomedical sciences (39 units)**

ANAT 503	Human Histology	(5)
HPRO 501	Human Anatomy and Physiology I	(4)
HPRO 502	Human Anatomy and Physiology II	(4)
HPRO 503	Human Anatomy and Physiology III	(4)
HPRO 519	Pharmacology	(3)
HPRO 531	Pathology of Human Systems I	(3)
HPRO 532	Pathology of Human Systems II	(3)
NUTR 504	Nutritional Metabolism	(5)
NUTR 517	Advanced Nutrition I: Carbohydrates and Lipids	(4)
NUTR 518	Advanced Nutrition II: Proteins, Vitamins, and Minerals	(4)

**Preventive care (29 units)**

HPRO 515	Mind-Body Interactions and Health Outcomes	(3)
HPRO 526	Lifestyle Diseases and Risk Reduction	(3)
HPRO 527	Obesity and Disordered Eating	(3)
HPRO 553	Addiction Theory and Program Development	(3)
HPRO 573	Exercise Physiology I	(3)
HPRO 578	Exercise Physiology II	(3)
HPRO 584	Aging and Health	(3)
HPRO 586	Introduction to Preventive Care	(1)
HPRO 606	Preventive Care Seminar	(2, 2)
NUTR 545	Clinical Nutrition I	(3)

**Research and evaluation (29 units)**

PSYC 501	Advanced Statistics I(4)	
PSYC 502	Advanced Statistics II	(4)
PSYC 506	Qualitative Methods in Clinical Psychology	(2)
PSYC 511	Psychometric Foundations	(2)
PHCJ 534	Research Methods	(3)
PHCJ 604	Research Seminar	(2)
HPRO 694	Research	(4)
HPRO 698	Dissertation	(8)

**Psychological science foundations (31 units)**

PSYC 524	History, Systems, and Philosophy of Psychology	(4)
PSYC 544	Foundations of Learning and Behavior	(4)
PSYC 545	Cognitive Foundations	(4)
PSYC 551	Psychobiological Foundations	(3)
PSYC 551L	Psychobiological Foundations Laboratory	(1)
PSYC 564	Foundations of Social Psychology and Culture	(4)
PSYC 574	Personality Theory and Research	(4)
PSYC 575	Foundations of Human Development	(4)
PSYC 591A	First-Year Colloquium	(1)
PSYC 591B	Second-Year Colloquium	(1)
PSYC 591C	Third-Year Colloquium	(1)

**General clinical (21 units)**

PSYC 525	Introduction to Clinical Psychology	(2)
PSYC 526	Ethics and Legal Issues in Clinical Psychology	(2)
PSYC 552	Brain and Behavior	(3)
PSYC 571	Adult Psychopathology	(3)
PSYC 572	Child Psychopathology	(2)
PSYC 681	Clinical Supervision: Concepts, Principles, and Functions	(2)
PSYC 683	Management, Consultation, and Professional Practice	(2)
PSYC 684	Human Sexual Behavior and Therapy	(2)
PSYC 686	Child, Partner, and Elder Abuse	(2)

**Psychological assessment (12 units)**

*PSYC 512	Assessment I	(2)
*PSYC 512L	Assessment I, Practice Laboratory	(1)
*PSYC 513	Psychological Assessment II	(2)
*PSYC 513L	Psychological Assessment II, Practice Laboratory	(1)
PSYC 514	Psychological Assessment III	(2)
PSYC 514L	Psychological Assessment III, Practice Laboratory	(1)
PSYC 515	Assessment IV, Battery	(2)
PSYC 515L	Assessment IV, Practice Laboratory	(1)

**Psychological treatment (17 units)**

PSYC 581	Psychological Treatment I: Behavior and Cognitive Therapies	(3)
PSYC 581L	Behavior and Cognitive Therapies, Practice Laboratory	(1)
PSYC 582	Psychological Treatment II: Psychodynamic Therapy	(2)
PSYC 582L	Psychodynamic Therapy, Practice Laboratory	(1)
PSYC 583	Psychological Treatment III: Humanistic/Phenomenological Approaches to Therapy	(2)
PSYC 583L	Humanistic/Phenomenological Therapy, Practice Laboratory	(1)
PSYC 584	Psychological Treatment IV: Conjoint and Group Psychotherapies	(2)
PSYC 584L	Conjoint and Group Psychotherapies, Practice Laboratory	(1)

**Wholeness core (20 units)**

PSYC 534	Culture, Psychology, and Religion	(3)
PSYC 535	Psychological Study of Religion	(3)
PSYC 566	Cross-cultural Psychology	(2)
PSYC 567	Ethnic Diversity and Community Issues	(2)
PSYC 568	Sex Roles and Gender Issues	(2)
_____	Religion in Psychology	(2)
_____	Health psychology electives	(6)

<b>Clinical practice</b>	<b>(400 clock hours) (16 units)</b>
HPRO 704 Internship	(400 clock hours)
PSYC 782 Practicum I	(3)
PSYC 783 Practicum II	(3)
PSYC 784 Practicum III	(3)
PSYC 785 Practicum IV	(3)
PSYC 799 Internship	(4)
<b>Religion</b>	<b>(3 units)</b>
REL_ 5__	(3)
TOTAL UNITS	225

*Public Health—PH*  
with  
*Nursing, Advanced Practice—SN*  
M.P.H./M.S.

(See program in Nursing, Advanced Practice  
with Public Health.)

*Public Health—PH*  
with  
*Dentistry—SD*  
M.P.H./D.D.S

(See program in Dentistry with Public Health.)

*Public Health—PH*  
with  
*Psychology—ST*  
Dr.P.H./Psy.D.

(Consult individual programs—Public Health and  
Psychology—in Section IV.)

*Social Policy and Social Research—ST*  
with  
*Biomedical and Clinical Ethics—FR*  
Ph.D./MA

(See program in Biomedical and Clinical Ethics  
with Social Policy and Social Research.)

*Social Work—ST*  
with  
*Public Health—FR*  
M.S.W./M.P.H.

(Consult individual programs—Social Work and  
Public Health—in Section IV.)

*Social Work—ST*  
with  
*Maternal and Child Health—FR*  
Ph.D./M.A.

(See program in Maternal and Child Health with  
Social Work.)







# V

## THE COURSES

## Key to Course Numbers

**C**ourses numbered  
 001-099, nondegree-applicable credit;  
 101-299, lower division;  
 301-499, upper division;  
 501-599, graduate;  
 601-699, graduate: seminar, research,  
 thesis, or dissertation;  
 701-899, professional and clinical;  
 901-999, continuing education  
 and undergraduate certificate courses  
 that are not applicable toward a degree  
 program at this University.

500-level course work may not apply toward a baccalaureate degree unless it is approved by the instructor, and both deans (dean of the school offering the course and dean of the school in which the student is enrolled) give permission; and provided the credit does not apply toward both an undergraduate and a graduate degree. Approval is not needed if the course is part of a coordinated program.

No courses numbered in the 700s, 800s, or 900s may apply toward a baccalaureate degree.

## Key to Course Codes

AHCJ	Allied Health Conjoint
ANAT	Anatomy
ANES	Anesthesiology
ANTH	Anthropology
ARTA	Art
BHCJ	Biochemistry
BIOL	Biology
CHIN	Chinese Studies
CHLS	Child Life Specialist
CLSC	Cytotechnology
CLSM	Clinical Laboratory Science
CMBL	Cell and Molecular Biology
COMM	Communication
COUN	Counseling
CRMJ	Criminal Justice
CSWK	Clinical Social Work
DERM	Dermatology
DNES	Dental Educational Services
DNHY	Dental Hygiene
DTCH	Dietetic Technology
DTCS	Nutrition and Dietetics
DMDN	Emergency Medicine
EMMC	Emergency Medical Care
ENDN	Endodontics
ENGL	English
ENSL	English as a Second Language
ENVN	Environmental Health
EPDM	Epidemiology
ESSC	Earth Systems Science
FMDN	Family Medicine
FMST	Family Studies
GEOL	Geology
GERO	Gerontology
GLBH	Global Health
GMDE	Graduate Medical Education
GRDN	Graduate Dentistry
GSCJ	Graduate School Conjoint

GYOB	Gynecology and Obstetrics
HADM	Health Administration
HCLS	Coding Specialist
HLIN	Health Information Administration
HPRO	Health Promotion
IBGS	Integrated Biomedical Graduate Studies
IIDPC	International Dentist Program Clinics
IDPG	International Dentist Program General
IDPO	International Dentist Program Oral Pathology
IDPP	International Dentist Program Prosthodontics
IDPR	International Dentist Program Research
IDPT	International Dentist Program Technical Procedures
IMPD	Implant Dentistry
MDCJ	Medicine Conjoint
MEDN	Medicine
MFAM	Marriage and Family
MFTH	Marriage and Family Therapy
MHIS	Health Information Systems
MICR	Microbiology/Immunology
NEUR	Neurology
NEUS	Neurosurgery
NRSB	Nursing Bridge
NRSG	Nursing
NSCI	Natural Sciences
NUTR	Nutrition
OCTA	Occupation Therapy Assistant
OCTH	Occupational Therapy
ODRP	Oral Diagnosis, Radiology, and Pathology
OMFS	Oral and Maxillofacial Surgery
OPHM	Ophthalmology
ORDN	Orthodontics and Dentofacial Orthopedics
ORPH	Oral Pathology
ORTH	Orthopaedics
OTOL	Otolaryngology
PAST	Physician Assistant Sciences
PATH	Pathology
PEAC	Physical Education Activities
PEDN	Pediatric Dentistry
PEDS	Pediatrics
PERI	Periodontics and Implant Surgery
PHCJ	Public Health Conjoint
PHIL	Philosophy
PHRM	Pharmacology
PHSL	Physiology
PHTH	Physical Therapy
PMPT	Physical Therapy—Progression Master's
PROS	Prosthodontics
PRVM	Preventive Medicine
PSYC	Psychology
PSYT	Psychiatry
PTAS	Physical Therapy Assistant
PUAD	Public Administration
RADS	Radiology
RDMN	Radiation Medicine
RDNG	Reading
RELE	Religion—Christian Ethics
RELG	Religion—General Studies
RELR	Religion—Relational Studies
RELT	Religion—Theological Studies
RESC	Rehabilitation Science
RESD	Restorative Dentistry

RSTH	Respiratory Therapy
RTCH	Radiation Technology
RTMD	Medical Dosimetry
RTMR	Medical Radiography
RTMS	Medical Sonography
RTNM	Nuclear Medicine
RTRA	Radiologist Assistant
RTSI	Special Imaging
RTTH	Radiation Therapy
RXDI	Pharmacy Practice—Drug Information
RXEE	Pharmacy Practice—Experiential Education
RXPC	Pharmacy Practice—Pharmaceutical Care
RXPS	Pharmaceutical Sciences
RXRX	Pharmacy Conjoint
RXSA	Pharmacy—Social and Administrative Sciences
RXTH	Pharmacy Practice—Therapeutics
SDCJ	School of Dentistry Conjoint
SDCL	School of Dentistry Clinical
SLPA	Speech-Language Pathology
SOCI	Sociology
SOWK	Social Work
SPAN	Spanish
SPOL	Social Policy
SPPA	Speech-Language Pathology and Audiology
STAT	Statistics
SURG	Surgery
UROL	Urology
WRIT	Writing

## ALLIED HEALTH CONJOINT

### AHCJ 101 Introductory Chemistry (4)

Basic survey of matter, energy, and measurement. Includes: atoms and molecules; chemical bonding; chemical reactions and reaction rates; gases, liquids, and solids; solutions and colloids; acids and bases; nuclear chemistry.

Prerequisite: High school algebra or equivalent.

### AHCJ 102 Introductory Organic Chemistry (4)

Introduces the study of compounds that contain carbon. Coverage includes: alkenes, alkynes, and aromatic compounds; alcohols, phenols, ethers, and halides; aldehydes and ketones; carboxylic acids and esters; amines and amides.

Prerequisite: AHCJ 101.

### AHCJ 103 Introductory Biochemistry (4)

Introduces the chemistry of living systems, including: carbohydrates, lipids, proteins, and nucleic acids; enzyme chemistry; bioenergetics; carbohydrate, lipid, and protein metabolism; biosynthetic pathways; protein synthesis; chemical transmitters and immunoglobulins; body fluids, nutrition, and digestion.

Prerequisite: AHCJ 101, 102.

### AHCJ 105 Procedures in Phlebotomy (5)

Designed for individuals who are interested in laboratory medicine and would like to become certified phlebotomists and for students trained in venipuncture and skin puncture. Medical terminology, laboratory safety, CPR, basic anatomy and physiology, specimen-collection techniques, hazards/complications, quality-assurance methods, and medicolegal issues of phlebotomy. Clinical rotation arranged at Loma Linda University Medical Center. CPR training and certificate arranged for students

who are not already certified.

Corequisite: Current CPR certificate.

### AHCJ 107 Advanced Phlebotomy (2)

Designed for the working phlebotomist who needs to comply with California regulations. Topics include advanced techniques, complications, site selection, nonblood specimens, transport and processing, legal issues, and quality assurance. Program approved by the State of California, Department of Health Services—Laboratory Field Services.

### AHCJ 111 Introductory Physics (4)

Focuses on mechanics, properties of matter and heat; emphasizes concepts. Three lecture hours and three laboratory hours per week. Designed for students entering programs in the allied health sciences and nursing.

### AHCJ 112 Introductory Physics (4)

Focuses on sound, light, electricity and magnetism, atomic and nuclear physics, and relativity; emphasizes concepts. Three lecture hours and three laboratory hours per week. Designed for students entering programs in the allied health sciences and nursing.

### AHCJ 129 Basic Communication Skills (1 or 2)

Instruction in ESL communication skills necessary for successful engagement in college class discussions. Individual testing and interviews given to determine specific needs.

### AHCJ 131 Communication Skills (1 or 2)

Advanced ESL oral communication designed to provide students with the opportunity to develop and practice oral communication techniques in professional and academic contexts, e.g., research and case presentations. Additionally, overall nonnative speech patterns facilitated within these contexts to increase speech intelligibility. Course may be repeated up to four times.

### AHCJ 177 Professional Literacy for Nonnative Readers (3)

### AHCJ 205 Essentials of Microbiology (4)

Introductory course covering basic concepts of microbiology, including functional anatomy, metabolism, and genetics of microorganisms. Examines host-parasite relationships in the context of pathogenesis and disease. Includes a survey of human microbial diseases, with emphasis on communicable disease and public health applications. Cannot be used as a prerequisite for admission to nursing and certain allied health programs. Four units of integrated lecture and laboratory.

### AHCJ 214 Foundations of Health Information Systems (2)

Fundamentals of computer technology: hardware, software, terminology, and concepts. Designed to give an understanding of how a computer works, and the reasoning behind computer design. Per week: lecture 2 hours, laboratory 1 hour.

### AHCJ 215 Microsoft Office Excel Applications (2)

### AHCJ 235 Essentials of Human Anatomy and Physiology (4)

Studies the structure and function of the human body, including organ systems. (Prerequisite to many certificate and associate degree programs, e.g., coding specialist/certificate, occupational therapy assistant/A.A.). Lecture and laboratory required.

**AHCJ 235L Essentials of Human Anatomy and Physiology Laboratory (1)**

Studies the structure and function of the human body, including organ systems. (Prerequisite to many certificate and associate degree programs, e.g., coding specialist/certificate, occupational therapy assistant/A.A.). Lecture and laboratory required.

**AHCJ 241 Microbiology (2.5)**

Designed for students in the health sciences. History, classification, morphology, growth, control, transmission, and pathology of selected bacteria, viruses, fungi, rickettsia, and parasites. Host defenses against microbial pathogens, including specific and nonspecific immunity. Lecture 30 hours; laboratory 30 hours. Course covers two quarters. Grade given upon completion of 241, 242 sequence.

Prerequisite: A college-level chemistry course.

**AHCJ 242 Microbiology (2.5)**

Designed for students in the health sciences. History, classification, morphology, growth, control, transmission, and pathology of selected bacteria, viruses, fungi, rickettsia, and parasites. Host defenses against microbial pathogens, including specific and nonspecific immunity. Lecture 30 hours, laboratory 30 hours. Course covers two quarters. Grade given upon completion of 241, 242 sequence.

Prerequisite: A college-level chemistry course.

**AHCJ 250 Anatomy and Physiology (4)**

An 8-unit course (4 units Winter Quarter plus 4 units Spring Quarter) that covers structure and function of human biology. For students entering two- and four-year health professional programs such as physical therapy, occupational therapy, cardiopulmonary sciences, speech-language pathology and audiology, radiation technology, nursing, and other programs with an anatomy and physiology prerequisite.

**AHCJ 251 Anatomy and Physiology (4)**

An 8-unit course (4 units Winter Quarter plus 4 units Spring Quarter) that covers structure and function of human biology. For students entering two- and four-year health professional programs such as physical therapy, occupational therapy, cardiopulmonary sciences, speech-language pathology and audiology, radiation technology, nursing, and other programs with an anatomy and physiology prerequisite.

**AHCJ 252 Human Anatomy and Physiology (4)**

Function of enzymes; cell respiration and metabolism; secretion and action of hormones; circulatory and respiratory systems. Lecture and laboratory.

Prerequisite: AHCJ 251.

**AHCJ 305 HIV/AIDS and the Health Provider (1)**

Current issues related to HIV/AIDS, with special emphasis on the epidemiology and etiology of the disease. Psychosocial, economic, ethical, and legal concerns. Education for prevention. Impact on the health care worker. Resources available. Risk factors and precautions for blood-borne pathogens, HIV, hepatitis, and tuberculosis.

**AHCJ 308 Professional Communications (1-2)**

Forms of written and verbal communication routinely required in the performance of the health care-manager's duties. Projects include memos, letters, confidential FAX cover design, short reports, meeting notices, minutes, and creation of an agenda.

**AHCJ 311 Medical Terminology (2)**

Language of medicine, including word construction, word analysis, definitions, and the use of terms related to medical science. Course organized by body systems.

**AHCJ 321 Dynamics of Communication (2)**

Surveys communication skills, including group dynamics, self-awareness, interpersonal relationships, learning styles, problem solving, listening skills, and body language. Systematic observation, patient-interviewing techniques, and objective medical documentation. Problem identification and goal setting in a multiperson health care-delivery system.

**AHCJ 324 Psychosocial Models and Interventions (2)**

Orientation to the major models in psychology and how they relate to medical care. Development of a psychological model for interpretation of needs of the person in crisis. Understanding the roles of psychiatrists, psychologists, social workers, and family therapists. Suicide intervention. Critical-incident debriefing. Support factors in providing temporary, adequate psychological care for all involved in medical crisis.

**AHCJ 325 U. S. Health Care-Delivery System (2)**

Overview of U. S. health care delivery, including the history of health care institutions, government structure, accrediting bodies, organizations that provide health care, regulations and standards, reimbursement methods used, and the professionals who provide services. Course, presented from a systems perspective, includes research into the future of health care.

**AHCJ 326 Patient-Care Methods (2)**

Foundation of basic patient-care information and skills for allied health professionals entering the clinical environment. Integrated basic-care knowledge and skills required by each profession.

**AHCJ 328 Portfolio Practicum I (1)**

Introduces SAHP goals for graduates. Students demonstrate progression toward wholeness, compassion, support of diversity, appreciation of human worth, and commitment to lifelong personal and professional growth.

**AHCJ 329 Organic Chemistry with Laboratory (5)**

Studies carbon chemistry as related to organic compounds found in the human organism.

**AHCJ 331 Human-Resource Management (3)**

Theory and practice of the management of people at work. Organizational behavior concepts and the problems of employee procurement, training, and motivation. Job evaluation, wage administration, employee benefits, and negotiating with labor unions. Preparation both for managing people and directing a department in a complex organization.

**AHCJ 334 Biochemistry (5)**

Chemistry and metabolism of carbohydrates, lipids, nucleic acids, and proteins. Chemical basis of life processes. Lecture and laboratory demonstrations to support student competency.

**AHCJ 336 Rehabilitation Specialty Workshops (2 or 3)**

Introduces advanced clinical models and techniques of rehabilitation that the LLU physical and occupational therapy programs have to offer, e.g., community model of OT, electrotherapy, hydrotherapy, hippotherapy (horse-back riding), etc. Topics selected to meet the needs and interests of student groups.

**AHCJ 351 Statistics for the Health Professions (3)**

Fundamental procedures in collecting, summarizing, analyzing, presenting, and interpreting data. Measures of central tendency and variation, probability, binomial and normal distribution, hypothesis testing and confidence intervals, t-tests, chi-square, correlation, and regression. Introduction to SPSS statistical package for computer data analysis.

Prerequisite: A passing score of 75% must be achieved on the mathematics-competency examination.

**AHCJ 402 Pathology I (4)**

Fundamental mechanisms of disease, including cell injury; inflammation, repair, regeneration, and fibrosis; and vascular, cardiac, respiratory, gastrointestinal, hepatobiliary, urinary, reproductive, endocrine, and integumentary pathologies.

**AHCJ 403 Pathology II (3 or 4)**

Fundamental mechanisms of disease, including the central and peripheral nervous systems; bone and joint, skeletal muscle, developmental, genetic, infectious, and parasitic pathologies; and neoplasia. Additional unit requires two autopsy viewings and written report.

Prerequisite: AHCJ 402.

**AHCJ 404 Pharmacology (1)**

Introduces pharmacology, including study of pharmacokinetics, pharmacodynamics, and actions of pharmaceuticals commonly encountered in various allied health professions.

**AHCJ 405 Dynamics of Learning and Teaching (2)**

Examines the theories of learning applied to the teaching process. Evaluates current research and methods of instruction.

**AHCJ 407 Financial Management (2)**

Financial aspects of health care involving prospective reimbursement system, analysis of various health care reimbursement schemes, and hospital financial disbursements. Budget-variance analysis, analysis of cost components, operating statements, and productivity related to a department budget. Special projects may be assigned as needed. Per week: lecture 2 hours.

**AHCJ 408 Health Care Management (4)**

Management theory: planning, organizing, directing, and controlling (including budgetary controls). Department productivity and theories of work simplification. Preparation of resumes, interviewing skills, professional attitudes, group theory, and group dynamics. Students spend the last two-to-three weeks doing special projects designed and supervised by their departments. (Department of Nutrition and Dietetics students register for a 2-unit practicum in conjunction with this course.) Health information students will be given laboratory assignments that consist of the following: management case studies, Visio software training, and office layout development using Visio software. Per week: lecture 4 hours, laboratory 1-2 hours.

**AHCJ 409 Adult Learning Styles (3)**

Theories and styles of learning; personality factors related to learning; implications of effective intellectual, emotional, and social functioning included within the context of structuring education for the adult learner. Analyzes the teaching process, including setting objectives, selecting content, and designing classroom and clinical teaching strategies—with emphasis on alternatives to lecturing.

**AHCJ 412 Anatomy (9)**

Gross and microscopic anatomy of the human body. Lecture, laboratory, dissection, demonstration, and slides. Orientation to the structure of various systems of the body. Basic medical terminology. (Successful completion of this course is essential for continuation in the program.)

**AHCJ 415 Educational Psychology for Health Professionals (3)**

Psychological factors related to learning processes in professional and higher education. Emphasis on the role of communication skills in learning settings, gender influences on learning, objectives setting and course design, stimulation of higher-level thinking, motivation, and retention.

Prerequisite: AHCJ 409.

**AHCJ 418 Physiology I (4)**

Physiology of the human body, including cellular, neuromuscular, cardiovascular, respiratory, gastrointestinal, renal, and endocrine physiology.

**AHCJ 419 Physiology II (3)**

Detailed study of neuromuscular physiology.

Prerequisite: AHCJ 418.

**AHCJ 421 Psychology of Physical Disability (2)**

Psychological reactions to illness or disability. Methods of dealing with these reactions considered with reference to the clinical situation. Seminar approach to professional responsibilities for health care.

**AHCJ 426 Introduction to Computer Applications (2)**

Hands-on instruction in Word, Excel, and Power-Point. Lectures, laboratory assignments, quizzes, projects, and a practical examination. (Course not taught every quarter.)

**AHCJ 432 Database Management II (2)**

Theories and steps of database development using Microsoft Access. Topics include but are not limited to: relationships, form building, advanced queries, reporting, and macros. Project creating a basic medical-information database from scratch required. Per week: lecture 2 hours, laboratory 1-2 hours.

**AHCJ 433 Special Projects in Computer Applications (1-2)**

Computer systems and applications designed to meet the specific professional needs and interests of the student. Emphasizes use of databases with health care data and on-systems design, as needed. Per week: lecture 2 hours, laboratory 1-2 hours.

Prerequisite: AHCJ 432, or consent of instructor.

**AHCJ 443 Neuroanatomy I (4)**

Basic anatomy and function of the central, peripheral, and autonomic nervous systems and related structures. Gross anatomy of the brain and spinal cord. Functional consideration of cranial nerves, tracks, and nuclei of major systems. Lecture, slides, and laboratory with specimens.

**AHCJ 444 Neuroanatomy II (2)**

Studies neuroanatomical systems, structures, and pathways, with application to lesions of the human nervous system.

**AHCJ 459 Current Issues: National and Global Perspectives (3)**

Reviews and discusses concerns relative to the health field, i.e., legislation, regulations, and professional organizations. Project or paper required.

**AHCJ 461 Research Methods (2)**

Introduces the scientific method in research. Focus on the major steps of the research process as these steps relate to research-report evaluation, proposal writing, literature review, development of conceptual framework, identification of variables, statement of hypotheses, research design, and analysis and presentation of data.

Prerequisite: AHCJ 351.

**AHCJ 464 Group Process and Dynamics (3)**

Introduces principles and techniques of group theories, processes, and dynamics, as applied to the health-professional setting. Concepts include group functions, roles, structures, and characteristics; group membership, norms, dynamics, and relations. Theoretical perspectives on group development, dynamics, and conflicts. Practical issues, including educational applications, negotiation, observation, and diagnosis. Leadership issues, facilitation, expedition, and termination. Simulation exercises, active learning, and flexible choices of study and application.

**AHCJ 465 Seminars in Leadership (2)**

Prepares graduates for entry into the new work requirements. Through observation and participation, student explores the responsibility of today's employee to successfully integrate customer and community service and social responsibility.

**AHCJ 485 Technology in Education (3)**

Introduces instructional technologies and their applications in education, including: computer-generated media, Internet resources, chat rooms, Web courses, two-way audio, videos, desk-top conferencing, and teleconferencing.

**AHCJ 497 Advanced Clinical Experience (40 to 480 hours)**

Advanced clinical experience in selected areas of professional practice.

**AHCJ 498 Portfolio Practicum II (1)**

Student develops portfolio that illustrates the potential graduate's ability to meet the goals set by the School of Allied Health Professions for graduates of baccalaureate and master's degree programs.

**AHCJ 499 Directed Study (1-4)**

Individual arrangements for students to study under the guidance of a program faculty member. May include readings, literature review, or other special or research projects. Minimum of thirty hours required for each unit of credit. Laboratory may be required in addition to class time. A maximum of 4 units applicable to any degree program.

**AHCJ 505 Educational Psychology for Health Professionals (2 or 3)**

Studies psychological factors that relate to the learning process in professional and higher education. Particularly emphasizes the role of communication skills in learning settings, gender influences on learning, objective setting and course design, stimulating higher-level thinking, motivation, and retention. Major focus on applications to health professional clinical setting.

**AHCJ 506 Educational Evaluation and Clinical Assessment (3)**

Introduces principles and techniques of designing evaluation activities and tests for measuring classroom learning and instructional products. Includes criteria-referenced approaches, formative and summative instruments, critical-incident observations, portfolio assessment, and other measurement concepts.

**AHCJ 507 Pharmacology in Rehabilitation (3)**

Principles of pharmacology as related to diagnosis, prevention, and treatment of disease—including a presentation of the pharmacology and therapeutic value of drugs used in rehabilitation medicine. Related topics include pharmacokinetics, pharmacodynamics, adverse effects, drug interactions, and drug toxicity—with special consideration given to pediatric and geriatric pharmacology.

**AHCJ 508 Current Issues in Basic Science (3)**

Studies current issues in basic science as related to physical therapy. Topics may include current advances in biomechanics, cell and molecular biology, tissue engineering and transplants, pharmacology, and presentation of basic science research. Lecture and discussions of current literature.

**AHCJ 509 Teaching and Learning Styles (3)**

Explores theories and styles of learning and personality factors that relate to learning. Implications of effective intellectual, emotional, and social functioning included within the context of structuring education for the adult learner. Includes analysis of the teaching process from the setting of objectives, selection of content, and design of classroom and clinical teaching strategies (with particular emphasis on alternatives to lecturing) to assessment and evaluation.

**AHCJ 511 Biostatistics I (3)**

Fundamental procedures of collecting, summarizing, presenting, analyzing, and interpreting data. Sampling, measures of central tendency and variation, probability, binomial distribution, normal distribution, sampling distributions and standard error, confidence intervals, hypothesis testing, t-tests, chi-square, correlation, and regression. Introduces computer analysis for solution of statistical problems.

**AHCJ 512 Biostatistics II (3)**

Introduces analysis of data using ANOVA (one-way, two-way, and repeated measures) with multiple comparisons; multiple correlation and regression; and non-parametric statistics. Interprets computer output and use of the SPSS statistical package for data analysis. Determines validity and reliability of research instruments.

**AHCJ 514 Kinesiology: Motor Control and Learning (3)**

Advanced kinesiology, including movement science dealing with behavioral basis of motor control and motor learning from an information-processing perspective.

**AHCJ 515 Curriculum Development in Higher Education (3)**

Examines principles of curriculum development. Selection, organization, and evaluation of learning experiences. Examines the nature, place, and interrelationship of general and specialized education in higher education.

**AHCJ 516 Clinical Imaging (3)**

Studies the etiology, pathogenesis, and clinical manifestations of selected bone and joint pathologies. Discusses current literature for selected pathologies.

**AHCJ 518 Neurobiology (3)**

Studies neurobiology, including current neuroscience literature, as related to selected pathologies.

**AHCJ 519 Graduate Portfolio (1)**

Student develops portfolio that demonstrates the graduate student's ability to meet the goals set by the School of Allied Health Professions.

**AHCJ 526 Computer Applications II (3)**

Hands-on instruction in Word, Excel, and Power-Point. Class activities include hands-on lectures, laboratory assignments, quizzes, projects, and a final examination. A special Web page project required.

**AHCJ 527 Medical Screening for Rehabilitation Professionals (3)**

Screening for nonneuromusculoskeletal origins for the musculoskeletal complaints of patients who commonly seek rehabilitation. Particularly emphasizes components of the history and physical examination that suggest medical pathology requiring referral and/or physician consultation. Knowledge and skills related to screening for medical pathology in patients with musculoskeletal complaints of the lumbar spine, pelvis, lower extremities, thoracic spine, shoulder girdle, and upper extremities.

**AHCJ 534 Advanced Neurological Rehabilitation (3)**

Studies in-depth the patient with spinal cord injury, including etiology, current treatment techniques in acute and outpatient settings, and principles of exercise physiology. Reviews research activities with regard to a cure for spinal cord injury, as well as the legal aspects of ADA and the individual with a spinal cord injury.

**AHCJ 535 Exercise and Thermoregulation (3)**

Focuses on energy sources utilized by the body for exercise, neural and mechanical structures of mechanisms that control body movements, environmental influences on exercise performance, and principles of aerobic and anaerobic exercise. Applies concepts and principles to normal and disabled human conditions.

**AHCJ 536 Health Care Financial Management (3)**

Focuses on understanding the finances of health care, including financial statements, reimbursement models of fee-for-service, capitation, managed care, and risk pools. Concepts of modeling and scenario planning, with emphasis on return on investment.

**AHCJ 537 Organizational Structure and Behavior (3)**

Understanding, predicting, and influencing human behavior in an organization. Provides students with a variety of theories, models, strategies, and experiences in organizational behavior through which managers can find their own solutions in specific situations.

Prerequisite or concurrent: STAT 509 or STAT 521.

**AHCJ 538 Histology (2 or 3)**

Advanced histology of joint pathology and the associated changes in bone, cartilage, and other connective tissues. Paper required.

**AHCJ 539 Technology and Health Care Organizations (3)**

Explores the direct and indirect impacts of technology on health care systems. Examines technology in terms of its definition, limits, change factors, and diffusion at the personal, managerial, corporate, and governmental levels of health care.

**AHCJ 544 Advanced Functional Neuroanatomy (3)**

Analyzes and applies neuroanatomy to lesions of the human nervous system; clinical significance of such lesions.

**AHCJ 545 Legal and Ethical Issues in the Health Professions (3)**

History and structure of federal and state governments, including torts, contracts, administrative law, criminal law, and reporting issues. Legal and ethical issues in patient confidentiality and release of patient information. The impact of technology on the collection and dissemination of patient information. Medical legal liability issues, including corporate compliance.

**AHCJ 551 Professional Systems in Management I (3)**

Administering the academic department: personnel selection, development, and evaluation; finance; team development; and leadership theories.

**AHCJ 552 Professional Systems in Management II (3)**

Administering the clinical setting, including assessing needs, implementing a business plan, and negotiating contracts; management philosophies.

**AHCJ 556 Administration in Higher Education (3)**

Leadership philosophy and styles of administrative leadership in higher education, with particular application to health professions educational programs. Includes personnel management; budgeting; contracting for clinical placement; group leadership in committees; faculty selection, development, and evaluation; strategic planning; and policy development.

**AHCJ 558 Stress and Health Behavior (3)**

Evaluates effects of stress on individuals, families, students, and health professionals in the educational setting. Analyzes biopsychological foundations, social systems, technological influences, life-development factors, and unique aspects of health-professional education. Explains coping strategies—such as nutrition, exercise, humor, time management and organization, cognitive therapies, relaxation, and imagery.

**AHCJ 559 Health Communication in Rehabilitation Science (3)**

Provides a broad introduction to human communication in a health care context. Provider-client communication, provider communication and education, intercultural health communication, alternative medicine, health ethics, and mass-media health images.

**AHCJ 564 Group Process and Dynamics (3)**

Group guidance, theories of group-individual interaction, and the communication process. Educational orientation to the utilization of groups to enhance motivation, commitment, and learning.

**AHCJ 565 Health Communication: Counseling Patients and Personnel (3)**

Communication in health care, multiple applications of communication theory to health promotion, and essentials of professional communication in clinical teaching and leading groups of health professionals. Emphasizes counseling techniques, nondefensive communication, and increased communications awareness.

**AHCJ 569 Computers and Electronics for Clinicians (3)**

Explains the roles of computers and electronics in a clinical setting. Equipment used in a classroom setting.

**AHCJ 574 Behavioral Modification and Personal Change (3)**

Explores and applies health-behavior change models. Educational, psychosocial, and behavioral issues, with emphasis on leadership, decision making, group process, and persuasion.

**AHCJ 585 Technology in Education (3)**

Introduces instructional technologies and their applications in education, including: computer-generated media, Internet resources, chat rooms, Web courses, two-way audio, videos, desk-top conferencing, and teleconferencing. (Course not taught every year.)

**AHCJ 591 Research I (3)**

Introduces the scientific method in health-science research. Focuses on the major steps of the research process: problem identification, literature review, conceptual framework, identification of variables, statement of hypothesis, experimental design, and analysis and presentation of data. Includes critical evaluation of research literature. Applies the research process to problems in related specific allied health fields. Develops a research proposal. Pilot-tests a research proposal. Tests procedures and data forms. Implements the research proposal in a practice setting.

**AHCJ 592 Research II (3)**

Computer data analysis and preparation of a research report. Student prepares a poster appropriate for a professional meeting. Graphics, tables, and abstract.

**AHCJ 599 Directed Teaching (3)**

Student develops a specialty module and presents it in a classroom or clinical setting. Includes course application, course syllabus, measuring instrument, student course evaluation, and lesson plans.

Prerequisite: AHCJ 505, 506; or consent of instructor or of program director.

**AHCJ 600 Active On-line Learning (3)**

On-line course (organized around the AVLL standard for on-line instruction). Focuses on integration of active learning strategies, meaningful interactions, and stimulating learning experiences. Modules include: introduction, course organization, a safe learning environment, the relational basis of learning, integration of faith, appropriate assessment, and the needs of individual learners.

Prerequisite: AHCJ 505, 509.

**AHCJ 601 Research-Proposal Writing (3)**

Student prepares a research proposal, including components essential for submission to the Institutional Review Board. Emphasizes writing skills in preparation of literature review, purpose, conceptual framework, proposed methodology, and statistical analysis. Includes the ways in which proposal serves as a basis for an article for publication.

**AHCJ 605 Critical Analysis of Scientific Literature (2 or 3)**

Evaluates the scientific literature, including critical evaluation of the rationale for the study; population inclusion/exclusion criteria; sampling and randomization techniques; sample size; appropriateness of the research design; choice of the data analysis; structure and content of tables and graphs; interpretation of statistical results; and applications to practice. Students evaluate research articles by answering questions posed by the instructor in a Web discussion board and virtual classroom. Students submit weekly evaluation papers for the articles discussed.

**AHCJ 699 Directed Study (1-6)**

Individual arrangements for advanced students to study under the guidance of a program faculty member. May include reading, literature review, and/or other special projects. Minimum of thirty hours required for each unit of credit.

**ANATOMY****ANAT 301 Head and Neck Anatomy DH (4)**

Gross anatomy of the human body. Lecture, laboratory, and demonstration.

**ANAT 303 General and Oral Histology and Embryology (3)**

Microscopic study of fundamental cells, organs, tissues, and systems of the body. Analyzes in detail the pulp, periodontal membrane, alveolar process, oral mucosa, and calcified tissues of the tooth.

**ANAT 506 Neuroscience DN (5)**

Basic anatomy and physiology of the human nervous system. Biophysical and structural concepts necessary for understanding all aspects of neurologic functioning. Fall Quarter: Four lectures and one laboratory per week.

**ANAT 508 Human Anatomy for Dentists I (7)**

Studies the human body at macroscopic and microscopic levels, including developmental considerations. Clinical case-based conferences facilitate integration of anatomy into clinical situations. Winter Quarter: Four lectures and three laboratories per week.

**ANAT 509 Head and Neck Anatomy for the Dentist (8)**

Studies human head and neck anatomy at macroscopic and microscopic levels. Special attention paid to development and oral histology. Spring Quarter: Five lectures and three laboratories per week.

**ANAT 514 Head and Neck Anatomy and Human Embryology (5)**

An in-depth look at the gross anatomy of the head and neck, including general human embryology. (Part of ANAT 509 without the oral histology component.)

**ANAT 518 Basic Human Histology (4)**

Studies tissues and organs of the human body, as seen with routinely stained histological sections. Basic understanding of relationship of structure and function. Fall Quarter: Two lectures and two laboratories per week.

**ANAT 521 Gross Anatomy/Embryology (1)**

Regional systemic study of the human body, with correlation to radiology and clinical medicine. Surveys human embryonic development. Considers origins of common birth defects.

**ANAT 522 Gross Anatomy/Embryology (5)**

Regional systemic study of the human body, with correlation to radiology and clinical medicine. Surveys human embryonic development. Considers origins of common birth defects.

**ANAT 523 Gross Anatomy/Embryology (2)**

Regional systemic study of the human body, with correlation to radiology and clinical medicine. Surveys human embryonic development. Considers origins of common birth defects.

**ANAT 524 Gross Anatomy/Embryology (1)**

Regional systemic study of the human body, with correlation to radiology and clinical medicine. Surveys human embryonic development. Considers origins of common birth defects.

**ANAT 526 Head and Neck Anatomy ( )**

Detailed dissection of the head and neck. Demonstration and lecture. Offered on demand.

Prerequisite: ANAT 541 or equivalent.

**ANAT 537 Neuroscience GS (1)**

Integrated approach to the fundamentals of neuroanatomy and neurophysiology, with applications to the clinical neurology. Fall Quarter, 1 unit; Spring Quarter, 4 units.

Prerequisite: ANAT 541 strongly recommended.

**ANAT 538 Neuroscience (4)**

Integrated approach to the fundamentals of neuroanatomy and neurophysiology, with applications to clinical neurology. Grade given upon completion of 537, 538 sequence.

Prerequisite: ANAT 541 strongly recommended.

Prerequisite or Concurrent: ANAT 537.

**ANAT 541 Gross Anatomy (4 or 6)**

Anatomy of the head, neck, locomotor system, thorax, abdomen, pelvis, and perineum. Correlated with radiology, applied features, and embryological development. Summer and Fall Quarters.

**ANAT 542 Cell, Tissue, and Organ Biology (5)**

The microscopic structure of cells, tissues, and organs of the human body. Fall Quarter.

**ANAT 544 Human Embryology Lecture (2)**

The plan of development as it pertains to the human. Considers principles. Summer through Fall Quarter.

**ANAT 544L Human Embryology Laboratory (1)**

Student works with both human and comparative materials. Winter Quarter.

Prerequisite: A course in vertebrate embryology.

**ANAT 545 Advanced Neuroanatomy (3)**

Studies in detail and dissects the human nervous system. Spring Quarter, even years.

Prerequisite: ANAT 537.

**ANAT 546 Electron Microscopy (3)**

Trains the student to use the electron microscope. Basic theory, operational techniques, and tissue preparation. On demand, as needed.

Prerequisite: Histotechnology or equivalent.

**ANAT 547 Histochemistry (3)**

Theoretical and practical aspects of histochemical methods, as applied to tissue sections. One lecture and two three-hour laboratories/conferences weekly. Summer Quarter, even years.

Prerequisite: A course in biochemistry; ANAT 542 or equivalent.

**ANAT 548 Advanced and Molecular Cytology (3)**

Studies the ultrastructural and cytochemical analysis of a variety of differentiated cells. Spring Quarter, odd years.

**ANAT 549 Seminar: Topographical Chemistry (2)**

Qualitative and quantitative distribution of enzymes and other chemically defined components of organs, as reported in current literature. Students responsible for one oral and one written report. On demand.

**ANAT 550 Gross Anatomy/Embryology (1)**

Regional systemic study of the human body, with correlation to radiology and clinical medicine. Surveys human embryonic development. Considers origins of common birth defects. Restricted to Biomedical Science Program (certificate).

Cross-listing: ANAT 521.

**ANAT 551 Gross Anatomy/Embryology (5)**

Regional systemic study of the human body, with correlation to radiology and clinical medicine. Surveys human embryonic development. Considers origins of common birth defects. Restricted to Biomedical Science Program (certificate).

Cross-listing: ANAT 522.

**ANAT 552 Gross Anatomy/Embryology (2)**

Regional systemic study of the human body, with correlation to radiology and clinical medicine. Surveys human embryonic development. Considers given to origins of common birth defects. Restricted to Biomedical Science Program (certificate).

Cross-listing: ANAT 523.

**ANAT 553 Gross Anatomy/Embryology (1)**

Regional systemic study of the human body, with correlation to radiology and clinical medicine. Surveys human embryonic development. Considers origins of common birth defects. Restricted to Biomedical Science Program (certificate).

Cross-listing: ANAT 524.

**ANAT 554 Techniques in Experimental Morphology (2)**

Introduces selected methods used in the morphological analysis of organ and cellular function. Spring Quarter, odd years.

**ANAT 555 Advanced Gross Anatomy—  
Articulation/Joints (3)**

Studies in detail the anatomical design of joints, linking function through clinical correlations. Spring Quarter, odd years.

**ANAT 594 Special Topics in Anatomy (1-7)**

Intensive study of a selected topic approved by the chair of the department. Individual guidance by a staff member.

**ANAT 605 Integrative Biology Graduate Seminar (1)**

Seminar, coordinated by the Division of Human Anatomy and the Department of Physiology and Pharmacology. Reports from current literature and the presentation of student and faculty research on various aspects of regulatory and integrative biology—as applied to cells, tissues, organs, and systems. Students and faculty expected to participate in a discussion and critical evaluation of the presentation.

**ANAT 697 Research (1-8)****ANAT 698 Thesis (1-2)****ANAT 699 Dissertation (1-5)****ANAT 891 Anatomy Elective (120 to 720 hours)**

Prerequisite: ANAT 541.

**ANESTHESIOLOGY****ANES 314 Dental Anesthesia: Local Anesthesia and Inhalation Sedation (4)**

Physiologic and psychologic aspects of pain and anxiety. A philosophy of patient management, including use of local anesthetics and nitrous oxide/oxygen sedation. History and patient evaluation. Pharmacology, armamentarium, and complications regarding use of these agents. Management of office emergencies. Students practice local anesthetic injections and administer nitrous oxide/oxygen to each other.

**ANES 521 Principles of Medicine, Physical Diagnosis, and Hospital Protocol (2)**

Studies methods recognizing normal and abnormal physical conditions. Reviews organ systems to expand the dentist's general medical knowledge. Specific topics reviewed include blood diseases, systemic diseases, cardiac disease, patient admission, physical examination, and hospital charting.

**ANES 546 General Anesthesia (7-9)**

Student administers general anesthesia and regional block anesthesia to a variety of medical and dental patients in the operating room, under the supervision of attending anesthesiologists. Repeated registrations required to fulfill the total units.

**ANES 547 Anesthesia Grand Rounds (1)**

Weekly meeting of the Department of Dental Anesthesiology featuring guest lecturers who present a variety of current topics in anesthesiology. One session per month designated as the Mortality and Morbidity Conference.

**ANES 548 Anesthesia Residents Seminar (2)**

Comprehensive didactic course covers the entire field of anesthesiology in a two-year cycle. Sectional written examinations given.

**ANES 604 Anesthesia Literature Review (1)**

Weekly session reviews current anesthesia literature.

**ANES 654 Practice Teaching in Anesthesia (1-2)**

Supervision of pre- and postdoctoral dental students administering local anesthesia and conscious sedation.

**ANES 697 Research (1)**

Student participates in ongoing research or original projects. All clinical research subject to approval by the Institutional Research Board. Multiple registration may be needed to complete research activities.

**ANES 751 Dental Anesthesia: Local Anesthesia and Inhalation Sedation (4)**

A philosophy of patient management, including use of local anesthetics and nitrous oxide/oxygen sedation, as well as the physiologic and psychologic aspects of pain and anxiety. Course covers the history of anesthesia, patient evaluation, pharmacology, armamentarium, complications regarding use of these agents, and the management of office emergencies. Students practice local anesthetic injections and administer nitrous oxide/oxygen to each other.

**ANES 801 Dental Anesthesia: Advanced Topics (2)**

Theory of general anesthesia. Hospital dentistry, patient evaluation, medical consultations. Reviews local anesthesia and introduces additional techniques of pain and anxiety control.

**ANES 891 Anesthesiology Elective (60 to 720 hours)****ANTHROPOLOGY****ANTH 304 Biological Anthropology (4)**

Explores the interaction between biology and culture in producing the variations in physical traits currently found worldwide. Examines processes of change resulting from heredity, ecological adaptation, dietary differences, mate selection, disease, and other factors. Examines the problems of paleopathology (disease in ancient populations), humankind in the fossil record, and the place of biological and ecological factors in the fall of ancient civilizations. Detailed consideration of scientific and social bases for popular conceptions of "race."

**ANTH 306 Language and Culture (4)**

Surveys anthropological linguistics and sociolinguistics. Considers the place of language and communication in social interaction. Introduces descriptive and structural linguistics and discourse analysis. Examines linguistic pluralism in the United States. Contrasts language of health care givers with the language styles of people they serve. Language productions such as folklore, humor and other forms of "word play," curses and blessings, and glossolalia.

**ANTH 315 Cultural Anthropology (4)**

Advanced course in ethnology and social organization. Explores the nature of culture, giving special attention to such features as technology, economic activities, community organization, kinship and marriage, social control, magic and religion, the arts, and other forms of cultural behavior. Presents a wide array of examples from societies around the world.

**ANTH 316 Archaeology (4)**

Studies principles of archaeological research and the discoveries of centers of civilization in the Middle East, the Mediterranean, the New World, the Far East, Africa, and other parts of the world, particularly recent discoveries. Also covers the main features of biblical archaeology. Some attention given to research into prehistoric cultures.

**ANTH 436 Cultural Contexts of Religion (4)**

Anthropological approach to the study of religious beliefs and practices, focusing on the diversity of religious expressions that can give us insight into what makes us human and how we can battle the frailties of humanity. Promotes empathy with people from cultural and religious traditions other than one's own, as well as tolerance and respect for their differences.

**ANTH 448 Medical Anthropology (4)**

Studies sickness and health as universal factors in the human condition. Examines worldview as an explanatory system for human behavior, giving ethnographic examples of curing systems and coping mechanisms. Deals with cross-cultural communication of health principles and practices.

**ART****ARTA 205 The Language of Art (2-4)**

Basic concepts, materials, and history of the visual arts that enable the nonart major to develop an art vocabulary and gain insight into the creative process.

**BIOCHEMISTRY****BCHM 306 Introduction to Organic and Biochemistry (6)**

Meets the organic and biochemistry requirements of nursing and allied health students. Covers the nomenclature, structure, and salient chemical properties of the nine classes of organic compounds. Covers the structures and biological functions of proteins, carbohydrates, lipids, and nucleic acids; intermediary metabolism. Emphasizes relevant health-related topics.

**BCHM 501 Biochemistry DN (5)****BCHM 504 Introduction to Biochemistry (5)**

Quantitative concepts of pH and buffers. Structure, function, and metabolism of the four major classes of biological macromolecules (proteins, carbohydrates, lipids, nucleic acids) and their subunits. Holoenzyme composition (vitamins, minerals) and activity. Bioenergetics. Regulatory mechanisms that contribute to homeostasis in biological systems. Flow of genetic information: replication, transcription, translation, and regulation. Connective tissue and body-fluid components. Lecture and demonstration primarily for dental students.

**BCHM 505 Seminar in Biochemistry (1)****BCHM 506 Seminar Presentation in Biochemistry (1)****BCHM 508 Principles of Biochemistry (6)**

Chemistry of amino acids and proteins. Enzyme properties and mechanisms. Bioenergetics. Chemistry and metabolism of carbohydrates, lipids, amino acids, and nucleic acids. Protein biosynthesis and the control of gene expression. Special topics in physiological chemistry: connective tissue components, acid-base balance, hormones, vitamins, and minerals.

**BCHM 509 Biochemistry of the Human Body DN (5)**

Studies the living process at the molecular level. Properties of water, the medium in which the biomolecules interact. Concepts of pH and buffers and structure and functional roles of amino acids and proteins. Enzyme properties and mechanisms. Role of micronutrients in biological systems. Bioenergetics. Catabolism and biosynthesis of carbohydrates, lipids, proteins, and nucleic acids. Collagen structure as a product of gene expression. Regulatory control of metabolism as a basis for maintaining homeostasis in biological systems. Hormone structure and function.

**BCHM 523 Introduction to Physical Biochemistry (3)**

Introduces biochemical thermodynamics, proteins and protein physical chemistry, enzyme kinetics and mechanisms, and bioenergetics.

Prerequisite: BCHM 508 or equivalent.

**BCHM 525 Metabolic Interrelationships and Control (5)**

Regulation of carbohydrate and lipid metabolism, nuclear hormone receptors, amino acid metabolism, growth factors, intracellular regulation, nucleotide metabolism, DNA, RNA structure and function, transcription, translation.

Prerequisite: BCHM 508 or equivalent.

**BCHM 527 Molecular Biology of the Cell (8)**

Identical to CMBL 502, offered by the Department of Microbiology.

Cross-listing: CMBL 502; MICR 539.

Prerequisite: BCHM 508 or CMBL 501.

**BCHM 534 Techniques of Biochemistry (5)**

Intensive, integrated laboratory experience in protein chemistry, and the physical characterization of macromolecules. Writing scientific papers.

**BCHM 544 Advanced Topics in Biochemistry (2-4)**

Recommended for the Ph.D. (2+2+2). Recent examples include proteins: modern methods of study; selected cellular events in carcinogenesis; enzyme kinetics; transgenic plants for human health.

Cross-listing: CMBL 538; BIOL 546; MICR 538.

**BCHM 551 Special Problems in Biochemistry (2-6)****BCHM 697 Research (1-10)****BCHM 698 Thesis (1-3)****BCHM 699 Dissertation (1-5)****BIOLOGY****BIOL 116 Introduction to Human Biology (3)**

Introductory course in human biology. Explores basic principles of human anatomy and physiology and their relationships to social functioning. Fulfills the human biology prerequisite for the master's program in Social Work.

**BIOL 314 Genetics and Speciation (4)**

Introduces genetic mechanisms of biological change. Processes of inheritance through time evaluated in their ecological context.

**BIOL 315 Ecology (4)**

Principles of terrestrial, aquatic, and marine ecology, with a focus on individual, population, community, and ecosystem levels of organization. Laboratory work includes field studies that examine ecological principles. Three class hours and one three-hour laboratory per week.

**BIOL 495 Undergraduate Research (14)**

Original investigation and/or literature study pursued under the direction of a faculty member. May be repeated for additional credit.

Prerequisite: Consent of instructor.

**BIOL 504 Biology of Marine Invertebrates (4)**

Behavior, physiology, ecology, morphology, and systematics of marine invertebrates, with emphasis on morphology and systematics. Three class hours per week; one-day field trip alternate weeks, or the equivalent.

**BIOL 505 Marine Biology (4)**

Surveys marine species of the world, and the oceanographic processes and ecological interactions that affect them. Emphasizes tropical and coral ecosystems. Includes an independent project. Four class hours per week, plus all-day field trips (usually on Sundays).

**BIOL 509 Mammalogy (4)**

Studies the mammals of the world, with emphasis on North America. Includes classroom and field study of systematics, distribution, behavior, and ecology. Three class hours, one three-hour laboratory per week.

**BIOL 515 Biogeography (3)**

Present and past distribution and migrations of the natural populations of organisms.

Prerequisite: Biology or systematics of at least two plant or animal taxa, desirable.

**BIOL 517 Ecological Physiology (4)**

Studies the interface between the individual and the environment, with emphasis on unusual environments, in order to explore the limits of physiological systems. Per week: Four class hours. Offered alternate years.

**BIOL 518 Readings in Ecology (2)**

Studies, analyzes, and discusses current and classic papers.

Prerequisite: A course in ecology or consent of instructor.

**BIOL 524 Paleobotany (4)**

Fossil plants; their morphology, paleoecology, taphonomy, classification, and stratigraphic distribution. Analyzes floral trends in the fossil record. Three class hours plus one three-hour laboratory or field trip per week.

Cross-listing: GEOL 524.

Prerequisite: Consent of instructor.

**BIOL 525 Paleopalynology (4)**

Morphology, paleoecology, classification, and stratigraphic distribution of plant microfossils. Includes introduction to biostratigraphic and paleoecologic analytical methods. Three class hours and one three-hour laboratory or field trip per week.

Cross-listing: GEOL 525.

Prerequisite: GEOL 405.

**BIOL 526 Principles and Methods of Systematics (3)**

Studies the principles and methods of modern systematic biology, with focus on the assumptions, concepts, and computerized methods of phylogeny reconstruction.

**BIOL 534 Invertebrate Paleontology (4)**

Structure, classification, ecology, and distribution of selected fossil invertebrate groups. Considers principles and methods involved in the study and analysis of invertebrate fossils. Three class hours and one three-hour laboratory per week.

Cross-listing: GEOL 534.

Prerequisite: Consent of instructor.

**BIOL 535 Animal Behavior (4)**

Behavioral mechanisms of animals and their role in survival. Lectures and projects.

**BIOL 536 Readings in Animal Behavior (2)**

Critical analysis of the research literature on selected topics in animal behavior.

Prerequisite: A course in animal behavior, or consent of instructor.

**BIOL 537 Advances in Sociobiology (3)**

Studies current concepts and ideas relating to the origin and structure of social behavior of animals. Focuses special attention on the adaptive significance of species-specific behavior in a wide variety of environments.

**BIOL 538 Behavior Genetics (4)**

Studies the interaction of genotype and phenotype as it relates to animal behavior. Primary focus at the molecular and physiological levels of behavior. Modern understanding of the nature/nurture debate extended to topics that include biological determinism and ethics.

**BIOL 539 Behavioral Ecology (4)**

Examines in depth how behavior contributes to the survival of animals, with an emphasis on behavioral strategies that reflect adaptation to the animal's environment.

**BIOL 544 Vertebrate Paleontology (4)**

Fossil vertebrates, with emphasis on the origins of major groups. Systematics, biology, and biogeography of ancient vertebrates. Three class hours and one three-hour laboratory per week.

Cross-listing: GEOL 544.

Prerequisite: General biology or consent of instructor.

**BIOL 545 Genetics and Speciation (4)**

Comparative analysis of species concepts, mechanisms of speciation, and analysis of micro- and macroevolution.

Prerequisite: A course in genetics and philosophy of science.

**BIOL 546 Techniques in Vertebrate Ecology (3)**

Theory and practice of vertebrate ecology research including marking methods, population estimation, home range and habitat analysis, and radiotelemetry. Software used extensively for analysis of data, some of which will be collected during field trips.

**BIOL 547 Molecular Biosystematics (4)**

Analyzes at the molecular level genetic events that underlie speciation. Laboratory work integrated with lecture, demonstrating basic molecular genetic research tools applicable to molecular biosystematics studies.

Prerequisite: Genetics and speciation or molecular genetics, and philosophy of science.

**BIOL 548 Molecular Ecology (4)**

Applies molecular markers to the study of ecology and natural history of populations. Emphasizes molecular techniques that uniquely contribute to resolving major problems in phylogeography and measures of adaptiveness.

Prerequisite: Genetics and speciation and a course in either ecology or biogeography.

**BIOL 549 Biodiversity and Conservation (3)**

Examines contemporary issues related to diminishing biodiversity on regional and global scales and the need to conserve both biodiversity and the critical habitats that support threatened flora and fauna.

**BIOL 558 Philosophy of Science and Origins (4)**

Studies selected topics in the history and philosophy of science, and applies these principles in analyzing contemporary scientific trends.

Cross-listing: GEOL 558

**BIOL 588 Current Topics in Biology (1-5)**

Reviews cutting-edge literature in the biological sciences. Different sections may be repeated for additional credit.

Prerequisite: Consent of instructor.

**BIOL 589 Readings in Biology (1-4)**

Studies, analyzes, and discusses current and classic papers.

**BIOL 605 Seminar Presentation in Biology (1)**

Student presentations on recent research and developments in biological science. Student presents one seminar during the quarter.

**BIOL 607 Seminar in Biology (1)**

Seminar presentations by guest scientists on recent research and developments in biological science. No student presentation required.

**BIOL 616 Research and Experimental Design (2)**

Concepts, methods and tools of research—including experimental design and data analysis.

**BIOL 617 Proposal Writing and Grantsmanship (2)**

Skills and practice of effective proposal writing, and strategies for locating and obtaining research grants.

**BIOL 695 Special Projects in Biology (1-4)**

Responsibility for a special research project in the field, laboratory, museum, or library. May be repeated for additional credit.

**BIOL 697 Research (1-8)**

See department checklist for recommended number of units.

**BIOL 698 Thesis (2)**

Credit for writing the master's thesis.

**BIOL 699 Dissertation (2)**

Credit for writing the doctoral dissertation.

**CHINESE STUDIES****CHIN 105 Chinese Civilization (4)**

Introduces and discusses important aspects of Chinese civilization: language, literature, history, geography, culture, economics, philosophies, and religions; as well as modern-day politics. Surveys the Mandarin Chinese language, focusing on basic pronunciation, grammar, traditional and simplified written characters, and sentence construction. Communication in everyday life, e.g., in restaurants, on public transportation, in health care encounters. Includes interactive learning, role play, media, music, and cultural presentations to enhance understanding and synthesize learning. Provides basic skills and understanding necessary for further Chinese studies and research.

**CHIN 106 China Today—Its Language and Culture (4)**

Briefly discusses China's past as background for study of important aspects of the country's changing, diverse, and modern culture—including its politics, economics, and religion. Introduces the richness of the Chinese language, while emphasizing common vocabulary used in everyday conversation, especially in a health care environment. Uses role-play and interactive learning to prepare students, faculty, and staff in their varied roles and missions to interact with modern China. Provides fundamental skills and understanding for further Chinese studies and research. Includes one local field trip.

**CHIN 111 Mandarin I (4)**

Concentrates on study of modern vernacular Mandarin Chinese in both spoken and written forms. Listening, speaking, reading, and simple writing skills immerse students in vocabulary and simple grammatical rules. Emphasizes applied learning, individual inquisitiveness, and fearless verbal practice. Some homework required. Students expected at the end of the course to pronounce a list of common words, distinguish them by listening, and use them in simple dialogues and minispeeches. Provides competence to read simple road signs, restaurant menus, some simple newspaper headlines and advertisements, simple biblical texts, and Chinese idioms. No knowledge of Chinese language required. Full attendance expected.

**CHIN 112 Mandarin II (4)**

Sequel to CHIN 111. Continues study in modern vernacular Mandarin Chinese in both spoken and written forms. Emphasizes further proficiency in the four basic language skills (listening, speaking, reading, and writing Chinese); and added competence in vocabulary and grammatical knowledge. Health care-related terminology, Christian texts in Chinese, Chinese idioms and English translations introduced. Examination includes a simple speech in class and a short narrative written in Chinese.

Prerequisite: CHIN 111 unless student can speak Chinese and write some Chinese characters.

**CHIN 205 Immersion Language and Culture Program (4)**

Integrates program with a domestic or an international service project within a Chinese community. Applies classroom learning in real life situations. Student receives an educational "China experience" firsthand through eighty clock hours of lectures, discussion, and service learning.

Prerequisite: CHIN 305 or 105 or 106.

**CHIN 206 Health Care-Service Learning in a Chinese Context (2 or 4)**

Focuses on an international service-learning project within a Chinese community. Classroom lectures applied to a health-exposition project. Student receives an in-depth China education experience through language and cultural immersion with practical learning while serving people's needs.

Prerequisite: CHIN 305 or 105 or 106.

**CHIN 305 Mandarin for Health Care Professionals (2 or 4)**

Focuses on the ability to listen, speak, read, and write in a Chinese health care-related setting, such as medical and dental offices, clinics, hospitals, nursing homes, public health facilities, and childcare centers. Students study and role play common communication exchanges with patients, physicians, dentists, nurses, and paramedical personnel.

Prerequisite: CHIN 105 or 106, 111, and 112 unless student demonstrates competence in Chinese language and knowledge commensurate with that gained as a result of completing the prerequisites.

**CHIN 399 Directed Study (2-4)**

Research in Chinese medicine, therapeutics, culture, education, prose, poetry, music; drama, biblical texts, and religious literature; influence of globalization, market dominance, entrepreneurship; religious liberty in China; or other topics in consultation with the instructor.

Prerequisites: CHIN 105 and 111, or permission of instructor.

**CHILD LIFE SPECIALIST****CHLS 504 Child Life Administration and Program Development (3)**

Introduces students to the history and development of the child life profession. Health care environment, administrative issues, program development, and outcome assessment process. Develops competencies and skills necessary to effectively administer a child-life program.

**CHLS 506 Child Life Specialist: Educational and Therapeutic Intervention (3)**

Teaches the developmental aspects of play therapy, in collaboration with the developmental stages of the child/teen and family in the context of a health care setting. Provides student with an experiential understanding of play therapy, recreation therapy, education, and practice.

**CHLS 507 Child Life Program: Medical Family Issues I (3)**

Teaches the child life student about the childhood disease process and describes the pathophysiology, symptoms, diagnostic testing, and treatment of disease. How disease affects the child and family's behavioral, social, and emotional development and coping strategies.

**CHLS 508 Child Life Program: Medical Family Issues II (3)**

Promotes understanding of various theories, and practices specific interventions that assist hospitalized children/teens or adult family members when they encounter issues of death, loss and/or grief. Students examine how these issues affect them personally and professionally; and describe their own epistemology regarding death, loss, and grief. Examines these issues from a family-system's perspective in a hospital setting.

**CHLS 604 Child Life Internship and Supervision I (3)**

Student works with children/teens and families in a hospital and/or related setting under the supervision of a certified child life specialist while accumulating the 480 hours required for the certificate. Gives special attention to legal, ethical, moral, educational, cultural, spiritual, and gender issues as these issues relate to work with children/teens and families.

**CHLS 605 Child Life Internship and Supervision II (3)**

Student works with children/teens and families in a hospital and/or related setting under the supervision of a certified child life specialist while accumulating the 480 hours required for the certificate. Gives special attention to legal, ethical, moral, educational, cultural, spiritual and gender issues as these issues relate to work with children/teens and families.

Prerequisite: CHLS 604.

**CYTOTECHNOLOGY****CLSC 301 Introduction to Radiographic Procedures I (2)**

Nature and description of radiologic procedures for the nonradiologic technologist. Applies principles and medical techniques to the radiographic setting. Surveys anatomy and instrumentation. Includes observation laboratory.

**CLSC 302 Introduction to Radiographic Procedures II (2)**

Nature and description of radiologic procedures for the nonradiologic technologist. Applies principles and medical techniques to the radiographic setting. Surveys anatomy and instrumentation. Includes observation laboratory.

**CLSC 341 Female Genital Cytology (12)**

Histology and cytology of the female genital tract. Cytohormonal changes, nonneoplastic abnormalities, premalignant lesions, and rare malignancies. Lecture, demonstration, and microscopic examination.

**CLSC 351 Respiratory Cytology (7)**

Histology and cytology of the respiratory tract. Lecture, demonstration, and microscopic examination. Research methods, with emphasis on experimental design and interpretation of results.

**CLSC 353 Urinary Tract and Prostate Cytology (3)**

Histology and cytology of the urinary tract and prostate. Lecture, demonstration, and microscopic examination.

**CLSC 357 Gastrointestinal Tract Cytology (2)**

Histology and cytology of the gastrointestinal tract. Lecture, demonstration, and microscopic examination.

**CLSC 361 Body Cavity and Miscellaneous Secretions Cytology (8)**

Histology and cytology of fluids from body cavities and other sites. Research methods applicable to cytology, with emphasis on experimental design and interpretation of results. Lecture, demonstration, and microscopic examination.

**CLSC 363 Bone Biopsy Cytology (1)**

Histology and cytology of bone. Lecture, demonstration, and microscopic examination.

**CLSC 365 Breast Cytology (1)**

Histology and cytology of the breast. Lecture, demonstration, and microscopic examination.

**CLSC 367 Cyto genetics (1)**

Meiosis, mitosis, and karyotype preparation. Genetic disorders. Lecture, demonstration, and laboratory.

**CLSC 371 Cytopreparation Techniques (3)**

Procedures on collection and fixation techniques from all organ sites. Techniques in assuming cumulation of follow-up data and laboratory quality control. Clinical and social aspects of AIDS. Lecture, demonstration, and laboratory.

**CLSC 373 Histotechnology Techniques (1)**

Histologic preparatory techniques, with emphasis on special stains.

**CLSC 404 General Histology (5)**

Microscopic study of fundamental tissues, cells, organs, and systems of the human body, with emphasis on laboratory and conference exercises.

Prerequisite: AHCJ 402, 403.

**CLSC 405 Pathology (5)**

Advanced pathology, with emphasis on the cytologic changes of cells in disease. Reviews all organ systems, with correlation between tissue-biopsy material and cytologic findings.

Prerequisite: PATH 305, 306.

**CLSC 424 Hematology (3)**

Theory and background of routine and special laboratory procedures used in diagnosis and treatment of hematologic and other diseases. Evaluates and compares methodologies. Emphasizes bone marrow, body fluid, and peripheral blood-cell morphology: hematopoiesis, maturation, kinetics. Atypical and abnormal cellular morphology, including leukemias, lymphomas, and anemias. Clinical and social aspects of AIDS.

**CLSC 431 Advanced Specialties (3)**

Principles and techniques of electron microscopy, including basic cell ultrastructure, immunohistochemistry, and molecular biology.

**CLSC 432 Current Research Techniques (3)**

Introduces current research techniques and skills development. Techniques in immunocytochemistry, image and flow cytometry, and molecular pathology.

**CLSC 481 Supervised Cytology Research Project (4)**

Research project under the supervision of the program director. Oral presentation and paper.

**CLSC 483 Supervised Hematology Research Project (2)**

Supervised research project under the direction of the hematopathologist. Oral presentation and paper.

**CLSC 491 Cytology Affiliation I (6)**

Three two-week (40-hours/week) internships in the cytopathology laboratory. Rotation through all phases of diagnostic service work and laboratory functions in cytology. Independent screening of routine gynecologic and nongynecologic specimens.

**CLSC 492 Cytology Affiliation II (6)**

Three two-week (40-hours/week) internships in the cytopathology laboratory. Rotation through all phases of diagnostic service work and laboratory functions in cytology. Independent screening of routine gynecologic and nongynecologic specimens.

**CLINICAL LABORATORY SCIENCE****CLSM 303 Urine and Body Fluid Analysis I (1)**

Urinalysis screening procedure and its application in the diagnosis of renal, systemic, and metabolic diseases. Analysis and morphology of body fluids. Lecture and laboratory.

**CLSM 307 Medical Parasitology (3)**

Medically important parasites: life cycles, clinical features, infective diagnostic stages. Demonstrations, slide studies, and diagnostic procedures. Lecture and laboratory.

**CLSM 309 Quantitative Analysis (Chemical) (4)**

Provides a rigorous background in chemical principles particularly important to analytical clinical chemistry. Develops an appreciation for the task of judging the accuracy and precision of experimental data and the application of statistical methods. Covers both fundamental and practical aspects of chemical analysis; neutralization titrations; acid-base titrations; spectrophotometric methods; and electrochemical and chromatographic methodologies. Lecture and laboratory.

**CLSM 321 Hematology I (3)**

Examines normal hematologic physiology, cellular development, and hemostasis in the human. Introduces pathophysiology, with emphasis on clinical and laboratory evaluation of hematologic status. Theory and background of laboratory procedures used in diagnosis and treatment of hematologic and other diseases. Stresses proficiency in evaluation of normal and abnormal cellular morphology. Lecture and laboratory.

**CLSM 322 Hematology II (3)**

Theory and background of routine and special laboratory procedures used in diagnosis and treatment of hematologic and other diseases. Emphasizes peripheral blood-cell morphology, hematopoiesis, maturation, and kinetics. Pathophysiology of hematologic disorders, including anemias and hematologic malignancies. Correlation of hemostasis testing with clinical hemostatic disorders. Lecture and laboratory.

Prerequisite: CLSM 321.

**CLSM 324 Immunology I (4)**

Fundamentals of humoral- and cell-mediated immunity. Mediators of immune response and aspects of human immunopathology. Clinical and social aspects of HIV/AIDS. Immunologic laboratory tests as tools for patient care. Research methods applicable to immunology, with emphasis on experimental design and interpretation. Per week: Lecture 3 hours, laboratory 3 hours.

**CLSM 327 Clinical and Pathogenic Microbiology I (5)**

Introduces microbiological concepts, leading to an in-depth study of the major groups of pathogenic bacteria and their relationship to human disease. Emphasizes clinical-laboratory identification methods and procedures. Lecture and laboratory.

**CLSM 328 Clinical and Pathogenic Microbiology II (5)**

Nature and control of microorganisms encountered in clinical material and various anatomical sites. Emphasizes antimicrobial agents, mycology, and virology, including hepatic viruses and HIV/AIDS. Lecture and laboratory.

Prerequisite: CLSM 327, or consent of instructor.

**CLSM 331 Biochemistry (5)**

Chemical structure and metabolism of carbohydrates, amino acids, lipids, and nucleic acids. Protein synthesis, functions, and analysis. Enzymes and their structure, function, kinetics, and regulation. Lecture and laboratory.

**CLSM 332 Clinical Chemistry I (4)**

Clinical chemistry procedures and their clinical significance in medicine, with focus on the following areas: fluids and electrolytes, acid-base balance, carbohydrates and diabetes mellitus, proteins, iron, hemoglobin, and porphyrins. Quality assurance, method evaluation, and establishment of reference ranges. Lecture and laboratory.

Prerequisite: CLSM 331, or consent of instructor.

**CLSM 333 Clinical Chemistry II (4)**

Clinical chemistry procedures and their clinical significance in medicine, with focus on the following areas: lipids, lipoproteins, cardiovascular disease, enzymes, liver function, the endocrine system; thyroid, parathyroid, adrenal cortex and catecholamines, and steroids; reproduction, pregnancy, and fetal well-being; therapeutic drug monitoring and toxicology. Lecture and laboratory.

Prerequisite: CLSM 332.

**CLSM 341 Immunohematology I (3)**

Fundamentals of antigen-antibody reactions. Studies major blood-group systems, compatibility testing, and antibody-identification techniques. Clinical analysis of hemolytic disease of the newborn. Lecture and laboratory.

**CLSM 342 Immunohematology II (3)**

Blood collection, donor testing, component preparation, and quality management in the collection facility. Identification of multiple antibodies, typing discrepancies, hemotherapy, hazards of transfusion, and investigation of autoimmune hemolytic disease. Lecture and laboratory.

Prerequisite: CLSM 341.

**CLSM 401 Immunology II (1)**

Correlates theory and clinical experience with, and applies them to analytical techniques. Assesses and interprets data. Evaluates and compares methodologies. Directed study and review, including standard serological techniques, nephelometry, and electrophoresis.

Prerequisite: CLSM 324.

Corequisite: CLSM 472.

**CLSM 411 Urine and Body Fluid Analysis II (1)**

Correlates theory and clinical experience with, and applies them to, analytical techniques. Assesses and interprets data. Evaluates and compares methodologies. Urinalysis screening procedures and applications in the diagnosis of renal, systemic, and metabolic diseases. Processing, analysis, and morphologic evaluation of body fluids.

Prerequisite: CLSM 303.

Corequisite: CLSM 471.

**CLSM 413 Diagnostic Microbiology (1-7)**

Correlates theory and clinical experience with, and applies them to, analytical techniques. Assesses and interprets data. Evaluates and compares methodologies. Directed study and review of diagnostic bacteriology, mycology, parasitology, and virology. Emphasizes isolation and identification of pathogenic microorganisms. Includes susceptibility testing, instrumentation, and rapid identification methods.

Prerequisite: CLSM 307, 327, 328.

Corequisite: CLSM 472.

**CLSM 422 Hematology III (1-5)**

Correlates theory and clinical experience with, and applies them to, analytical techniques. Assessment and interpretation of data. Evaluates and compares methodologies. Directed study and review of hemostasis, cellular quantification and identification techniques, and clinical hematology. Includes white-cell, red-cell, platelet, and hemostatic disorders.

Prerequisite: CLSM 321, 322.

Corequisite: CLSM 471.

**CLSM 431 Immunoassay (2)**

Fundamentals and principles of radioisotopic and nonradioisotopic immunoassays. Methods discussed include fluorescence polarization, enzyme immunoassay, chemiluminescence, radioassay, and molecular diagnostic techniques. Clinical uses of the above methods discussed and applied to clinical laboratory science.

Prerequisite: CLSM 332, or consent of instructor.

**CLSM 434 Clinical Chemistry III (1-4)**

Correlates and applies theory and clinical experience with analytical techniques. Assesses and interprets data. Evaluates and compares methodologies. Directed study and review include: carbohydrates, proteins, lipids, enzymology, electrolytes, acid-base balance, endocrine system, and therapeutic drug monitoring.

Prerequisite: CLSM 333.

Corequisite: CLSM 473.

**CLSM 442 Immunohematology III (1 or 2)**

Applies theory and techniques routinely used in transfusion medicine. Emphasizes correlation with clinical experience. Directed study and review include: type and screen, antibody identification, investigation of hemolytic disease of the newborn, hemotherapy, and hazards of transfusion. Assesses and interprets data. Overview of donor facilities: donor criteria, records management, component preparation, blood storage, and

Prerequisite: CLSM 341, 342.

Corequisite: CLSM 472.

**CLSM 451 Clinical Laboratory Management I (2)**

Introduces management theory, including: management styles, professional communications, business ethics, group theory, team building, process management, process control, and personnel.

**CLSM 452 Clinical Laboratory Management II (2)**

Financial management, with emphasis on concepts, tools, and strategies underlying financial decision making. Topics include health care-reimbursement systems, coding, billing, development of operating budgets, and financial reports. Concepts of financial negotiations, inventory management, and financial planning. Integrates and applies analytical techniques used in the service industries.

**CLSM 453 Clinical Laboratory Management III (2)**

Introduces theories of quality management, organization, strategic planning, and the decision-making process. Reviews and analyzes government agencies, legislation, and regulatory bodies that impact laboratory management. Compares quality systems-management philosophies.

**CLSM 455 Special Procedures (1-3)**

Correlates and applies theory and clinical experience requiring assessment and interpretation of data. Evaluates and compares methodologies. Directed study and review include the following immunoassays: chemiluminescence, enzyme and radioisotopic assays, microparticle enzyme immunoassay, and fluorescence polarization and nephelometry. Also includes thin-layer and high-pressure liquid chromatography, electrophoresis, spectrophotometry, toxicology, amino acids assay, rapid-detection testing for bacteria and viruses, polymerase and ligase chain reactions, Western blot assays, serology, and current immunologic techniques.

Prerequisite: CLSM 324, CLSM 333.

Corequisite: CLSM 473.

**CLSM 471 Clinical Practicum I (1-5)**

Thirteen weeks of supervised clinical laboratory experience in selected areas, including: parasitology, hematology, urinalysis, and body fluids. Student performs tests routinely done in these areas of the clinical laboratory. Includes selected case studies as part of floor rounds.

Prerequisite: Satisfactory completion of Clinical Laboratory Science Program junior-year courses.

Corequisite: CLSM 411, 422.

**CLSM 472 Clinical Practicum II (1-5)**

Thirteen weeks of supervised clinical laboratory experience in selected areas, including: microbiology and immunohematology, with experience in transfusion services and in a blood-collection facility. Student performs tests routinely done in these areas of the clinical laboratory. Emphasizes clinical-laboratory quality-control procedures and evaluation.

Prerequisite: Satisfactory completion of Clinical Laboratory Science Program junior-year courses.

Corequisite: CLSM 413, 442.

**CLSM 473 Clinical Practicum III (1-5)**

Thirteen weeks of supervised clinical laboratory experience in selected areas, including: chemistry and special procedures. Student performs tests routinely done in these areas of the clinical laboratory. Incorporates experience in administrative duties.

Prerequisite: Satisfactory completion of Clinical Laboratory Science Program junior-year courses.

Corequisite: CLSM 434, 455.

**CLSM 495 Laboratory Science (3)**

Clinical laboratory experience in an area selected for a project, designed to develop a degree of specialized technical ability.

**CLSM 496 Clinical Laboratory Science Seminar I (1)**

Introduces an assigned capstone project, designed to incorporate skills developed and knowledge obtained in the Clinical Laboratory Science Program junior year. Project must be of current interest to the laboratory field. Topics related to the project include literature-search methods, research methods, presentation skills, team building, assessment of impact on clinical outcomes, and analysis and implementation of clinical applications. Prerequisite: Satisfactory completion of Clinical Laboratory Science Program junior-year courses, or consent of instructor.

**CLSM 497 Clinical Laboratory Science Seminar II (1)**

Continues assigned capstone project. Presents relevant contemporary topics.

Prerequisite: CLSM 496, or consent of instructor.

**CLSM 498 Clinical Laboratory Science Seminar III (2)**

Student meets regularly with faculty advisers to formulate plans and provide status reports on progress of capstone project. Additional time outside regular class periods. Submission and presentation of assigned capstone to faculty as a culminating activity.

Prerequisite: CLSM 496, 497; or consent of instructor.

**CLSM 499 Medical Technology Independent Study (1-5)**

Project or paper to be submitted on a topic of current interest in an area related to medical technology. Regular meetings provide the student with guidance and evaluation. Elected on the basis of need or interest.

**CELL AND MOLECULAR BIOLOGY****CMBL 501 Steady-State Cell (3-8)**

The generalized cell; its structural and functional integrity in a thermodynamically hostile environment. Biochemical concepts of the flow of biological information and of free energy. Emphasizes the interplay of information and energy, the integrating role of compartmentalization, and regulation of metabolic pathways. Fall Quarter.

**CMBL 502 The Cell in Transition (8)**

Surveys prokaryotic and eukaryotic molecular biology. Topics include genome structure and organization, recombination and repair, transcription and translation, control of gene expression, posttranslational modification of proteins, protein folding and degradation, gene transfer and mobile genetic elements, control of development, methods and applications of genetic engineering, and bioinformatics. Winter Quarter.

Prerequisite: CMBL 501.

**CMBL 503 The Differentiated Cell (10)**

Biological membranes and cell fibrillar systems as a basis for studying specialized structures and functions of selected differentiated cell types. The role of cell-cell interactions in specialized tasks. Emphasizes underlying molecular mechanisms of specialized cell function. Spring Quarter.

**CMBL 511 Clinical Correlates (1)**

A three-quarter companion sequence to CMBL 501, 502, 503 that utilizes the topics of cell functions presented in the major sequence as a basis for discussion of clinical problems arising from abnormalities in those functions. Fall, Winter, Spring Quarters.

**CMBL 512 Clinical Correlates (1)**

A three-quarter companion sequence to CMBL 501, 502, 503 that utilizes the topics of cell functions presented in the major sequence as a basis for discussion of clinical problems arising from abnormalities in those functions. Fall, Winter, Spring Quarters.

**CMBL 513 Clinical Correlates (1)**

A three-quarter companion sequence to CMBL 501, 502, 503 that utilizes the topics of cell functions presented in the major sequence as a basis for discussion of clinical problems arising from abnormalities in those functions. Fall, Winter, Spring Quarters.

**CMBL 537 Introduction to Human Genetics (1)**

Introduces medical genetics, human chromosomal abnormalities, Mendelian inheritance, multifactorial inheritance, prenatal diagnosis, newborn screening, and genetic counseling. Spring Quarter.

**CMBL 541 Cellular Structural Elements (3-4)**

Comprehensive description of biological membranes and cytoskeletal fibrillar systems that will form a basis for elucidating the functions of specialized cells. Spring Quarter.

**CMBL 542 Signal Transduction and Regulation (2-3)**

Describes signal transduction pathways and other cellular regulatory mechanisms that form the basis of receptor-response phenomena. Spring Quarter.

**CMBL 543 Immunology (4)**

Discusses the role of cell-cell interactions and the mechanism for cellular specialization emphasizing the immune system. Spring Quarter.

**CMBL 544 Cell and Molecular Neurobiology (3)**

A comprehensive, introductory, lecture-based course designed to introduce basic biomedical science graduate students to the cellular and molecular concepts that underlie most forms of neurobiological phenomena. Selected topics include the molecular and cellular components of neuronal excitation and transmission, neuronal development, differentiation and aging, axonal injury and nerve regeneration, and specific cases of nervous system pathology.

Cross-listing: PHSL 544.

Prerequisite or Concurrent: CMBL 541, 542; or CMBL 503.

**COMMUNICATION****COMM 178 Oral Communication I (2)**

Enhances oral communication skills by improving word-recognition skills and fluency of language usage. Includes a study of phonetics, using linguistic patterning with all five senses working simultaneously to create a deep neurological impression.

**COMM 278 Oral Communication II: Public Speaking (2)**

Develops and reinforces students' skills in oral communications. Focuses on sequential, logical thinking as an integral part of developing specific techniques for delivering dynamic, effective, and engaging oral presentations.

**COUNSELING****COUN 501 Research Tools and Methodology I (3)**

Current social research methods; practice in the use of techniques. Considers the philosophy of the scientific method, and familiarizes with counseling test instruments.

Cross-listing: MFAM 501.

Prerequisite: Introductory course in statistics as an undergraduate research methods course.

**COUN 502 Research Tools and Methodology II (3)**

Qualitative methodology. Prepares students to undertake research projects using the intensive interview method of qualitative research. Explores practical and epistemological issues and problems in qualitative research in a workshop format.

Cross-listing: MFAM 502.

**COUN 514 Cross-Cultural Counseling and Family Values (2)**

Structure and function, changing patterns, future in urban society. Relationship of changes in society to widespread family problems. Familiarity with a wide range of social and ethnic backgrounds including but not limited to people of color, Asians, Native Americans, and Hispanics.

**COUN 515 Crisis-Intervention Counseling (3)**

Experiential course in which theory, techniques, and practices of crisis intervention are presented, with special attention to development of the basic communication skills of counseling. Areas included that are intended to contribute to the development of a professional attitude and identity are: confidentiality, interprofessional cooperation, professional socialization, and organization. Therapeutic tapes also presented covering topics such as death and dying, incest, spousal abuse, and rape. Laboratory required.

Cross-listing: MFAM 515.

**COUN 545 Gender Perspectives (2)**

Explores the identities, roles, and relationships of women and men in light of social, cultural, and historical perspectives. Implications for family therapists, educators, and other professionals explored.

Cross-listing: MFAM 545.

**COUN 547 Social Ecology of Individual and Family Development (3)**

Studies human individual development and its relationship to the family life cycle from birth through aging and death of family members. Discusses biological, psychological, educational, social, and spiritual development in the context of family, education, and career dynamics involving traditional two-parent families, alternative partnerships, single parents, blended families, and intergenerational communities.

Cross-listing: MFAM 547.

**COUN 556 Psychopathology and Diagnostic Procedures I (3)**

Explores the history and development of psychopathology, and how it relates to current clinical practice in general and marriage and family therapy in particular. Addresses classifications such as ADD/ADHD that affect school achievement and educational placement. Utilizes the multi-axial classifications of the DSM-IV as a practical basis for diagnostics.

Cross-listing: MFAM 556.

Prerequisite: A course in abnormal psychology.

**COUN 568 Group Process Theory and Procedures: Theories in Marital and Family Therapy (3)**

Major theoretical approaches surveyed include individual theories, marital groups, network, and family therapy groups. Provides group-laboratory experience in which students apply theory to practice and develop group leadership skills.

Cross-listing: MFAM 568.

**COUN 574 Psychological Foundations of Education (4)**

Explores educational psychology through application of development and learning theories to instruction, achievement motivation, self-esteem, classroom management, supportive and disruptive processes on school sites, campus standards, disciplinary practices, legal/ethical issues. Requires research of effective educational practices and related foundations. Additional research for graduate credit.

Prerequisite: General psychology.

**COUN 575 Counseling Theory and Applications (3)**

Counseling theories and applications necessary for professional school counseling work with students, families, school personnel, and consultants in the community. Focuses on models of counseling currently used by professionals in the field—including humanist, behaviorist, post-modernist, psychodynamic, and Adlerian. Meaningful integration of theory and experience on personal and case study levels.

**COUN 576 Exceptional and Medically Challenged Children (3)**

Studies the determinants, characteristics, problems, and adjustments of individuals who deviate markedly from the norm in their mental, physical, emotional, or social aptitudes, traits, and tendencies. Emphasizes education and career planning.

**COUN 577 Assessment in Counseling (3)**

Develops competencies and understandings for selecting, administering, and interpreting the major types of standardized tests and inventories used in psychology and education. Theoretical principles and issues presented with hands-on applications. Practicum required.

Cross-listing: PSYC 404, with additional requirements in research and clinical applications with schools and families.

**COUN 578 College and Career Counseling (3)**

Examines vocational and career-choice theories, trends, and related educational programming, including introduction to interest, attitude, and ability evaluation used for career counseling. Includes administration, scoring, and interpretation as part of hands-on application in schools and clinic settings.

**COUN 584 Advanced Child and Adolescent Development (2 or 3)**

Advanced study of child and adolescent development using topical instructional format. Explores relationship of development to family attachments, self-esteem, school achievement, and social competence. Explores counseling interventions related to development of support for relational and educational success.

Cross-listing: MFAM 584.

**COUN 614 Law and Ethics (3)**

Laws pertaining to the family and related systems: child welfare and education, separation, divorce, and financial aspects of family maintenance. Case management, referral procedures, professional and client interaction, ethical practices (AAMFT), ethical relations with other professions, legal responsibilities, liabilities, and confidentiality. Current legal patterns and trends in the mental health profession. Explores the practitioner's sense of self and human values and his/her professional behavior and ethics.

Cross-listing: MFAM 614.

**COUN 624 Individual and Systems Assessment (3)**

Applies psychological testing methods in the diagnostic assessment of individual, family, and group behavioral dynamics as encountered in marriage and family counseling and related experience. Observations and/or laboratory experience.

Cross-listing: MFAM 624.

**COUN 638 Family Therapy and Chemical Abuse (3)**

Current theories and treatment of chemical dependencies. Emphasizes family therapy, assessment techniques, understanding of how chemicals affect the mental and biological systems, issues of dual diagnosis.

Cross-listing: MFAM 638.

**COUN 644 Child Abuse and Family Violence (3)**

Definition and incidence of physical and emotional abuse, neglect, sexual molestation, dynamics of family violence; offender and nonoffender characteristics. Treatment of children, adolescents, the family, and adults abused as children. Treatment modalities, including individual, group, and family therapy. Ethical and legal issues, referral sources, multidisciplinary approach to child abuse, assessment, interview techniques, and confidentiality. Minimum of thirty contact hours.

Cross-listing: MFAM 644.

**COUN 669 Human Sexual Behavior (3)**

Sexuality in contemporary society, from the sociopsychological viewpoint. Anatomy and physiology of human sexuality: reproduction, normal and abnormal sexual response, psychosexual development, human fertility, human sexual dysfunction. Integration of systems theory. Minimum of thirty contact hours.

**COUN 678 Consultation and Leadership (3)**

Studies school organization and relationships to other systems and consultants in education, career, and mental health. Emphasizes human relations, leadership development, professionalism, legal/ethical mandates, team building, and advocacy for school counselors.

**COUN 679 School Counseling: History and Practice (3)**

Integrates knowledge and skills essential for development, implementation, coordination, and supervision of counseling programs within educational institutions—with emphasis on the role and function of school counselors in preschool, elementary, middle, and secondary grades. Applications made to state graduation requirements, case management, school law, community, consultation, and professional ethics.

**COUN 680 Field Experience and Supervision in School Counseling (100 to 300 hours)**

Student demonstrates knowledge and skills within supervised field experience in schools and other agencies. Competencies include areas of educational assessment, personal and social counseling, academic and career counseling, program development, program coordination and supervision, consultation, legal aspects, and professional ethics. State Pupil Personnel Services (PPS) requires a minimum of 600 clock hours—which must include two educational levels, public school activity, and involvement with students from diverse cultural-ethnic-language backgrounds

Prerequisite: Department approval at least six weeks prior to placement; and state clearances for health, character, and competence in basic skills.

**CRIMINAL JUSTICE/JURISPRUDENCE****CRMJ 515 Crime and Society (4)**

Discusses crime as a social problem and surveys its criminal justice responses. Provides an overview of criminological theory by placing crime in its cultural, social, political, and historical context. Describes the criminal justice system from an institutional perspective; and examines the intersecting roles of the police, forensic science agencies, the courts, and corrections as they aim to promote justice in the context of the social good.

**CRMJ 517 Criminal Procedure and Rules of Evidence (3)**

Studies criminal procedures as they are guided by the U.S. Constitution. Focuses on 4th, 5th, 6th and 14th Amendment rights with regard to searches and seizures, confessions, due process, jury trials, assistance of counsel, and equal protection under the law. Discusses the introduction of scientific evidence in criminal trials as the point of intersection between science and law. Pretrial discovery rules, access to expert witnesses and testing, as well as federal and state rules of admissibility examined as they shape the content and process of evidence presentation in the courts by expert witnesses.

**CRMJ 518 Legal Discourse (3)**

Overviews the different specialties in forensic science. Discusses different kinds of evidence in terms of evidence processing; methods of testing, analyzing, and recording laboratory results; interpreting results as criminal evidence.

**CRMJ 519 Moot Court (3)**

Provides an opportunity for students to practice testifying as expert witnesses in a simulated trial setting

Prerequisite: CRMJ 518.

**CRMJ 520 Restorative Justice (3)**

Provides a new perspective on the purpose and role of the criminal justice system by examining how restorative justice attempts to forge new relationships between offenders and the people and communities they have victimized.

**CRMJ 574 Criminological Theory (4)**

Provides students with a detailed examination of the best-known and most influential theories of crime causation. Examines and evaluates selected theories from sociological, psychological, and behavioral perspectives.

**CRMJ 588 Topics in Forensic Science (2)**

Addresses current interests in specific areas of forensic science, offered at the discretion of the Department of Social Work and Social Ecology. Topics may include quality assurance, forensic chemistry and controlled substances, forensic biology, forensic toxicology, questioned documents, and others. Sections consist of lectures but may also include laboratory experience under the guidance of criminalists.

**CRMJ 599 Directed Study/Special Project (1-4)**

Limited to matriculating master's of criminal justice students who wish to pursue independent investigations in criminal justice practice or policy under the direction of a department faculty member.

**CRMJ 620 Forensic Mental Health (3)**

Overviews the specialized mental health and substance-abuse disorders treatment for persons incarcerated in jails, prisons, or special forensic psychiatric hospitals. Reviews effective treatment methods in forensic institutions and examines the current criminal justice system's handling of persons with mental illness and substance-abuse disorders.

**CRMJ 630 Criminal Justice Planning and Administration (3)**

Examines the structure, function, and effective operation of criminal justice agencies and organizations—including law enforcement, the courts, and corrections—within the overall context of the criminal justice system.

**CRMJ 640 Forensic Evidence (3)**

Overviews specialties in forensic science. Discusses different kinds of evidence in terms of evidence processing; methods of testing, analyzing, and recording laboratory results; interpreting the results as criminal evidence.

**CRMJ 645 Special Tools and Analysis in Criminal Justice (2)**

Provides students with key concepts and tools from information science, operations research, dynamic modeling, geographic information systems, and visualization theory within social, behavioral, and criminal justice sciences.

**CRMJ 687B Field Practicum and Seminar in Criminal Justice (180 hours)**

Provides students with experiential learning opportunities in criminal justice settings. Students placed at practicum sites, as determined by the program committee. Students complete 160 practicum hours concurrent with 20 hours of practicum seminar for each of three consecutive quarters. Total hours: 480 + 60.

**CRMJ 687C Field Practicum and Seminar in Criminal Justice (180 hours)**

Provides students with experiential learning opportunities in criminal justice settings. Students placed at practicum sites, as determined by the program committee. Students complete 160 practicum hours concurrent with 20 hours of practicum seminar for each of three consecutive quarters. Total hours: 480 + 60.

**CRMJ 697 Research (2)**

Supports students who choose to complete the thesis option. Provides research matriculation in the collection and analysis of data for the thesis. Students required to register for two quarters, or a total of 4 units.

**CRMJ 698 Thesis (2)**

The culminating work of the students' independent research, under the direction of the research adviser. Registration during the quarter in which student defends research and submits final document to the department and School of Science and Technology.

**CLINICAL SOCIAL WORK****CSWK 671 Research Orientation I (2)**

Second quarter of a three-quarter sequence that introduces doctoral students to the research process, with an emphasis on research-problem identification and formulation. Students continue their orientation with the study of theoretical models and conceptual frameworks. Students complete a series of required readings on the epistemology of theory construction in the social sciences, and prepare a conceptual framework or theoretical model.

**CSWK 672 Research Orientation II (2)**

Second quarter of a three-quarter sequence that introduces doctoral students to the research process, with an emphasis on research-problem identification and formulation. Students continue their orientation with the study of theoretical models and conceptual frameworks. Students complete a series of required readings on the epistemology of theory construction in the social sciences, and prepare a conceptual framework or theoretical model.

**CSWK 673 Research Orientation III (2)**

Third quarter of a three-quarter sequence that introduces doctoral students to the research process, with an emphasis on research-problem identification and formulation. Students focus on writing competence and presentation of a theory paper to seminar participants and doctoral program faculty. Paper includes a review of literature, a theoretical framework, and a clearly described research problem. Satisfactory completion of this paper meets the theory paper requirement of the comprehensive examination.

Prerequisite: CSWK 681, 672.

**CSWK 676 Advanced Clinical Theory I: Psychoanalytic and Attachment (3)**

The first course of a two-part sequence that differentially examines a number of interrelated psychodynamic theories as they apply to clinical practice. Considers differing views of the therapeutic process with clients from a wide range of diagnostic categories. Illuminates theoretical perspectives from classic and contemporary case material. Introduces content that deals with the effects of trauma on psychosocial development, as well as issues of race and historical and cultural context. Discusses salient themes of pioneering psychodynamic theories such as psychic conflict, interpreting resistance, interpreting transference, and the working alliance. Reviews the relevance of the contribution of Attachment Theory as it relates to bio-psycho-social-spiritual developmental normality.

**CSWK 684 Advanced Developmental Psychopathology I: Children/Adolescents (3)**

A practice course that examines psychopathology, viewed from the intrapsychic and interpersonal perspectives. Central theme analyzes the development and expression of psychopathology from the perspective of the person in the environment. Pays particular attention to issues of poverty, class, race, ethnicity, gender, and distributive justice as influences on psychopathology. Emphasizes critical analysis of treatment interventions as it applies to the educator and advanced practitioner. Considers research methods for the study of clinical practice.

**CSWK 688 Independent Study in Clinical Social Work (1-6)**

Limited to Ph.D. degree clinical social work students who intend to obtain clinical practice experience. A diversity of clinical settings acceptable as long as psychotherapy is provided.

**DERMATOLOGY****DERM 891 Dermatology Elective (60 to 720 hours)****DENTAL EDUCATION SERVICES****DNES 305 Etiology and Management of Dental Caries (2)**

Applies biochemistry, microanatomy, physiology, and microbiology to the study of the normal oral environment. Provides a basis for study of the pathogenesis of dental caries and periodontal diseases. Taught conjointly with DNES 705 but with separate evaluation.

**DNES 705 Etiology and Management of Dental Caries (2)**

Etiology, prevention, and management of dental caries. The specific plaque hypothesis; role of diet, host resistance, and saliva in caries. Diagnosis, lesion progression, remineralization. Principles of medical and surgical management. Caries risk assessment. Establishes a caries-management program. Patient education. Lecture and laboratory.

**DNES 707 Personal Development (2)**

Practical introduction to human behavior, self-acceptance, personal development, stress management, and development of a professional manner.

**DNES 708 Introduction to the Dental Profession (1)**

Overview of dentistry as it has evolved into a health care profession. History of dentistry, characteristics of professions, purpose and structure of professional organizations, discussion of the recognized specialties, personal finance, and debt management.

**DNES 711 Introduction to Clinical Experience (2)**

Introductory course to provide the student with the basic knowledge and skills necessary to begin the clinical dental experience.

**DNES 712 Introduction to Clinical Experience (.5)**

Prerequisite or Concurrent: DNES 711.

**DNES 713 Introduction to Clinical Experience (.5)**

Continues DNES 711 to provide the student with the basic knowledge and skills necessary to begin the clinical dental experience.

Prerequisite or Concurrent: DNES 712.

**DNES 771 Applied Nutrition (2)**

Basic concepts of nutrition. Recognition of a balanced diet. Evaluates the specialized nutritional needs of the young, the medically compromised, and the aging patient. Dietary assessment and counseling. Health-behavior change.

**DNES 775 Clinic Orientation II (1)**

Introduces patient relations and clinic policies.

**DNES 789 National Board Part I Review (1)**

Reviews basic and preclinical sciences to prepare students for the National Board Examination Part I.

**DNES 794 Public Health Dentistry (2)**

Introduces community dentistry, oral epidemiology, public health programs, preventive dentistry, health education, and volunteer programs.

**DNES 804 Applied Statistics (2)**

Introduces research methodology. Develops critical statistical thinking, enabling students to critique research results reported in dental journals and to understand and correctly interpret the research results so that new findings can be properly implemented in dental practice. Provides students with statistical tools necessary to pursue lifetime learning in the dental sciences.

**DNES 806 Research Design (2)**

Developing a research protocol. Authoring skills, role of the mentor and investigator, topic selection, assurances and approvals (animals/IRB), fiscal responsibility, and research misconduct.

**DNES 806L Research Design Laboratory (1)**

Student reviews literature, designs a research proposal in preparation for professional presentation of a table clinic. Student conducts research experiment or project culminating in presentation of the results at a professional meeting.

**DNES 809 Practice Management (2)**

Introduces dental practice management, including logistics, economics of practice, managing patients and staff, locating and purchasing practice opportunities, and finding employment.

**DNES 851 The Dentist and the Law (2)**

Introduces legal limitations and compliance with legal requirements.

**DNES 889 National Board Part II Review (2)**

Reviews basic and clinical sciences and their application in case-based testing format to prepare students for National Board Examination Part II.

**DENTAL HYGIENE****DNHY 303 Dental Materials and Techniques (2)**

Materials and equipment used in dentistry. Practice in the manipulation and use of common materials.

**DNHY 305 Dental Anatomy Lecture (2)**

Anatomy of the teeth and surrounding tissues.

**DNHY 305L Dental Anatomy Laboratory (1)****DNHY 309 Radiology I (3)**

Principles governing radiation production and safety relative to radiographic anatomy/dental materials. Fundamentals of intraoral and extraoral techniques, dark-room procedures, and mounting of radiographs. Practical application of techniques.

**DNHY 310 Radiology II (2)**

Continues laboratory techniques, plus radiograph interpretation of the teeth and surrounding bony structures.

**DNHY 321 Preclinical Dental Hygiene I Lecture (2)**

Preclinical phases of dental hygiene, including instrumentation techniques, patient management, intra- and extraoral soft-tissue assessment, charting procedures, disease processes, patient-health assessment, basic operatory preparation, clinical asepsis, and oral health care techniques.

Corequisite: DNHY 321L.

**DNHY 321L Preclinical Dental Hygiene I Laboratory (2)**

Corequisite: DNHY 321.

**DNHY 322 Preclinical Dental Hygiene II Lecture (2)**

Continues DNHY 321.

Prerequisite: DNHY 321.

Corequisite: DNHY 322L.

**DNHY 322L Preclinical Dental Hygiene II Laboratory (2)**

Prerequisite: DNHY 321, 321L.

Corequisite: DNHY 322.

**DNHY 323 Preclinical Dental Hygiene III (2)**

Continues DNHY 322.

Prerequisite: DNHY 321; DNHY 322, 321L, 322L may be taken concurrently.

Corequisite: DNHY 323L.

**DNHY 323L Preclinical Laboratory (1)**

Prerequisite: DNHY 321, 321L; DNHY 322, 322L may be taken concurrently.

Corequisite: DNHY 323.

**DNHY 324 Preclinical Dental Hygiene IV (2)**

Continues DNHY 323.

Prerequisite: DNHY 321, 321L, 322, 322L, 323L; DNHY 323 may be taken concurrently.

Corequisite: DNHY 324L.

**DNHY 324L Preclinical Laboratory (1)**

Prerequisite: DNHY 321L, 322L; DNHY 323L may be taken concurrently.

Corequisite: DNHY 324.

**DNHY 375 Dental Hygiene Clinic (1)**

Clinical application of skills and techniques of dental hygiene. Prophylaxes on pediatric and adult patients.

**DNHY 376 Dental Hygiene Clinic (1-8)**

Continues DNHY 375.

Prerequisite or Concurrent: DNHY 375.

**DNHY 380 Medically Compromised Patients (2)**

Lectures dealing with the medically compromised patient relative to the use of local anesthetics, drug interactions, need for antibiotic premedication, and necessary modification in treatment planning.

**DNHY 390 Introductory Statistics (3)**

Fundamentals of statistical analysis and critique of research data in scientific literature and in student research projects. Inferential and descriptive statistics, frequency distribution, histograms, bar graphs, and statistical tests. Laboratory computer practice in preparing and analyzing research data.

**DNHY 405 Introduction to Periodontics (2)**

Reviews gross and microscopic anatomy of the periodontium in health and disease. Primary etiology of periodontal disease. Examines patient's clinical periodontal status. Introduces the diagnostic and treatment-planning process.

**DNHY 406 Orthodontics Concepts for Dental Hygiene (1)**

Basic skeletal and dental growth and development as applied to orthodontics. Treatment modalities. Retention principles and methods. Impressions for orthodontic models. Intraoral measurements for orthodontic procedures. Placing and removing orthodontic separators. Placing, ligating, and removing prepared arch wires. Removing excess cement from orthodontic bands. Checking for loose bands. Seating adjusted retainers and headgear. Instructing the patient. Using ultrasonic scaler to remove excess cement.

**DNHY 408 Professional Ethics (2)**

Develops understanding of hygienist's obligations to the public and to his/her professional association. Defines the ethical and mature conduct expected of professional health care providers. Compares and contrasts professional ethics and personal morality as they relate to dental hygiene practice.

**DNHY 409 Jurisprudence (2)**

Laws and regulations that govern the practice of dental hygiene, with special emphasis on California regulations. Standards of government regulations. Obligations of the hygienist to the public and to his/her profession.

**DNHY 412 Dental Hygiene Topics II (2)**

Prepares student for the Dental Hygiene National Board examination. Areas covered include multiple special-needs patients, pulp vitality, and case reviews. Continues instruction in advanced clinical skills, such as building clinical speed. Continues development of the professional portfolio.

**DNHY 413 Dental Hygiene Topics III (2)**

All employment aspects of dental hygiene, including resume writing, interviewing, benefits/remuneration, termination, job services, family violence, and introduction to managed care, soft-tissue management, and marketing. Student completes a professional portfolio.

**DNHY 414 Personal Finance (2)**

Personal finance topics, including credit, taxes, insurance, real estate, budgeting, housing, and inflation.

**DNHY 415 Applied Nutrition (2)**

Basic concepts of nutrition. Recognition of a balanced diet. Evaluates the specialized nutritional needs of the young, the medically compromised, and the aging patient. Dietary assessment and counseling. Health-behavior change.

**DNHY 416 Dental Health Education I (2)**

Current theories and principles of psychology as they relate to learning and teaching, personality development and change, and interpersonal processes and dynamics.

**DNHY 417 Dental Health Education II (2)**

Principles and practices involved in teaching dental public health. Fieldwork in local schools and community. Methods and practice of professional presentation.

**DNHY 418 Critical Issues of Health Care (2)**

Old age as part of the natural developmental sequence. Physical, psychological, and social needs of the elderly. Ways the allied health practitioner can contribute to wellness and independence. Important issues of HIV/AIDS, including global impact, prevention, treatment, and ethical issues.

**DNHY 421 Research I (2)**

Introduces research methodology. Evaluates literature, emphasizing statistics adequate for interpretation of the literature. Student reviews literature and designs a research proposal in preparation for professional presentation of a table clinic. Student conducts a research experiment or project culminating in presentation of the results at a professional meeting.

**DNHY 422 Research II (2)**

Introduces research methodology. Evaluates literature, emphasizing statistics adequate for interpretation of the literature. Student reviews literature and designs a research proposal in preparation for professional presentation of a table clinic. Student conducts a research experiment or project culminating in presentation of the results at a professional meeting.

Prerequisite or Concurrent: DNHY 421.

**DNHY 423 Research III (1)**

Introduces research methodology. Evaluates literature, emphasizing statistics adequate for interpretation of the literature. Student reviews literature and designs a research proposal in preparation for professional presentation of a table clinic. Student conducts a research experiment or project culminating in presentation of the results at a professional meeting.

Prerequisite or Concurrent: DNHY 422.

**DNHY 431 Dental Public Health (3)**

Philosophy, principles, language, and objectives of public health and public health dentistry. Critical review of the literature.

**DNHY 435 Special Topics in Periodontal Therapy (2)**

Studies advanced periodontal topics and special problems related to periodontal therapy.

**DNHY 451 Clinical Seminar/Dental Hygiene Topics (3)**

Topics and issues directly and indirectly related to clinic, the national board examination, state and regional dental hygiene examinations, and individual student case presentations—followed by class discussion of the issues presented.

**DNHY 452 Clinical Seminar II (1)**

Topics and issues directly and indirectly related to clinic, the national board examination, state and regional dental hygiene examinations, and individual student case presentations followed by class discussion of the issues presented.

Prerequisite or Concurrent: DNHY 451.

**DNHY 453 Clinical Seminar III (1)**

Topics and issues directly and indirectly related to clinic, the national board examination, state and regional dental hygiene examinations, and individual student case presentations—followed by class discussion of the issues presented.

Prerequisite or Concurrent: DNHY 452.

**DNHY 475 Dental Hygiene Clinic I (1-6)**

Integrates all components of dental health care into the clinical treatment of patients.

Prerequisite or Concurrent: DNHY 475.

**DNHY 476 Dental Hygiene Clinic II (1-4)**

Integrates all components of dental health care into the clinical treatment of patients.

Prerequisite or Concurrent: DNHY 475.

**DNHY 477 Dental Hygiene Clinic III (1-4)**

Integrates all components of dental health care into the clinical treatment of patients.

Prerequisite: DNHY 475; DNHY 476 may be taken concurrently.

**DNHY 498 Dental Hygiene Directed Study (1-10)****DNHY 499 Research Writing (2)**

Elective course for students wishing to write their research study for submission to professional journals for possible publication.

**DIETETIC TECHNOLOGY****DTCH 201 Human Nutrition (3)**

Fundamentals of normal nutrition. Carbohydrates, proteins, fats, vitamins, and minerals; their roles in human metabolism. Introduces nutrition in the life cycle. Per week: lecture 3 hours.

**DTCH 202 Food Selection and Preparation (4)**

Foods and their nutritive values. Changes associated with maturation, preservation, table preparation, transportation, and storage in relation to food safety. Per week: lecture 3 hours, practicum 3 hours. Laboratory fee.

**DTCH 203 The Art of Food Presentation (3)**

Art of food presentation to enhance acceptance of food. Nutritional concepts and cultural food patterns in planning and producing meals. Focuses on meal service at home and in professional and social settings. Per week: lecture 2 hours, practicum 3 hours. Laboratory fee.

Prerequisite: DTCH 201, 202 (may be taken concurrently); or consent of instructor.

**DTCH 204 Community Nutrition (4)**

Education of community members in different areas related to nutrition requiring knowledge of normal nutrition and life-cycle issues. Nutrition assessment; medical nutrition-therapy topics such as obesity, CHD, diabetes, etc. Legislative process and politics. Program planning, implementation, management, and evaluation. Counseling, teaching, and facilitating group processes. Interpreting data and research findings. Identifying and accessing community-nutrition resources. Community interactions that promote a healthy lifestyle, including but not limited to nutrition topics. Per week: lecture 2 hours, practicum 6 hours.

Prerequisite: DTCH 201, 239, 241.

**DTCH 205 Professional Issues in Nutrition and Dietetics (1)**

Growth of dietetic technology and of nutrition and dietetics as professions, and their role in the restoration and maintenance of health. Illustrates nontraditional roles of the dietetic technician and the registered dietitian. Emphasizes the development of professionalism, accountability, and the responsibility for lifelong learning. Preparation of a professional portfolio.

**DTCH 239 Life-Cycle Nutrition (2)**

Management of the normal nutrition needs of individuals across the life span. Focuses on pregnancy, lactation, normal infant growth and development, childhood, and adolescence—with an overview of school feeding programs. Adult men and women's health issues. Geriatrics. Per week: lecture 1 hour, practicum 3 hours.

Prerequisite: DTCH 201.

Corequisite: DTCH 241.

**DTCH 241 Nutrition Assessment (3)**

Basic knowledge of the responsibilities of the clinical dietetic technician and the dietitian: medical terminology, patient charts, documentation in the medical record, patient interviewing, and counseling techniques. Utilizes the computer for diet analysis. Introduction to nutrition assessment, vegetarian diets, nutrition quackery, sports nutrition, obesity, eating disorders, osteoporosis, dental nutrition, and labeling requirements. Open to dietetic technician students only. Per week: lecture 1 hour, practicum 6 hours.

Prerequisite: DTCH 201; or equivalent; introductory chemistry, complete sequence with laboratory; anatomy and physiology, with laboratory.

**DTCH 242 Nutritional Care (4)**

Basic biochemical and physiological conditions that necessitate dietary modifications in the clinical management of the patient, including: diabetes, cardiac disease, burns, allergies, osteoporosis, cancer, physical handicaps, gastrointestinal and renal disease. Continues practice in interviewing. Introduces nutritional counseling. Uses computer-assisted nutritional analysis and learning modules. Medical terminology. Per week: lecture 2 hours, practicum 6 hours.

Prerequisite: DTCH 241.

**DTCH 271 Quantity Food Purchasing, Production, and Service (5)**

Emphasizes methods to achieve quantitative and qualitative standards in quantity food production. Menu planning for institutions. Practicum in food purchasing, production, and service. Open to dietetics students only. Per week: lecture 2 hours, practicum 9 hours.

**DTCH 272 Food-Systems Management (4)**

Studies food-service systems. Effective utilization of resources within the food system. Computer application in food-systems management. Per week: lecture 2 hours, practicum 6 hours.

Prerequisite: DTCH 271.

**DTCH 281 Operations Management in Quantity Food Productions (4)**

Applies operations-management techniques to food-systems management, including: quantitative decision making, development of work standards, and productivity management. Operations-analysis evaluation and quality control. Role of the nutritional services department supervisor. Leadership. Per week: lecture 2 hours, practicum 6 hours.

Prerequisite: DTCH 272.

**DTCH 291 Dietetic Technology Affiliation (4)**

Supervised experience in dietetic technology in community hospitals, extended-care facilities, county hospitals, public health departments, and school food service. Performance review and evaluation. Minimum of three weeks (120 clock hours) at the end of the program.

Prerequisite: DTCH 281.

**DTCH 299 Independent Study in Dietetic Technology (1-5)**

Project or paper submitted by student on a topic of current interest in an area of dietetic technology. Regular meetings provide student with guidance and evaluation.

**NUTRITION AND DIETETICS****DTCS 301 Human Nutrition (3)**

Fundamentals of normal nutrition. Carbohydrates, proteins, fats, vitamins, minerals; their roles in human metabolism. Introduction to nutrition in the life cycle. Per week: lecture 3 hours.

**DTCS 302 Food Selection and Preparation (4)**

Foods and their nutritive values. Changes associated with maturation, preservation, table preparation, transportation, and storage in relation to food safety. Per week: lecture 3 hours, laboratory 3 hours. Laboratory fee.

**DTCS 303 The Art of Food Presentation (3)**

Art of food presentation to enhance acceptance of food. Nutritional concepts and cultural food patterns in planning and producing meals. Focuses on meal service at home and in professional and social settings. Per week: lecture 2 hours, practicum 3 hours. Laboratory fee.

Prerequisite: DTCS 301, 302 (may be taken concurrently).

**DTCS 304 Community Nutrition (4)**

Education of community members in different areas related to nutrition. Requires knowledge of normal nutrition and life-cycle issues. Nutrition assessment; medical nutrition-therapy topics such as obesity, CHD, diabetes, etc. Legislative processes and politics. Program planning, implementation, management, and evaluation. Counseling, teaching, and facilitating group processes. Interpreting data and research findings. Identifying and accessing community nutrition resources. Community interactions that promote a healthy lifestyle, including but not limited to nutrition topics. Per week: lecture 2 hours, practicum 6 hours.

Prerequisite: DTCS 301, 339, 341.

**DTCS 305 Professional Issues in Nutrition and Dietetics (.5)**

Growth of nutrition and dietetics as a profession, and the role of the professional in restoration and maintenance of health.

**DTCS 311 Human and Clinical Nutrition for Nursing (4)**

Fundamentals of normal nutrition. Carbohydrates, proteins, fats, vitamins, minerals; their roles in human metabolism. Investigates the role of nutrition at various stages in the life cycle of the individual in health and disease. Nutrition intervention in the prevention and treatment of disease in the clinical setting.

**DTCS 312 Clinical Nutrition for Nursing (2)**

Nutrition intervention in the prevention and treatment of disease in the clinical setting.

**DTCS 321 Nutrition and Human Metabolism (4)**

Nutritional requirements and metabolism of essential nutrients for the human organism at the cellular level. Focuses on macro- and micronutrients metabolism. Per week: lecture 4 hours.

Prerequisite: DTCS 301 or equivalent; general chemistry; anatomy and physiology; biochemistry.

**DTCS 339 Life-Cycle Nutrition (2)**

Management of the normal nutrition needs of individuals across the life span. Includes focus on pregnancy and lactation; normal infant growth and development; childhood and adolescence, with an overview of school feeding programs. Adult men and women's health issues. Geriatrics. Per week: lecture 1 hour, practicum 3 hours.

Prerequisite: DTCS 301.

Corequisite: DTCS 341.

**DTCS 341 Nutrition Assessment (3)**

Basic knowledge of the responsibilities of the clinical dietitian: review of the medical record, documentation in the medical record, medical terminology, and patient interviewing. Utilizes the computer for diet analysis.

Introduces nutrition assessment, anemias, food allergies, vegetarian diets, nutrition quackery, sports nutrition, obesity, eating disorders, osteoporosis, dental nutrition, and food-labeling requirements. Per week: lecture 1 hour, practicum 6 hours.

Prerequisite: DTCS 301 or equivalent; anatomy and physiology with laboratory; introductory chemistry.

Corequisite: DTCS 339.

**DTCS 342 Medical Nutrition Therapy I (5)**

Basic biochemical and physiological conditions that necessitate dietary modifications in the clinical management of the patient, including: cardiovascular disease and hypertension; diabetes; cancer; HIV/AIDS; and other disorders. Continues practice in interviewing and counseling the patient, nutrition assessment and documentation, and use of computer-assisted nutritional analysis. Ongoing study of medical terminology. Advanced topics: lipids, antioxidants, and phytochemicals. Per week: lecture 3 hours, practicum 6 hours.

Prerequisite: DTCS 341 or equivalent course.

**DTCS 343 Medical Nutrition Therapy II (5)**

Basic biochemical and pathophysiologic processes that necessitate dietary modifications in the clinical management of the patient with pulmonary disease, including cystic fibrosis; digestive disorders; disorders of the liver, biliary system, and pancreas; alcoholism; renal disease; solid-organ transplantation; sepsis/trauma; metabolic disorders; and neurologic disorders—including spinal cord injury and stroke. Continues nutrition assessment, patient interviewing, and counseling. Applies enteral and parenteral nutrition support when indicated in the clinical management of patients with these conditions. Introduces preparation of an in-depth case study. Per week: lecture 2 hours, practicum 9 hours.

Prerequisite: DTCS 342.

**DTCS 371 Quantity Food Purchasing, Production, and Service (5)**

Emphasizes methods to achieve quantitative and qualitative standards in quantity food production. Menu planning for institutions. Practicum in food purchasing, production, and service. Open to dietetics students only. Per week: lecture 2 hours, practicum 9 hours.

**DTCS 372 Food-Systems Organization and Management (4)**

Studies food-service systems. Effective utilization of resources within the food system. Computer application in food-systems management. Per week: lecture 2 hours, practicum 6 hours.

Prerequisite: DTCS 371.

**DTCS 395 Nutrition and Dietetics Practicum (2-6)**

Supervised experience in medical nutrition therapy, community, and administrative dietetics in hospitals, outpatient clinics, public health departments, and food systems. Performance review and evaluation. Ten weeks (400 clock hours) during the summer at the end of the junior year.

Prerequisite: DTCS 304, 343, 372.

**DTCS 405 Senior Seminar (.5)**

Develops professional skills, team efforts to market nutrition in the community, volunteer efforts in the community, professional networking, and special topics as determined by nutrition and dietetics faculty. Emphasizes professional portfolio and transition to entry-level nutrition educator/dietitian/food-service director. Introduces preparation of an in-depth case study.

Prerequisite: DTCS 305.

**DTCS 425 Pharmacology in Medical Nutrition Therapy (2)**

General overview of pharmacology, including kinetics, dynamics, and therapeutics of drugs. Basic definitions, sources of information, classification of drugs, and principles and mechanisms of drug actions. Emphasizes drug-nutrient interactions.

**DTCS 442 Nutrition Counseling (3)**

Applies techniques of nutrition counseling with emphasis on improving skills in verbal and nonverbal communication, assertiveness, dealing with cultural differences, dealing with death and dying. Skills in administration for the nutrition counselor. Ethical implications in health care.

Per week: lecture 2 hours, practicum 3 hours.

Prerequisite: DTCS 341, 342.

Corequisite: DTCS 343.

**DTCS 445 Nutrition-care Management (4)**

Applies operations analysis, financial management, quantitative decision making, and productivity-management techniques to enhance the delivery of nutrition care. Staff justification, continuous quality improvement, reimbursement for nutrition services, case management, and entrepreneurship.

**DTCS 452 Advanced Nutrition (4)**

Presents advanced topics of normal nutrition, with emphasis on case studies to illuminate metabolic pathways and effects of disease.

Prerequisite: DTCS 321.

**DTCS 453 Advanced Medical Nutrition Therapy (3)**

Case-study approach to the theory and application of critical-care nutrition to complex medical conditions. Interprets and synthesizes the following information: fluid and electrolyte balance, acid/base balance, vital signs, ICU monitoring forms, interpretation of laboratory data and diagnostic tests, medical and surgical history, and drug/nutrient interactions. Focuses on a problem-list approach to nutrition assessment, documentation, intervention, and outcome evaluation. Clinical rotation in critical-care setting. Per week: lecture 2 hours, practicum 3 hours.

**DTCS 461 Food Science (4)**

Chemical, physical, and biological effects of maturation, processing, storage, and preservation on the structure, composition, palatability, product quality, and microbiological safety of food and its additives. Per week: lecture 4 hours, laboratory 3 hours. Laboratory fee.

Prerequisite: Basic foods, human nutrition, organic chemistry.

**DTCS 473 Medical Nutrition-Therapy Affiliation (6)**

Applies knowledge and skills in clinical facilities as a staff dietitian. Regular conferences to aid in developing professional competence. Major applied project relating to clinical or community nutrition. Minimum of ten weeks (400 clock hours) during the Spring Quarter of the senior year.

Prerequisite: DTCS 453.

Corequisite: DTCS 473V.

**DTCS 474 Advanced Food-Systems Management (3)**

Develops problem-solving competencies in the management of food systems. Production schedules, equipment, layout and design, and work analysis. Presents current management philosophy, with application to administrative dietetics. Practicum with computerized management information system. Per week: lecture 4 hours.

Prerequisite: DTCS 445.

**DTCS 476 Exercise Physiology in Medical-Nutrition Therapy (3)**

Basic preparation for development and leadership of exercise programs. Includes: exercise-physiology training, acute and chronic effects of exercise, simple assessment of fitness, role of exercise in prevention of common health problems, and management of selected risk factors. Discusses endurance, strength, flexibility, and aerobic exercises. Laboratory included.

Prerequisite: Anatomy and physiology.

**DTCS 479 Food Systems-Management Affiliation (6)**

Applies knowledge and skills in the administrative dietetics area as a staff dietitian. Regular conferences to aid in developing professional experience. Minimum of ten weeks (400 clock hours) during the Spring Quarter of the senior year.

Prerequisite: DTCS 474.

Corequisite: DTCS 479V.

**DTCS 491 Orientation to Research in Dietetics Laboratory (1)**

Experience in nutrition and dietetics research, including hypothetical-formulation research methods, data collection, and presentation of findings. Per week: practicum 3 hours.

Prerequisite: AHCJ 351.

Corequisite: AHCJ 461.

**DTCS 497 Advanced Clinical Experience (40 to 480 hours)**

Advanced clinical experience in selected areas of professional dietetic practice.

Prerequisite: DTCS 473, 478, or 479.

**DTCS 499 Nutrition and Dietetics Independent Study (1-5)**

Project or paper to be submitted on a topic of current interest in an area of nutrition and dietetics. Regular meetings provide the student with guidance and evaluation. Elected on the basis of need or interest.

**EMERGENCY MEDICINE****EMDN 821 Emergency Medicine Clerkship (3)**

Two-week required rotation of seven eight-hour emergency department (ED) shifts. A variety of Loma Linda University Community Hospital ED, Loma Linda University Medical Center ED, Loma Linda University Children's Hospital ED shifts (pediatric side); and an administrative shift—including time in the radio room, on the triage desk, and with the transport nurse. Didactic sessions include attendance at emergency medicine residency conferences and grand rounds, and one-on-one learning experience with the senior administrative resident each Monday morning. Also included are hands-on suture lab, EKG reading tutorial, and case studies in reading common emergency radiographs.

**EMDN 891 Emergency Medicine Elective (60 to 720 hours)**

Two-week or four-week rotation of four eight-hour emergency department (ED) shifts weekly. Shifts include a variety of Loma Linda University Community Hospital ED, Loma Linda University Medical Center ED, Loma Linda University Children's Hospital ED shifts (pediatric side); and an administrative shift—including time in the radio room, on the triage desk, and with the transport nurse. Didactic sessions include attendance at emergency medicine residency conferences and grand rounds, and one-on-one learning experience with the senior administrative resident each Monday morning. Also included are a hands-on suture laboratory, EKG reading tutorial, and case studies in reading common emergency radiographs.

**EMERGENCY MEDICAL CARE****EMMC 308 Pharmacology (3)**

General overview of pharmacology—including pharmacokinetics, pharmacodynamics, and therapeutics of drugs. Basic definitions, sources of information, classification of drugs, and principles and mechanisms of drug actions. Emphasizes prehospital drug categories.

**EMMC 314 ECG Interpretation and Analysis (2)**

Develops basic ECG interpretation skills. Focuses on anatomy and physiology, underlying pathophysiology, and basic rhythm recognition. Overview of related treatments. Emphasizes skills needed by bedside practitioner to differentiate between benign and life-threatening dysrhythmias.

**EMMC 315 Cardiology (3)**

Assists the health care provider to develop assessment skills and increase knowledge of medical management of the patient with acute and chronic cardiovascular disorders. Focuses on anatomy and physiology, underlying pathophysiology, advanced history taking and physical assessment, cardiovascular pharmacology, electrical modalities, cardiac diagnostic testing, and current research. Emphasizes the emergency care of patients with myocardial infarction and trauma to the cardiovascular system. Assignment includes interaction with cardiac patients and observation of diagnostic studies in the clinical setting.

**EMMC 316 12-lead ECG Interpretation (2)**

Designed for health care providers who are familiar with basic ECG monitoring and are seeking to learn principles of application and interpretation of the 12-lead system. Emphasizes recognition of the acute myocardial infarction. Additional topics include identifying: axis deviation, acute ischemic conditions, electrolyte imbalances, bundle-branch block, and infarct impostors. Practical application of information to bedside care of cardiac patients, emphasizing patient assessment, data collection, and use of the 12-lead to guide rapid intervention. Certificate issued upon successful completion of the course.

Prerequisite: Successful completion of a basic ECG interpretation examination.

**EMMC 325 Current Issues in Emergency Medical Care (2)**

Seminar-style discussion on current issues and controversies in emergency medicine. May include topics such as prehospital use of thrombolytic therapy, managed care, primary-care advanced-scope paramedic practice, etc.

**EMMC 331 Introduction to Theories of Emergency Medical Services (2)**

Introduces prehospital medical services. Roles and responsibilities of paramedics and EMTs. EMS systems design, constraints, and operating problems. EMS environment and scene issues. Medical-legal issues. History and current state of prehospital care and medical oversight.

**EMMC 332 Theories of Emergency Medical Services (2)**

Investigates the dimensions of emergency medical services. Influence of environment on oxygen delivery. Develops paradigms for EMS. Decision making in the constrained environment. Stress models and role theories. Discusses EMS as sequential environments from public health to critical care.

**EMMC 351 Neonatal Resuscitation (1)**

Neonatal anatomy and physiology. Asphyxia and its effects on the newborn. Intubation, medications, and ventilation techniques. Thermoregulation as it relates to resuscitation of the neonate. Skills laboratory for delivery resuscitation, including megacode.

**EMMC 427 Cardiopulmonary Therapeutics (2)**

Administration of gases and gas mixtures. Humidity aerosol treatment, oxygen therapy, theory of application of mechanical ventilation, interpretation of arterial blood gases. Describes ventilators and relationship of therapeutic procedures to underlying pathology.

**EMMC 435 Disasters, WMD, and Terrorism (2)**

Introduces EMS response involving large-scale natural disasters and weapons of mass destruction (WMD). Explores prehospital and hospital treatment. Evaluates current issues facing EMS personnel. Crisis and consequence management, theories of terrorism response, and state and federal resources. Discusses interagency roles, overview of social and psychological aspects, policy development and the media, comparison of response protocols of disaster versus terrorist incidents.

**EMMC 444 Diversity in EMS (2)**

A senior-level emergency medical care core-curriculum course designed to expose students to specialty areas of EMS that often are overlooked. Includes wilderness medicine, search and rescue, event/mass-gathering medicine, sports medicine, aeromedical EMS, water-rescue and dive EMS, hazardous materials and toxicology, tactical and forensic EMS, catastrophic and disaster EMS, and international EMS.

**EMMC 445 Perinatal and Pediatric Care (3)**

Emergency evaluation and care of the perinatal and pediatric patient. Cardiac, gastrointestinal, hematologic, renal, and metabolic conditions and treatment. Discusses appropriate versus inappropriate child development and behavior, including developmental stages, temperaments, feeding disorders, sleep disorders, mentally challenged, and attention deficit. Psychosocial aspects of pediatric, child, and adolescent psychiatric disorders.

**EMMC 446 Physical Diagnosis (2)**

Systemic review of assessment techniques utilized in critical patient assessment. Discusses clinical assessment techniques and interpretation of findings. Emphasizes laboratory tests, chest radiographs, arterial blood gases, and other tests used to evaluate the patient. Lecture, reading, and discussion of case studies.

**EMMC 447 Geriatrics and Aging (2)**

A forum for discussing current trends in aging and for identifying the needs of an older population. Discusses psychological and social changes in the older adult. Physiologic process of aging and the medical considerations unique to age. Management of geriatric trauma, medical emergencies, and the impact of chronic diseases. Establishing a social response to aging and viable health care-delivery models for older adults.

**EMMC 451 Health Care Management for Prehospital Providers (2)**

Basic principles of management and how they relate to EMS systems. Federal, state, and local authority for EMS delivery and services, resources for and constraints of EMS systems, relationship to and impact on public safety and health care-delivery systems, interface of public and private organizations, current and future issues.

**EMMC 452 Seminars in EMS Management I (2)**

Management theories applied to EMS management and practice. Public/private sector integration, public/media relations, government relations, stress management, management/leadership-skills development, decision making, performance improvement.

Prerequisite: EMMC 451.

**EMMC 453 Seminars in EMS Management II (2)**

Further applies management theories to EMS management and practice. The quality management process and its relationship to continuous learning, promoting organizational/system change, evaluating effectiveness of performance-improvement projects, strategic planning, and integration of EMS with public safety and public health.

Prerequisite: EMMC 451, 452.

**EMMC 471 Senior Project I (2)**

Project developed, implemented, and evaluated by students for in-depth experience in area of choice. May include research; community projects; and/or education, management, or clinical affiliations. Students work under direct supervision of assigned faculty mentor.

**EMMC 472 Senior Project II (2)**

Continues project developed in EMMC 471.

Prerequisite: EMMC 471.

**EMMC 484 Legal Issues in Health Care (2)**

Introduces the legal system as it pertains to health care professionals. Concepts of malpractice, litigation, consent for and refusal of medical treatment, advanced directives, and patient confidentiality. Discusses employment issues, including discrimination and sexual harassment. Develops health and safety programs per OSHA regulations, risk management, legal issues in vehicle operations and equipment, and EMS and law-enforcement interactions.

**EMMC 489 Senior Seminars (1)**

Discusses issues of professionalism, portfolio development and refinement, short- and long-term goal setting, and development of resume/curriculum vitae.

Prerequisite: Senior-level academic status.

**ENDODONTICS****ENDN 534 Endodontic Treatment Conference (2)**

Evaluates and discusses diagnosis, treatment planning, prognosis, and outcome of endodontic treatment cases. Repeated registrations required to fulfill the total units.

**ENDN 601 Principles of Endodontics (2)**

Comprehensive study of various aspects of endodontics. Repeated registrations required to fulfill the total units.

**ENDN 604 Literature Seminar in Endodontics (2)**

Reviews literature pertaining to the principles and practice of endodontics. Repeated registrations required to fulfill total units.

**ENDN 625 Clinical Practice in Endodontics (240 hours)**

Students gains practice and experience in all aspects of endodontics. Emphasizes obtaining experience in treating complex endodontic cases. Repeated registration required to fulfill total units.

**ENDN 654 Practice Teaching in Endodontics (1)**

Supervised teaching in the endodontic preclinical laboratory and predoctoral clinic. Repeated registrations required to fulfill total units.

**ENDN 697A Research (1)**

Student identifies a research project, prepares a proposal, and obtains approval for the protocol. Multiple registrations may be needed to complete these research activities.

**ENDN 697B Research (1)**

Conducting the actual research project, including the data collection.

**ENDN 698 Thesis (1)****ENDN 831 Endodontics I (1)**

Didactic course provides foundational knowledge to prepare the student to manage patients with diseases of pulpal origin.

Coequisite: ENDN 832.

**ENDN 832 Endodontics II (1)**

Preclinical laboratory course teaches the student basic skills necessary to perform endodontics treatment on permanent teeth with uncomplicated root canal systems.

Corequisite: ENDN 831.

**ENDN 833 Endodontics III (1)**

Preclinical laboratory course expands the students' skills in performing endodontics procedures using techniques and instruments more advanced than those introduced in ENDN 832.

Prerequisite: ENDN 831, 832.

**ENDN 834 Endodontics IV (1)**

Didactic course containing essential information on various endodontics topics elevates the students' diagnostic and treatment-planning skills.

Prerequisite: ENDN 831, 832, 833.

**ENDN 875 Endodontics Clinic (1)****ENGLISH****ENGL 111 Freshman English (3)**

Reading skills and techniques. Student practices written communications, with emphasis on expository, critical, argumentative, and research writing. (Available only at international program sites.)

Prerequisite: Grade of C or better in ESL courses, or satisfactory performance on a placement test.

**ENGL 112 Freshman English (3)**

Reading skills and techniques. Student practices written communications, with emphasis on expository, critical, argumentative, and research writing. Available only at international program sites.

Prerequisite: Grade of C or better in ESL courses, or satisfactory performance on a placement test.

**ENGL 113 Freshman English (3)**

Reading skills and techniques. Student practices written communications, with emphasis on expository, critical, argumentative, and research writing. (Available only at international program sites.)

Prerequisite: Grade of C or better in ESL courses, or satisfactory performance on a placement test.

**ENGL 206 Introduction to Literature (4)**

Introduces reading and analysis of major literary genres: poetry, drama, short story, and essay.

**ENGL 246 Literary Forms and Ideas (4)**

Varied content from quarter to quarter, with specific areas listed in the class schedule (such as drama, the short story, contemporary literature, women in literature, C. S. Lewis). May be repeated with new content for additional credit.

**ENGL 478 Theory and Application of Linguistics (3)**

Introduces general linguistics. Covers the core linguistic areas of syntax, phonetics, phonology, morphology, and semantics; also peripheral linguistic areas such as sociolinguistics, pragmatics, and psycholinguistics.

**ENGLISH AS A SECOND LANGUAGE****ENSL 077 English as a Second Language (2-10)**

Teaches American English to speakers of other languages so that they may use this language for whatever purposes they choose. Meets the needs of English for academic purposes, but is also open and adaptable to students with a variety of language needs. Students progress at their own rate as individual language needs in areas such as pronunciation, reading, writing, grammar, and conversation are met. Students expected to have 15 contact hours for each unit of registration.

**ENSL 177 English as a Second Language (2-12)**

Enables University students to improve their proficiency in speaking and in understanding spoken, academic American English. Emphasizes appropriate listening and conversation skills, as well as attention to problems arising from the student's native language.

**ENVIRONMENTAL HEALTH****ENVH 414 Introduction to Environmental Health (3)**

Introduces an overview of the major areas of environmental health, such as ecology, environmental law, and population concerns; environmental diseases and toxins; food, water, and air quality; radiation; noise; and solid and hazardous waste.

**ENVH 421 Cartography and Map Design (3)**

Cartographic principles and guidelines, including geodesy, map projections, coordinate and locational systems, scale and distance, direction, vertical factors, mapping methods and techniques, and graphic representation of Earth patterns. Provides the foundation for understanding advanced geospatial technologies including GIS, remote sensing, and global positioning systems.

Cross-listing: ENVH 521.

**ENVH 422 Principles of Geographic Information Systems (4)**

Comprehensive overview of the concepts, functions, applications, technologies, and trends pertaining to automated geographic information systems (GIS). Framework for understanding the design, development, implementation, and management of GIS. Topics include: GIS hardware and software considerations, data resources, technical issues and applications in GIS.

Corequisite: ENVH 421.

**ENVH 423 Practical Issues in GIS (4)**

Key tasks and issues faced by GIS managers and practitioners responsible for implementing and managing health GIS systems in government or private-sector organizations. Presents sound principles and approaches for GIS implementation, as well as project management and organizational issues, to provide the necessary foundation of information on alternatives and pitfalls. Main topics include: GIS needs assessment, software/hardware considerations, financial and staffing requirements, project-scope delineation, project planning and control, pilot projects.

**ENVH 424 Desktop GIS Software Applications ( )**

Introduces state-of-the-art, PC-based GIS applications. Student acquires the conceptual knowledge as well as the hands-on experience needed to optimally utilize available functions within desktop GIS technology for display, editing, analysis, and presentation of spatial and thematic data. Focus on ArcView GIS, and its analytical extensions.

Cross-listing: ENVH 524.

Prerequisite: Programming language course, e.g., Visual Basic, C, etc.

**ENVH 434 Advanced GIS Software Applications (3)**

Conceptual overview and hands-on experience on high-end GIS applications for advanced spatial data analysis and display. Focus on ArcGIS, the worldwide standard for GIS functionality. ArcGIS's relevant subsystems and spatial statistical functions for health and environmental analysis. Introduces the fundamentals of Internet and hand-held GIS.

Prerequisite: ENVH 424.

**ENVH 435 Sources, Capture, and Integration of GIS Data (3)**

Provides overview of some of the technologies and methods used in capturing, processing, integrating, and displaying GIS data. Topics include: global positioning systems, satellite digital imagery, image processing, aerial photography, digital orthophotography, GIS applications

for the World Wide Web, and GIS data sources on the Internet. Fundamentals of conceptual and physical design, construction, currency and integrity of geospatial databases.

Cross-listing: ENVH 535.

Prerequisite: ENVH 422.

**ENVH 436 Spatial Analysis with GIS (4)**

Focuses on GIS functionality suited for modeling and analyzing complex spatial relationships. Basic functions for the selective retrieval of spatial information and the computation or mapping of statistical summaries. Advanced quantitative methods of spatial statistics for analyzing different data-feature types and data structures, and investigating patterns in spatial data. Main topics include: feature manipulation, distance measurement, spatial overlay, proximity analysis, spatial-correlation analysis, point-pattern analysis, spatial interaction, surface analysis, network analysis, grid analysis, and spatial modeling within GIS.

Cross-listing: ENVH 536.

Prerequisite: ENVH 422, 424; STAT 414, 415.

**ENVH 437 GIS in Public Health (2)**

Reviews GIS methods and analytical techniques with potential for improving public health research and practice. Fields of public health considered individually. Identifies specific GIS approaches and techniques. Considers specific disciplines, including: epidemiology, health promotion, international health/development, health care administration, environmental health and contamination, and emergency management. Current applications of GIS technology and methods at the international, national, and local levels.

Cross-listing: ENVH 537.

Prerequisite: ENVH 436

**ENVH 498 Health Geographics Senior Project (4)**

Three-quarter senior research or applications project conducted during the student's final academic year. Student demonstrates mastery of spatial analysis skills by assessing relevant public and oral presentation required. May be repeated for additional credit. Must have a total of 12 units. Paper and oral presentation required during final quarter of registration.

**ENVH 499 Directed Study/Special Project (1-4)**

Individual arrangements for undergraduate, upper-division students to study under the guidance of a program faculty member. May include readings, literature review, or other special projects. Minimum of thirty hours required for each unit of credit. A maximum of 4 units applicable to any undergraduate degree program.

**ENVH 509 Principles of Environmental Health (3)**

Rural and urban environmental factors that affect human-health status, enjoyment of the quality of life, and human survival. Focuses within a framework of air, water, food quality, residential environments, industrial sites, recreational patterns, and environmental risk avoidance. Stresses prevention of disease and promotion of healthful environments. Not applicable toward a major in environmental health.

**ENVH 515 Food Quality Assurance (3)**

Principles and techniques of quality assurance for food preparation and prevention of food-borne diseases. Sanitary and safe preparation, storage, transportation, and handling of foodstuffs and products—both commercially and residentially. Criteria and practical methodology of inspection and surveillance techniques, facilities design, and plan checking. Food degradation, contamination,

additives, and toxicants. Performance criteria for food handlers, with application to environmental techniques in education, enforcement, and consultation. Field trips.

Prerequisite: Program prerequisite courses or written consent of program adviser.

### **ENVH 521 Cartography and Map Design (2)**

Map design and content, design procedure, production techniques, color selection, use of text, creation of visual hierarchy, and visual balance. Explores thematic and general mapping with use of GIS data for mapping purposes. Discusses ArcGIS software. Map critiquing. Provides foundation for understanding advanced including GIS, remote sensing, and global positioning systems.

Cross-listing: ENVH 421.

### **ENVH 522 Principles of Geographic Information Systems and Science (3)**

Comprehensive overview of the concepts, functions, applications, technologies, and trends pertaining to automated geographic information systems (GIS). Topics include: GIS hardware and software considerations, data resources, technical issues and applications in GIS.

Cross-listing: ENVH 422.

### **ENVH 523 Practical Issues in GIS (3)**

Key tasks and issues faced by GIS managers and practitioners responsible for implementing and managing health GIS systems in government or private-sector organizations. Sound principles and approaches for GIS implementation, as well as project management and organizational issues, presented to provide the necessary foundation of information on alternatives and pitfalls. Main topics include: GIS needs assessment, software/hardware considerations, financial and staffing requirements, project-scope delineation, project planning and control, pilot projects.

Cross-listing: ENVH 423.

Prerequisite: ENVH 522.

### **ENVH 524 GIS Software Applications and Methods (3)**

GIS software applications, including display, editing, analysis, and presentation of spatial and thematic data. Focuses on ArcGIS and its analytical extensions.

Cross-listing: ENVH 424.

### **ENVH 525 Special Topics in Environmental and Occupational Health (1-4)**

Lecture and discussion on a current topic in environmental and occupational health. May be repeated for a maximum of 4 units applicable to degree program.

Prerequisite: Consent of instructor.

### **ENVH 535 Integration of Geospatial Data in GIS (2)**

Surveys capturing, processing, integrating, and displaying GIS data. Focuses on public health applications of global positioning systems, satellite digital imagery, image processing, aerial photography, digital orthophotography, GIS applications for the World Wide Web, and GIS data sources on the Internet.

Cross-listing: ENVH 435.

Prerequisite: ENVH 522, 524.

### **ENVH 536 Spatial Analytic Techniques and GIS (3)**

Modeling and analyzing complex spatial relationships through GIS technology. Selective retrieval of spatial information and computation or mapping of statistical summaries. Advanced methods of analysis using spatial statistics.

Cross-listing: ENVH 436.

Prerequisite: ENVH 522, ENVH 524, STAT 509

### **ENVH 537 Health Care Geographics (2)**

GIS in health services research and the health care sector. Introduces GIS-based methods of mapping; modeling and analyzing issues, such as patients' access to health care and services; locating new medical facilities and health services; delineating medical service areas and consumer markets. Presents emerging applications of GIS to the scale of individual facilities and the mapping of the human body itself.

### **ENVH 546 Introduction to Spatial Epidemiology (2)**

Provides overview of GIS-based mapping and statistical methods for describing, displaying, quantifying, and modeling spatial variations in disease, especially with respect to exposures at the small-area scale. Main topics include disease mapping, analysis of spatial clustering of health events, disease surveillance, and ecological modeling. Presents currently implemented spatial epidemiologic applications at the international, national, and local levels.

### **ENVH 547 GIS for Public Health Practice (2)**

Community health assessment and planning, chronic disease prevention, public health, health disparities analysis, and immunization.

### **ENVH 557 Geographical Techniques for Health and Environmental Analysis (3)**

Geographic tools for graphic display and spatial analysis of international and U.S. domestic health, epidemiological health services, and environmental health problems and issues. How geographical information systems (GIS); desktop mapping; geocoded, computerized databases and medical geographical applications are used in health and environmental planning, decision making, and research.

### **ENVH 558 Global Environmental Health (2)**

Global implications of human impact on terrestrial, atmospheric, and marine environments. Considers dilution and dispersion of pollutants, climatic changes, endangered species, desertification, deforestation, vehicle emissions, free-trade agreements, renewable resources, and export of hazardous industry to developing nations. Impact of political, economic, and cultural factors on present and future mitigation strategies.

### **ENVH 559 Environmental Health for Developing Countries (3)**

Major challenges associated with environmental health and hygiene practices in developing nations. Water-resource development/operations and maintenance, infection and disease-vector control, pesticide management, food quality and availability, solid-waste management, uncontrolled urban settlements, occupational health, and the implications of localized atmospheric pollutants.

### **ENVH 566 Outdoor Air Quality and Human Health (3)**

Sources and characteristics of air pollutants and their effects on humans and human environment. Methods used in sampling of pollutants, controls, and abatement of air-quality standards violations.

Prerequisite: Program prerequisite courses or written consent of program adviser.

### **ENVH 567 Hazardous-materials and Solid-waste Management (3)**

Production, collection, transportation, treatment, recycling, and disposal of solid wastes and hazardous materials. Toxic effects and hazard-producing characteristics of these materials; and the process of disposal-site design, siting, and operation.

Prerequisite: Program prerequisite courses or written consent of program adviser.

**ENVH 568 Water Quality Assurance (3)**

Principles and processes involved in providing safe and adequate water supplies. Water-source development, quantity and quality assurance, source and system design, and inspection parameters. Protection of water sources from contamination; and the abatement of, and correction techniques applied to, degraded water quality. Potable water supplies, fresh and saline bodies of water, and municipal liquid-waste disposal.

Prerequisite: Program prerequisite courses or written consent of program adviser.

**ENVH 569 Environmental Sampling and Analysis (4)**

Practical laboratory experience that serves as an introduction to techniques used in measurement and evaluation of environmental health problems. Techniques pertinent to air, water, and food sanitation. Occupational stressors and radiological health.

Prerequisite: Program prerequisite courses or written consent of program adviser.

**ENVH 575 Indoor Air Quality (2)**

Social and technical factors associated with nonindustrial, indoor air-quality issues. Ventilation, source assessment, complaint investigations, control measures, sanitation, building design, enforcement criteria, and case studies.

Prerequisite: Microbiology or consent of instructor.

**ENVH 578 Principles of Occupational Health (3)**

Issues related to the effects of occupational exposures on health and safety of workers. Principles of preplacement evaluations, biological and environmental monitoring of hazards, surveillance testing, and disease/injury prevention and treatment.

**ENVH 579 Occupational Health Management (3)**

Planning, implementing, and evaluating health programs in occupational settings. Principles of case management, cost containment, worker evaluation and placement, referrals, and rehabilitation. Current legislation, regulations, and legal issues.

**ENVH 581 Principles of Industrial Hygiene (3)**

Introductory course in industrial hygiene. Industrial/occupational health, hygiene and safety, philosophy, legislation, and regulation.

Prerequisite: Program prerequisite courses or written consent of program adviser.

**ENVH 585 Institutional Environmental Health (3)**

Biological and chemical methods for identifying and controlling the environmental factors influencing health in institutional sites, hospitals, acute- and extended-care facilities, foster- and day-care sites, correctional institutions, schools, and other related institutions. Includes epidemiology and etiology of hospital-acquired infections and their control.

**ENVH 586 Environmental Health Administration (3)**

Introduces the administration and management of organizations involved in environmental health within the context of the health care system. Provides an overview of regulatory and policy issues, applicable statutes, and emerging management systems.

**ENVH 587 Environmental Toxicology (3)**

Principles and mechanisms of toxicology as applied to environmentally encountered toxic agents. Toxicants of current public health importance and their pathologic effect on representative tissues and organs. Dose-response relationships; hazard and risk assessment; and determination of toxicity of environmental carcinogens, teratogens, mutagens, pesticides, metals, plastics, and organic solvents.

Prerequisite: Program prerequisite courses or written consent of program adviser.

**ENVH 589 Environmental Risk Assessment (3)**

Principles and methods of risk assessment associated with human exposure to toxic chemicals and other environmental hazards. Quantitative risk-assessment methodologies and approaches. Ecological risk assessment; risk-management issues involved in taking appropriate public health action; risk communication, acceptability, and perception; and informational resources.

**ENVH 605 Seminar in Environmental and Occupational Health (1)**

Areas of current interest. May be repeated for additional credit.

**ENVH 694 Research (1-14)**

Independent research on problems currently receiving study in the department. Research program arranged with faculty member(s) involved. Minimum of thirty hours required for each unit of credit. Limited to qualified master's degree students.

Prerequisite: Consent of instructor responsible for supervision and of program adviser.

**ENVH 696 Directed Study/Special Project (1-4)**

Individual arrangements for advanced students to study under the guidance of a program faculty member. May include readings, literature reviews, or other special projects. Minimum of thirty hours required for each unit of credit. A maximum of 4 units applicable to any master's degree program.

Prerequisite: Consent of instructor responsible for supervision and of program adviser.

**ENVH 698 Laboratory (1-6)**

Individual and/or group arrangements for selected students to participate in a structured laboratory experience in specified areas of environmental health.

Prerequisite: Consent of instructor responsible for supervision and of program adviser.

**ENVH 699 Applied Research (2)**

Assignment to private, government, international, or voluntary health agency or other approved organization, where practical application of the materials studied on campus is made under the guidance of the department faculty and the organization involved. Research project that includes substantial analysis of data and discussion of results. Written report and oral presentation required.

Prerequisite: Consent of department adviser and of instructor(s) responsible for supervision.

**ENVH 797 MIP Residency in Environmental Health (400 hours)**

Individual guided study in operational field practice under faculty supervision. Limited to graduate students in the ENVH Masters' International Program (M.P.H./MIP) whose projects have been approved by their committees.

**ENVH 798A Field Practicum (200 hours)**

Assignment to private, government, international, or voluntary health agency or other School of Public Health-approved organization in which practical application of the materials studied on campus is made under the guidance of the department faculty and the organization involved. May consist of a research project. May be repeated for additional credit.

Prerequisite: Course requirements and consent of instructor(s) responsible for supervision and of program adviser.

**ENVH 798B Field Practicum (400 hours)**

Assignment to private, government, international, or voluntary health agency or other School of Public Health-approved organization in which practical application of the materials studied on campus is made under the guidance of the department faculty and the organization involved. May consist of a research project. May be repeated for additional credit.

Prerequisite: Course requirements and consent of instructor(s) responsible for supervision and of program adviser.

**EPDM 414 Introduction to Epidemiology (3)**

Distribution and determinants of health events in human populations. Assessments of environmental conditions, lifestyles, and other circumstances influencing disease. Measures of disease occurrence and frequency, and use of these measures in health care. Major types of epidemiological investigation. Interpretation of statistical associations.

Prerequisite or Concurrent: STAT 414.

**EPIDEMIOLOGY****EPDM 509 Principles of Epidemiology I (0 or 3)**

Principles and methods used to investigate the distribution, determinants, and prevention strategies for disease in human populations. Major topics include: disease classification, measures of disease frequency and relative effect, comparisons and contrasts of analytic study designs, methods used to isolate effects, statistical-significance testing, interpretation of results, and screening for latent disease. Laboratory included.

Prerequisite or Concurrent: STAT 509 or 521.

**EPDM 510 Principles of Epidemiology II (3)**

Definitions and contrasts of cumulative incidence, incidence rates (density), and hazard rates. Contrasts confounding versus effect modification. Mantel-Haenszel relative-effect measures and significance-test results for relative effect, including risk-difference measures frequently used in case-control and cohort investigations. Assesses statistical power, sample-size determination, least-significant, relative-effect measures for observational case control, and cohort investigations using dichotomous exposures. Estimates effect of exposure-measurement errors on the effect measures, and discusses how to correct for bias and random error. Laboratory includes Epi-Info and other computer programs, and problem sets used in applied epidemiology.

Prerequisite: EPDM 509.

**EPDM 511 Advanced Epidemiologic Methods (2)**

Studies complex epidemiologic models found in current epidemiology literature. Course topics include: analysis of study design, bias and misclassification, building a linear model for epidemiologic inference, logistic regression analysis, and analytic strategies used in epidemiologic analysis of complex data sets. Laboratory component of course involves microcomputer analyses of epidemiologic data sets.

Prerequisite: EPDM 510; STAT 521.

**EPDM 512 Multivariate Modeling in Epidemiology (1 or 3)**

Studies complex epidemiologic models found in current literature. Topics included for 1-unit credit include: building a linear model, analytic strategies for epidemiologic inference, logistic regression analysis, and the theory for calculation of sample size and power when using these methods. Additional topics included for 3 units: nonparametric survival analysis, Poisson regression models, proportional hazard models, and the analysis of matched case-control studies. Laboratory includes microcomputer analysis of epidemiologic data sets.

Prerequisite: EPDM 509; STAT 522.

**EPDM 515 Clinical Trials (3)**

Theory and practice of intervention studies, including community and clinical trials. Design, analysis methods, randomization, masking schemes, management of complex trials, ethical considerations, and meta analysis. Laboratory includes: power calculations, interpretation of published reports, randomization, and design of trials.

Prerequisite: EPDM 509 or 510; STAT 509 or 521.

**EPDM 534 Epidemiology of Maternal-Child Health (3)**

Applies epidemiologic issues to maternal and child health topics, emphasizing analysis and interpretation of data. Introduces key studies and standard data sets used to describe and compare maternal and child health outcomes both domestically and globally. Includes framework for critical review of studies in the field. Limited to maternal and child health, epidemiology, and doctoral students; or consent of instructor.

Prerequisite: EPDM 509; STAT 509 or 521.

**EPDM 544 Epidemiology of Infectious Disease (3)**

Epidemiology of major acute and chronic infectious diseases worldwide. Characteristics of host, agent, environment. Immunity of individuals and populations. Methods of control and eradication. Types of epidemics. Experimental, serological, and analytical techniques used in epidemiology of infectious disease.

Prerequisite: EPDM 509.

**EPDM 555 Epidemiologic Methods in Outcomes Research and Continuous Quality Improvement (3)**

Epidemiologic methods of outcomes research and continuous quality-improvement techniques in medical care processes. Medical care as a process, use of control charts in process improvement, measurement of quality of care, and patient satisfaction with medical care. Cost benefit, cost effectiveness, cost utility, and decision-tree analysis applied to medical care and public health. Laboratory includes: demonstration of process control charts, flow charts, Pareto diagram, decision tree, and data scanning.

Prerequisite: EPDM 509 or 510.

**EPDM 565 Epidemiology of Cancer (3)**

Critically reviews epidemiology of the major causes of cancer death in developed nations, including anatomic (ICD-9 and ICD-0-2) and morphologic/pathogenic (ICD-0-2) classifications. Emphasizes research and health-promotion issues that relate to control and prevention of cancer. Topics include: pathology vocabulary; multistage model of carcinogenesis; sources of cancer data; validity and value of population measures of cancer; magnitude of the cancer problem; trends in cancer frequency, incidence, burden, mortality, and survival; surveillance objectives and methods; consistent risk and protective factors for major cancer types; the role of infectious diseases in cancer etiology and progression; nutrition and cancer; screening objectives, recommendations, and controversies; interactions between genetic and environmental exposures in the etiology of cancer; and other selected etiologic hypotheses.

Prerequisite: EPDM 509.

**EPDM 566 Epidemiology of Cardiovascular Disease (3)**

Descriptive epidemiology of the major cardiovascular diseases, including: myocardial infarction, sudden death, angina pectoris, hypertension, and stroke. Acquaintance with experimental designs and analytic techniques commonly used in cardiovascular epidemiology. Experimental and epidemiological evidence relating risk factors such as diet, smoking, blood lipids, blood pressure, and exercise to cardiovascular diseases. Acquaintance with the design and results of the major intervention studies.

Prerequisite: EPDM 509.

**EPDM 567 Epidemiology of Aging (3)**

Global demographic trends, determinants, and measures of population-age structure. Health, morbidity, disability, and mortality; comprehension of morbidity and mortality; mechanisms, biomarkers, and genetics of aging. Aging research: surveys, clinical trials, and ethics. Chronic conditions/diseases (i.e., dementia, musculoskeletal conditions, osteoporosis, obesity, diabetes, cardiovascular disease); risk factors (i.e., diet, smoking, physical activity); and prevention. Economic aspects, drug use. Laboratory includes critical evaluation of current literature reports.

Prerequisite or Concurrent: EPDM 509 or 510; (STAT 509 or STAT 521).

**EPDM 568 Epidemiologic Research of Developing Countries (3)**

Introduces selected methodological techniques and skills useful in the planning, implementation, and evaluation of international programming. Especially emphasizes understanding and application of geographic information system (GIS), EPI Info, and evaluation tools.

Prerequisite: EPDM 509; STAT 509.

**EPDM 588 Environmental and Occupational Epidemiology (3)**

Evaluates epidemiologic principles and methodologic approaches used in the assessment of environmental exposure, selection of applicable study designs, and determination of analytic methods used in the investigation of environmental health problems within populations. Epidemiologically analyzes selected and controversial environmental exposures that impact significantly on public health practice, disease morbidity and mortality outcomes, and health policy.

Prerequisite: EPDM 509 or 510; STAT 509 or 521.

**EPDM 605 Seminar in Epidemiology (1)**

Presents and discusses current research and methodological issues. Individual research and report. Seminar facilitates maximal interaction among doctoral students and faculty to facilitate professional development. Exposure to visiting epidemiologist. Course offered over multiple quarters.

Prerequisite: Limited to doctoral degree students, or consent of instructor.

Prerequisite: EPDM 509.

**EPDM 635A Epidemiological Studies of Seventh-day Adventists (1)**

Background, objectives, methodologies, results, and public health implications of most epidemiological studies conducted on Seventh-day Adventists worldwide, but especially in California. Data on the health behaviors and health/disease experience of this low-risk population. Healthy volunteer effect, self-selection versus lifestyle hypothesis, and other relevant epidemiological issues.

Prerequisite: EPDM 509 or 510.

**EPDM 635B Epidemiological Studies of Seventh-day Adventists (1)**

Background, objectives, methodologies, results, and public health implications of most epidemiological studies conducted on Seventh-day Adventists worldwide, but especially in California. Data on the health behaviors and health/disease experience of this low-risk population. Students discuss methodological issues related to these studies.

Prerequisite or Concurrent: EPDM 635A.

**EPDM 685 Preliminary Research Experience (2)**

Experience gained in various aspects of research under the guidance of a faculty member and by participation in an ongoing project. Must be completed prior to beginning dissertation research project. Limited to doctoral degree students.

**EPDM 692 Research Consultation (1-4)**

Individual advice on project design, data collection, analysis, and evaluation. Restricted to School of Public Health students and staff.

**EPDM 694 Research (1-14)**

Independent epidemiologic research. Research program arranged with faculty member(s) involved. Written report and oral presentation required.

Prerequisite: Consent of instructor responsible for supervision and of academic adviser.

**EPDM 696 Directed Study/Special Project (1-4)**

Individual arrangements for advanced students to study under the guidance of a program faculty member. May include readings, literature reviews, or other special projects. Minimum of thirty hours required for each unit of credit. A maximum of 4 units applicable to any master's degree program.

Prerequisite: Consent of instructor responsible for supervision and of program adviser.

**EPDM 698 Dissertation (1-14)**

Student prepares manuscript presenting results of doctoral research study. Limited to doctoral degree candidates.

**EPDM 699 Applied Research (1-4)**

Assignment to private, government, international, or voluntary health agency or other department-approved organization where practical application of the materials studied on campus is made under the guidance of the department faculty and the organization involved. Research project that includes substantial analysis of data and discussion of results. Written report and oral presentation required.

Prerequisite: Consent of department adviser and of instructors responsible for supervision.

**EARTH SYSTEMS SCIENCE****ESSC 401 Earth Systems and Global Change I (4)**

Part I of a two-quarter sequence. Explores the dynamic biogeophysical processes in the geosphere and hydrosphere. Focuses on acquiring an interdisciplinary understanding of the basic principles and concepts of earth-systems science (ESS) and the human dimensions of global environmental change (HDGC).

**ESSC 402 Earth Systems and Global Change II (4)**

Part II of a two-quarter sequence. Explores the dynamic biogeophysical processes in the atmosphere, biosphere, and sociosphere. Focuses on acquiring an interdisciplinary understanding of the basic principles and concepts of earth-systems science (ESS) and the human dimensions of global environmental change (HDGC).

Prerequisite: ESSC 401.

**ESSC 541 Remote Sensing in the Social, Health, and Biosciences (4)**

Students develop fundamental knowledge of and skills in modern remote sensing in environmental data acquisition and analysis; as well as applications in related social, health, earth-systems, and biosciences. Topics include GIS-based image interpretation and data generation, satellite remote sensing, and remote sensing applications. Case studies in sustainable development, social policy, health, and biosciences. Introduces software tools IDRISI and ERDAS (from Clark Laboratories) and Imagine (from Leica Geosystems).

Prerequisite: Consent of instructor.

**ESSC 542 System Science Modeling in the Social, Health, and Biosciences (4)**

Introduces "systems science" both as a conceptual approach to analysis and as a methodology for enhancing research and application within the social, health, earth-systems, and biosciences. Students develop fundamental knowledge of dynamic modeling tools, with particular focus on using STELLA and iThink (from Isee Systems); as well as other tools that integrate spatial and nonspatial datasets, e.g., ArcModeler, Geode, TerraVIVA, Netweaver, and various SAS tools. Applies systems thinking and analysis to specific interdisciplinary issues within sustainable development, forensic, social and health policy, earth-systems, and other applied sciences.

Prerequisite: Consent of instructor.

**ESSC 575 Field Practicum: Applied Earth-system Science (4)**

Applies geospatial tools, earth-system science methods and concepts, social policy analytical frameworks, and other conservation-science methods to integrated, place-based sustainability problems within a given ecosystem, community, or region. Focuses on applying the concepts and tools of sustainability science. Students learn to use field tools—such as GPS, ArcPAD, and varied ecological monitoring and assessment instruments, and PRA; as well as traditional ethnographic and socioeconomic qualitative research methods. U.S. target sites alternate between Great Salt Lake, Utah; and Salton Sea, California. International sites may include Honduras, East Africa, Fiji, and Jamaica; with partners such as University of the South Pacific in Fiji and Northern Caribbean University in Jamaica.

Prerequisite: Consent of instructor.

**FAMILY MEDICINE****FMDN 599 Directed Elective Study (1.5–18)****FMDN 701 Family Medicine Clerkship (1.5–6)**

Students spend a four-week rotation in family practice clinical setting. Assignments vary and may be with community physicians or in residency-based clinics. Emphasizes integrating biomedical, psychosocial, and spiritual issues, as well as appropriate preventive care. An OSCE given at the end of every twelve-week block, in conjunction with pediatrics.

**FMDN 821 Family Medicine Subinternship (60 to 240 hours)**

Students spend four weeks participating as members of the Family Medicine Inpatient Service team, providing patient care at Loma Linda University Community Medical Center and affiliated hospitals; and two afternoons seeing patients in a residency-based outpatient clinic.

**FMDN 891 Family Medicine Elective (General Family Medicine) (60 to 720 hours)**

Student works with Loma Linda Family Practice faculty to provide both inpatient and outpatient care.

**FAMILY STUDIES****FMST 505 Social Research Methods I (3)**

Analyzes current social research methods. Practice in the use of techniques. Scientific method.

Prerequisite: Introductory course in statistics as an undergraduate research methods course.

**FMST 506 Advanced Social Research Methods II (3)**

Student uses computer, analyzes statistics, and writes research report.

**FMST 514 Cross-cultural Counseling and Family Values (2)**

Structure and function, changing patterns, future in urban society. Relationship of changes in society to widespread family problems. Student becomes familiar with a wide range of social and ethnic backgrounds—including but not limited to people of color, Asians, Native Americans, and Hispanics.

**FMST 515 Professional Issues in Family-Life Education (3)**

Surveys the professional practice of family-life education, examines the legal and ethical issues that govern the practice of family-life education, investigates the major policies and legal codes that govern family behavior in the United States and other countries, evaluates strategies for professional development in the field, and delineates boundaries regarding the scope of practice in this field and in family therapy.

**FMST 517 Hispanic Family: Theory and Research (3)**

Covers three areas pertaining to Hispanic family issues. Covers a psychosociocultural theoretical framework; explores an array of issues (e.g., acculturation, biculturalism, values development, crisis and conflict); develops a model for understanding the multicultural family in the U.S.A. based on Hispanic family experiences.

**FMST 518 Advanced Theories in Child Development (3)**

Examines child development from the perspectives of family systems, symbolic interactionism, structural functionalism, family development, social construction, and others. Investigates theories and stages of development—from birth through adolescence—from classical and contemporary literature in the physical, cognitive, language, social, emotional, and moral development domains.

**FMST 524 Family Resource Management (2)**

Challenges of health care costs, childcare, reorganizing and downsizing organizations, managing cultural diversity, and equal employment opportunity. Responding to needs of families and employees through consistent and effective planning so that people become more productive and more satisfied with their lives at work and at home.

**FMST 525 Sociology of the Family (2)**

Studies the structure, function, and changing patterns of families in society; the relationships between family problems and changes in society, and their impact on children.

**FMST 526 Marriage and the Family (3)**

Studies the family from perspectives of psychology, anthropology, biology, history, politics, and religion. Investigates the major movements or moving forces in society that have influenced families living in the United States and elsewhere. Evaluates the important contemporary issues in families, and presents theories of family functioning that inform therapeutic and educational interventions by professionals.

**FMST 528 Parenting (2)**

Principles and practices relating to parent-child relationships. Emphasizes family roles, communication, conflict resolution, values development, and parenting-skill development.

**FMST 529 Family-life Education (2)**

Systematic comparative analysis of the historical development, theoretical perspectives, types of programs, and research in family-life studies.

**FMST 577 Family-life Workshop (2)****FMST 614 Family Communication (3)**

Theoretical foundations of human communication. Therapeutic techniques of major communication theorists in marital and family therapy.

**FMST 635 Single Adult in Family and Society (3)**

Perceptions, needs, challenges, and opportunities during the periods of adult singleness in the life cycle.

**FMST 694 Directed Study: Family Studies (1-3)****FMST 695 Internship in Family Studies (1-4)****FMST 696A Advanced Topics in Family Studies: Parenting (3)**

Directed study in parenting.

**FMST 696B Advanced Topics in Family Studies: Family Resource Management (3)**

Directed study in family resource management.

**FMST 696C Advanced Topics in Family Studies: Family Life Education (3)**

Directed study in family life education.

**FMST 696D Advanced Topics in Family Studies: Child Development in Family Context (3)**

Directed study in child development in family context.

**FMST 696E Advanced Topics in Family Studies: Divorce and Remarriage (3)**

Directed study in divorce and remarriage.

**FMST 696F Advanced Topics in Family Studies: Marriage and the Family (3)**

Directed study in marriage and the family.

**FMST 697 Research (1-6)****FMST 698 Project or Thesis (3)****GEOLOGY****GEOL 204 Physical Geology (4)**

Introductory geology course that provides the student with a broad picture of geological processes operating on and within the earth. Introduction to minerals, sedimentary and igneous rocks, and fossils. Weathering, earthquakes, volcanism, erosion and sedimentation, and plate tectonics. Three class hours, one three-hour laboratory or field trip per week.

**GEOL 316 Mineralogy (4)**

Studies minerals, including: crystallography and crystal chemistry, phase diagrams, and systematic classification. Mineral identification based on hand sample, optical, and other analytical techniques. Three class hours and one three-hour laboratory or field trip per week.

Prerequisite: GEOL 204 or consent of instructor.

**GEOL 317 Igneous and Metamorphic Petrology (4)**

Systematically studies igneous and metamorphic rocks, including: classification by petrography and geochemical methods; application of one-, two-, and three-component phase diagrams; and models of petrogenesis. Three class hours and one three-hour laboratory or field trip per week.

Prerequisite: GEOL 316.

**GEOL 325 Rocky Mountain Field Geology (2 or 3)**

Geological and/or paleontological studies at selected localities in the Rocky Mountains. One unit credit per week of field activity. Additional credit may be given for optional projects completed after the field activity.

Prerequisite: GEOL 204 or consent of instructor.

**GEOL 326 Geology of Southern California (3 or 4)**  
Studies the geology of southern California, with emphasis on local areas of geologic interest, including the Loma Linda area, Mojave Desert, Anza Borrego Desert, and the coastal area. Introductory geological principles, earthquakes and faults, and geology and paleontology of regional areas. Student registers for lectures only (3 units) or for lectures and field trips (4 units).

Prerequisite: GEOL 204 or consent of instructor.

**GEOL 384 Paleobotany (4)**  
Fossil plants; their morphology, paleoecology, taphonomy, classification, and stratigraphic distribution. Analyzes floral trends in the fossil record. Three class hours and one three-hour laboratory or field trip per week.

Prerequisite: GEOL 204; BIOL 314, 315.

**GEOL 386 Invertebrate Paleontology (4)**  
Structure, classification, ecology, and distribution of selected fossil invertebrate groups. Principles and methods involved in the study and analysis of invertebrate fossils. Three class hours and one three-hour laboratory per week.

Prerequisite: GEOL 204; BIOL 314, 315.

**GEOL 387 Vertebrate Paleontology (4)**  
Fossil vertebrates, with emphasis on the origins of major groups. Systematics, biology, and biogeography of ancient vertebrates. Three class hours and one three-hour laboratory per week.

Prerequisite: GEOL 304; BIOL 310, 315; general biology or consent of instructor.

**GEOL 424 Structural Geology (4)**  
Theory of stress and strain, and examination of rock deformation in a framework of plate tectonics. Includes problems and applications. Three class hours—with required full-day and half-day field trips—and one three-hour laboratory or field trip per week.

Prerequisite: GEOL 204.

**GEOL 431 Geochemistry (4)**  
Chemical concepts and their geochemical applications in areas of interest in elementary geology.

Prerequisite: GEOL 204 and college chemistry or consent of instructor.

**GEOL 437 Geophysics (4)**  
Applies classical physics to the study of the earth. Studies the earth's gravitational, geomagnetic, geothermal, and seismic characteristics; as well as the dynamics of the earth's crust, plate tectonics, and radioactive dating.

Prerequisite: GEOL 304, physics, and college mathematics.

**GEOL 441 Sedimentology (4)**  
Sediments, sedimentary rocks, and their stratigraphic context. Emphasizes sedimentary processes, primary sedimentary structures, and environments of deposition. Includes description, classification, origin, and interpretation of sediments and sedimentary rocks, with lithofacies, analysis, and other stratigraphic techniques. Three class hours and one three-hour laboratory or field trip per week. Includes several weekend field trips.

Prerequisite: GEOL 204, 316.

**GEOL 442 Stratigraphy (4)**  
Principles of litho-, bio-, and chronostratigraphy; methods of correlation of sedimentary rocks; and introduction to facies-analysis methods. Three class hours and one laboratory or field trip per week.

Prerequisite: GEOL 441.

**GEOL 443 Historical Geology (4)**  
Introduces earth history, with in-depth examination of the stratigraphic record of rocks and fossils. Three class hours and one three-hour laboratory per week.

Prerequisite: GEOL 204, 441, 442.

**GEOL 448 Field Seminar in Historical Geology (4)**  
Field analysis of the stratigraphic and fossil record, with emphasis on interpretation and discussion of models of deposition. Includes one week of lecture and a two-week field trip to specific sites in the western United States. Summer only.

Prerequisite: GEOL 204, 441, 442, 443; or consent of instructor.

**GEOL 454 Sedimentary Petrology (4)**  
Origin, diagenesis, and classification of sedimentary rocks. Includes use of the petrographic microscope in the study of sedimentary rock-forming minerals, cements, textures, and fabrics. Three class hours and one three-hour laboratory or field trip per week.

Prerequisite: GEOL 316, 441; or consent of instructor.

**GEOL 455 Modern Carbonate Depositional Systems (3)**

Examines modern and Pleistocene carbonate systems in the field, using these environments as models for understanding sediment production, facies development, and early diagenesis for many ancient carbonates. Presentations and readings on specific environments—combined with field descriptions, mapping, analysis, and reports. Requires rigorous hiking and snorkeling in shallow water.

Prerequisite: GEOL 204 or consent of instructor.

**GEOL 456 Field Methods of Geologic Mapping (4)**  
Advanced geologic mapping of complex areas, with interpretation of their history; includes mapping of igneous, metamorphic, and sedimentary rocks. Experience in preparation of geologic reports of each mapped locality.

Prerequisite: GEOL 424.

**GEOL 464 Environmental Geology (3)**  
Geological and hydrogeological principles that apply to subsurface waste and contaminant characterization. Reviews remediation techniques and hazardous-waste disposal alternatives. Three class hours per week.

Prerequisite: GEOL 204; GEOL 441, 442 recommended.

**GEOL 465 Hydrogeology (4)**  
Theory and geology of groundwater occurrence and flow, the relation of groundwater to surface water, and the potential distribution of groundwater by graphical and analytical methods. Three class hours and one three-hour laboratory per week.

Prerequisite: GEOL 441, 442; or consent of instructor.

**GEOL 475 Philosophy of Science and Origins (4)**  
Concepts in the history and philosophy of science, and application of these principles in analyzing current scientific trends.

Prerequisite: GEOL 204 or equivalent.

**GEOL 484 Readings in Geology (1-4)**  
Reviews literature in a specific area of geology. Students make presentations from the literature and submit current papers dealing with the assigned topic.

**GEOL 485 Seminar in Geology (.5 or 1)**  
Selected topics dealing with recent developments. Seminar attendance for 0.5 units; presentation required for 1 unit.

**GEOL 486 Research and Experimental Design (2)**

Concepts, methods, and tools of research—including experimental design and data analysis.

**GEOL 487 Field Geology Studies (1-6)**

Special field study trips lasting one or more weeks. Student involvement required—including field presentations and field work assignments, such as the measurement and analysis of sedimentary sections, facies profiling, paleontologic excavation, mapping, or other geological or paleontology field activity. One unit of credit per week. May be repeated for additional credit.

**GEOL 488 Topics in Geology (1-4)**

Reviews current knowledge in specified areas of the earth sciences. Registration should indicate the specific topic to be studied. May be repeated for additional credit. Offered on demand.

Prerequisite: Consent of instructor.

**GEOL 489 Readings in Paleontology (1-4)**

Reviews the literature in a specific area of paleontology. Students make presentations from the literature and submit current papers dealing with the assigned topic.

**GEOL 495 Special Projects in Geology (1-4)**

Special project in the field, laboratory, museum, or library under the direction of a faculty member. Registration indicates the specific field of the project.

Prerequisite: Consent of instructor.

**GEOL 497 Undergraduate Research (1-4)**

Original investigation and/or literature study pursued under the direction of a faculty member. May be repeated for additional credit.

Prerequisite: Consent of instructor.

**GEOL 499 Directed Study (1-4)**

Experimental, field, or library study of a problem of restricted scope, under the direction of a staff member. May be repeated for additional credit.

Prerequisite: Consent of instructor.

**GEOL 524 Paleobotany (4)**

Fossil plants; their morphology, paleoecology, taphonomy, classification, and stratigraphic distribution. Analyzes floral trends in the fossil records. Three class hours and one three-hour laboratory or field trip per week.

Cross-listing: BIOL 524.

Prerequisite: BIOL 106 and consent of instructor.

**GEOL 525 Paleopalynology (4)**

Morphology, paleoecology, classification, and stratigraphic distribution of plant microfossils. Introduces biostratigraphic and paleoecologic analytical methods. Three class hours and one three-hour laboratory or field trip per week.

Cross-listing: BIOL 525.

Prerequisite: GEOL 405 and consent of instructor.

**GEOL 534 Invertebrate Paleontology (4)**

Structure, classification, ecology, and distribution of selected fossil invertebrate groups. Principles and methods involved in the study and analysis of invertebrate fossils. Three class hours and one three-hour laboratory per week.

Cross-listing: BIOL 534.

Prerequisite: BIOL 106 and consent of instructor.

**GEOL 544 Vertebrate Paleontology (4)**

Fossil vertebrates, with emphasis on the origins of major groups. Systematics, biology, and biogeography of ancient vertebrates. Three class hours and one three-hour laboratory per week.

Cross-listing: BIOL 544.

Prerequisite: General biology or consent of instructor.

**GEOL 545 Taphonomy (3)**

Processes that affect an organism from death until its final burial and fossilization, and utilization of this information in reconstructing ancient assemblages of organisms. Three class hours per week.

**GEOL 546 Ichnology (2)**

Fossilized traces produced by animal activity, such as tracks, burrows, feeding traces, etc. Two class hours per week.

**GEOL 547 Advanced Historical Geology (4)**

History of the earth, with in-depth examination of paleontologic and lithologic changes of the geologic column. Emphasizes concepts of interpretation, particularly the causes of mass extinctions within the context of their accompanying sedimentologic variations. Term paper or research project report required.

Prerequisite: GEOL 204, 441, 442.

**GEOL 554 Limnogeology (4)**

Ancient lake deposits, including their sedimentologic, paleontologic, mineralogic, geochemical, and stratigraphic characteristics. Investigates as analogs the depositional processes occurring in modern lakes. Laboratory and several extended field trips.

Prerequisite: GEOL 441, 442; or consent of instructor.

**GEOL 555 Carbonate Geology (4)**

Advanced look at the geology of carbonate rocks, including petrology; depositional environments; and overview of current topics of research. Laboratory experience in the analysis of carbonate rocks and rock sequences. Field trip to an ancient carbonate sequence.

Prerequisite: GEOL 441, 454; or consent of instructor.

**GEOL 556 Paleoenvironments (4)**

Applies paleontologic, sedimentologic, and geochemical data and methods to interpretation of past sedimentary environments, with emphasis on organism-sediment relationships. Investigates as analogs processes, sediments, and organisms in modern depositional environments.

Prerequisite: GEOL 441, 442; or consent of instructor.

**GEOL 558 Philosophy of Science and Origins (4)**

Selected topics in the history and philosophy of science, and application of these principles in analyzing contemporary scientific trends.

Cross-listing: BIOL 558.

**GEOL 566 Advanced Sedimentology (4)**

Advanced methods and principles of sedimentology, with emphasis on analysis and interpretation of sedimentary structures and the processes that produced them. Discusses in detail sedimentary facies, depositional environments, chemogenic and biogenic sedimentation, and postdepositional diagenetic processes. Research or project paper required. Three class hours and one three-hour laboratory or field trip per week, and several extended field trips.

Prerequisite: GEOL 204.

**GEOL 567 Stratigraphy and Basin Analysis (4)**

Advanced methods of stratigraphy and basin analysis, including facies analysis, depositional systems, sequence stratigraphy, paleogeography, and basin modeling. Research or project paper required. Three class hours and one laboratory or field trip per week, and two extended field trips.

Prerequisite: GEOL 204, 441, 442.

**GEOL 569 Tectonics and Sedimentation (4)**

Analyzes depositional systems developed in various tectonic settings. Compares unique depositional styles in strike-slip basins, foreland basins, arc-trench systems, rift margins, and aulacogens. Three class hours and one laboratory or field trip per week.

Prerequisite: GEOL 441, 442, 443; or consent of instructor.

**GEOL 574 Environmental Geology (3)**

Geological and hydrogeological principles that apply to subsurface waste and contaminant characterization. Reviews re dedication techniques and hazardous-waste-disposal alternatives. Three class hours per week.

Prerequisite: GEOL 204; GEOL 441, 442 recommended.

**GEOL 575 Hydrogeology (4)**

Theory and geology of groundwater occurrence and flow, the relation of groundwater to surface water, and the potential distribution of groundwater by graphical and analytical methods. Three class hours and one three-hour laboratory per week.

Prerequisite: GEOL 441, 442; or consent of instructor.

**GEOL 588 Topics in Geology (1-4)**

Reviews current knowledge in specified areas of the earth sciences. When registering, the student must indicate specific topic to be studied. May be repeated for additional credit. Offered on demand.

Prerequisite: Consent of instructor.

**GEOL 589 Readings in Paleontology (1-4)**

Reviews literature in a specific area of paleontology. Students make presentations from the literature and submit current papers dealing with the assigned topic.

**GEOL 594 Readings in Geology (1-4)**

Reviews the literature in a specific area of geology. Students make presentations from the literature and submit current papers dealing with the assigned topic.

**GEOL 595 Lacustrine Readings (1)**

Readings and analysis of current and classic scientific literature dealing with modern and ancient lake environments—including geochemistry, sedimentology, biology and paleontology, and related subjects. Activities include student presentations of papers, discussion, and research proposals and reports. One extended, multiday field trip required.

**GEOL 605 Seminar Presentation in Geology (1)**

Selected topics dealing with recent developments, particularly reports of current research. Student attends and presents one seminar during the quarter.

**GEOL 607 Seminar in Geology (1)**

Selected topics dealing with recent developments.

**GEOL 616 Research and Experimental Design (2)**

Concepts, methods, and tools of research—including experimental design and data analysis.

**GEOL 617 Proposal Writing and Grantsmanship (2)**

Skills and practice of effective proposal writing, and strategies for locating and obtaining research grants.

**GEOL 695 Special Projects in Geology (1-4)**

Special project in the field, laboratory, museum, or library under the direction of a faculty member. Registration indicates the specific field of the project.

Prerequisite: Consent of instructor.

**GEOL 697 Research (1-8)****GEOL 698 Thesis (1-2)****GEOL 699 Dissertation (2)**

Credit for writing the doctoral dissertation.

**GERONTOLOGY****GERO 515 Diversity and Aging (3)**

Assists students in understanding the complexity of variables related to the aging process. Examines ethnicity, gender, social class, and culture within the context of the physical, mental, social, political, and financial effects of aging.

**GERO 599 Directed Study/Special Project (1-4)**

Limited to matriculating master's degree in gerontology students who wish to pursue independent investigations in criminal justice practice or policy under the direction of a department faculty member.

**GERO 617 Bio-psycho-social-spiritual Theories of Aging (4)**

An interdisciplinary, team-taught learning experience that provides an integrative understanding of the bio-psycho-social-spiritual aspects and theories of aging, and the impact of these on older adults and their families.

**GERO 665 Gerontology and GIS (2)**

Provides students with key concepts and tools from information science, operations research, dynamic modeling, geographic information systems, and visualization theory within social, behavioral sciences.

**GERO 687A Field Practicum and Seminar in Gerontology (180 hours)**

Provides students with experiential learning opportunities in gerontology settings. Students placed at practicum sites, as determined by the program committee. Students complete 160 practicum hours concurrent with 20 hours of practicum seminar for each of three consecutive quarters. Total hours: 480 + 60.

**GERO 687B Field Practicum and Seminar in Gerontology (180 hours)**

Provides students with experiential learning opportunities in gerontology settings. Students placed at practicum sites, as determined by the program committee. Students complete 160 practicum hours concurrent with 20 hours of practicum seminar for each of three consecutive quarters. Total hours: 480 + 60.

**GERO 687C Field Practicum and Seminar in Gerontology (180 hours)**

Provides students with experiential learning opportunities in gerontology settings. Students placed at practicum sites, as determined by the program committee. Students complete 160 practicum hours concurrent with 20 hours of practicum seminar for each of three consecutive quarters. Total hours: 480 + 60.

**GERO 698 Thesis (2)**

The culminating portion of the student's independent research, under direction of the research adviser. Students register for class during the quarter in which they defend their research and submit their final document to the department and School of Science and Technology.

**GERO 757A, B, C Professional Practicum and Seminar (3, 3, 3)**

Students complete 3 units of professional practicum during each quarter. Each 3 units require 160 hours of practicum and 20 hours of seminar.

**GLOBAL HEALTH****GLBH 514 Ethnographic Methods in Public Health (3)**

Systematically examines issues of health care access, policy, disease burden, and client-provider interactions, within social, historical, and cultural contexts for at-risk populations.

**GLBH 515 Understanding Health Disparities (3)**

Systematically examines issues of disease distribution, health care access, policy, and client-provider interactions within social, economic, historical, and cultural contexts for the main minority groups in the U.S.: Asian and Pacific Islanders, Blacks, Latinos, and Native Americans.

**GLBH 516 HIV/AIDS: Implications for Public Health (3)**

Historical, epidemiological, and public health aspects of HIV/AIDS. Viral, immunologic, laboratory, and clinical manifestations associated with HIV/AIDS. Approaches to preventing/controlling the epidemic. Socioeconomic, political, and health impact of HIV/AIDS; and the related implications in terms of legal, ethical, and health care-management issues. Laboratory/field work earned by the student's active participation and involvement in a variety of field-based activities, such as clinic-intake interviews, analysis of existing epidemiologic databases, grant writing, health education, hospice care, etc.

**GLBH 517 Cultural Issues in Health Care (3)**

Analyzes cross-cultural issues that affect the delivery of health care. Applies practical health education models in multicultural communities. Uses case studies, videos, and selected readings illustrating the important role that cultural beliefs and practices play in public health—both in domestic and international settings. Indicates how to use this awareness to provide better health care.

**GLBH 519 Principles of Disaster Management (3)**

Dynamics of disaster management. Explores complex issues and problems associated with planning, organization, and management of disaster-relief services. Public health impact of disasters. Nature and dynamics of emergency public health interventions as they relate to disaster management. Analyzes and studies skills utilized to address assessment, management, evaluation, and prevention issues nationally and internationally.

**GLBH 534 Agriculture in Development (3)**

Food-production systems and issues in agricultural development. Attitudes and approaches for rural development practitioners.

**GLBH 543 Epidemiology of Infectious Disease Projects (1)**

Appropriate project/study or a comprehensive review of an infectious disease of major public health significance.

Prerequisite: EPDM 509.

Corequisite: GLBH 544.

**GLBH 544 Epidemiology of Infectious Disease (3)**

Epidemiology of major acute and chronic infectious diseases worldwide. Characteristics of host, agent, environment, immunity of individuals, and populations. Methods of control and eradication; types of epidemics; and experimental, serological, and analytical techniques used in epidemiology of infectious disease.

Cross-listing: EPDM 544.

Prerequisite: EPDM 509.

**GLBH 545 Integrated Community Development (4)**

Issues, problems, resources, and strategies of implementing integrated community-development projects. Basic developmental needs of rural and urban communities. Taught from perspectives of developmental anthropology, agriculture, economic development, and the role of global health organizations. Includes field work in a developing country.

Prerequisite: GLBH 564, 566, 568, 605.

**GLBH 547 Refugee and Migrant Health (3)**

Current global issue of refugee and migrant movements, focusing on physical and psychosocial health risks to affected populations in the migratory, internment, and resettlement phases. Mass migration as a global security problem. Economic, political, ethical, and international legal and regulatory issues; and targeted programs to promote health and security by international, national, and private organizations.

**GLBH 548 Violence Issues: Global Public Health Perspective (3)**

Different types of violence, and their distribution around the world. Socioeconomic, political, and medical impact of violence, with a focus on approaches for intervention and prevention. Public health implications of violence. Design of a violence-intervention/prevention model program.

**GLBH 550 Women in Development (3)**

Global epidemiological profile of women in terms of educational patterns, economic productivity, social status, and mortality patterns. Risks to physical and psychosocial health. National and international legal and regulatory issues and programs to promote access to health care, economic productivity, and the health of women.

Cross-listing: HPRO 550.

**GLBH 564 Primary Health Care Programs I (3)**

The first of a three-part series of module-based learning experiences necessary to the management of primary health care and development programs serving vulnerable populations in resource-scarce areas. Current world health programs, with a focus on the ecologic, demographic, developmental, and sociocultural determinants of health. Topical areas include: program management and evaluation; food security and agricultural sustainability; communicable diseases; essential drugs and immunizations; population/family planning, maternal-child health; traditional practices and cross-cultural communications; environmental issues; urban health; populations at risk; relief operations; literacy; microenterprise; and public health policy/advocacy.

**GLBH 566 Primary Health Care Programs II (3)**

The second of a three-part series of module-based learning experiences necessary to the management of primary health care and development programs serving vulnerable populations in resource-scarce areas. Current world health programs, with a focus on the ecologic, demographic, developmental, and sociocultural determinants of health. Topical areas include: program management and evaluation; food security and agricultural sustainability; communicable diseases; essential drugs and immunizations; population/family planning, maternal-child health; traditional practices and cross-cultural communications; environmental issues; urban health; populations at risk; relief operations; literacy; microenterprise; and public health policy/advocacy.

**GLBH 567 Evaluation of Global Health and Development Programs (3)**

Approaches and methodology of evaluation in the setting of multiple stakeholders and varied cultural perspectives and expectations. Need for objectivity and improved measurement of outcomes balanced with the need for participation and feedback to the decision-making process. Limited to doctoral degree students or consent of instructor.

**GLBH 568 Primary Health Care Programs III (3)**

The third of a three-part series of module-based learning experiences necessary to the management of primary health care and development programs serving vulnerable populations in resource-scarce areas. Current world health programs, with a focus on the ecologic, demographic, developmental, and sociocultural determinants of health. Topical areas include: program management and evaluation; food security and agricultural sustainability; communicable diseases; essential drugs and immunizations; population/family planning, maternal-child health; traditional practices and cross-cultural communications; environmental issues; urban health; populations at risk; relief operations; literacy; microenterprise; and public health policy/advocacy.

**GLBH 584 Special Topics in Global Health (1-3)**

Lecture and discussion on a current topic in global health. May be repeated for a maximum of 4 units applicable to degree program.

**GLBH 605 Seminar in Global Health (1)**

Issues, trends, organizational structure, and practice of international public health. Issues impacting global health, the structure and functions of government and NGOs in the delivery of public health services, and preparation to practice international health. Selected guest lecturers and student participation.

**GLBH 606 Advanced Seminar in Global Health (2)**

Research methodologies applied to program operations and health and development problems in developing countries. Cultural, ethical, and technical issues in conducting research in other societies. May be repeated for additional credit. Limited to doctoral degree students.

**GLBH 685 Preliminary Research Experience (2)**

Various aspects of research under the guidance of a faculty member and by participation in an ongoing project. Must be completed prior to beginning dissertation/research project. Limited to doctoral degree students.

Prerequisite: Consent of instructor.

**GLBH 692 Research Consultation (2)**

Individual advice on research design, data collection, data analysis, and reporting of results.

Prerequisite: Consent of instructor.

**GLBH 694 Research (1-4)**

Independent research on problems being studied in the School of Public Health or associated institutions; collaboration with researcher/faculty member. Research program arranged with faculty member(s) involved and approved by adviser. Minimum of thirty hours required for each unit of credit. Written report required. Limited to qualified master's and doctoral degree students.

Prerequisite: Consent of instructor responsible for supervision and of program adviser.

**GLBH 695 Practicum in Field-Based Survey and Evaluation (3)**

Individualized, arranged participation in field survey and evaluation, with preceptorship by affiliating nongovernment organizations (NGOs) in the developing world or underserved population settings. Limited to doctoral degree students.

Prerequisite: GLBH 567.

**GLBH 696 Directed Study/Special Project (1-4)**

Individual arrangements for advanced students to study under the guidance of a program faculty member. May include readings, literature reviews, or other special projects. Minimum of thirty hours required for each unit of credit. A maximum of 4 units applicable to any master's degree program.

Prerequisite: Consent of instructor responsible for supervision and of program adviser.

**GLBH 698 Dissertation (1-12)**

Student prepares manuscript presenting results of doctoral research study. Limited to doctoral degree candidates.

**GLBH 699 Applied Research in Global Health (2 or 4)**

Focuses on operations/evaluation research and/or program development that involves application of knowledge/skills acquired earlier in the academic program. Field sites may include private or governmental health organizations functioning in a cross-cultural environment. Guidance to be provided by supervising faculty and agency personnel. Written paper per departmental guidelines.

**GLBH 796 Internship (12)**

Individual mentored study in organizational management and development, under the direction of an international nongovernmental organization that has a contractual agreement with the department. Limited to graduate GLBH students who have been recommended by the department and accepted by the nongovernmental organization for this internship experience and whose project proposals have been approved by both entities.

**GLBH 797 MIP Residency in Global Health (12)**

Individual guided study in operational field practice, under faculty supervision. Limited to graduate students in the INTH Master's Internationalist Program (M.P.H./MIP) whose projects have been approved by their committee.

**GLBH 798A Culminating Activity/Field Practicum (3)**

Written report, proposal, or evaluation of a program or project in which the student has been or will be involved. Student applies concepts and skills taught in course work, made under the guidance of department faculty and agency supervisors. For students who lack relevant professional experience in an international or cross-cultural health/development program, a ten-week assignment to an approved agency will be arranged. Students register for 400 clock hours. Students with appropriate experience register for 100 hours and write a culminating activity paper under the direction of department faculty.

Prerequisite: Consent of instructors responsible for supervision.

**GLBH 798B Culminating Activity/Field Practicum (6)**

Written report, proposal, or evaluation of a program or project in which the student has been or will be involved. Student applies concepts and skills taught in course work, made under the guidance of department faculty and agency supervisors. For students who lack relevant professional experience in a global or cross-cultural health/development program, a ten-week assignment to an approved agency will be arranged. Students register for 400 clock hours. Students with appropriate experience register for 100 hours and write a culminating activity paper under the direction of department faculty.

Prerequisite: Consent of instructors responsible for supervision.

**GLBH 798D Culminating Activity/Field Practicum (12)****GRADUATE MEDICAL EDUCATION****GMDE 504 General Communication in Health Care (1)**

Overview of general communication skills between peers, attending physicians, patients, staff, and community. How to discuss sensitive issues, such as “do not attempt resuscitation” and medical mistakes. Family matters. Understanding cultural diversity in light of one's own belief system.

**GMDE 504A The Resident as a Teacher, Leader, and Evaluator (.5)**

Introduces general teaching skills for student-resident interaction. Exposes students to the general ways people learn, and the skills useful in teaching medical students or junior residents using inspiration. Emphasizes methods of evaluating students. Reviews lecture and presentation techniques.

**GMDE 504C Communication in Difficult Clinical Situations (.5)**

Discusses unique areas of patient-physician communication in which patients may have unique medical conditions that involve lifestyle and behavioral modification. Emphasizes communicating effectively without being offensive. Provides a general understanding of communication skills that will provide the health care professional a distinct advantage in various clinical situations.

**GMDE 504D Communication with Health Care Personnel (.5)**

Looks more closely at the day-to-day communication between physicians, nurses, and office staff; and how it can be more effective. Exposes students to techniques of bringing out the best in difficult and disruptive individuals, whether in the hospital or the clinic. Describes effective communication in the community setting.

**GMDE 504E Communication Skills in Health Care (.5)**

Provides an overview of communication skills, including: assessing nonverbal communication, understanding cross-cultural communication, and how to communicate with patients when medical mistakes are made. Emphasizes how to break bad news when all treatments have failed. Discusses how to communicate as a caregiver about spiritual matters in light of one's personal religious belief system.

**GMDE 504F Communication with Groups in Health Care (.5)**

Reviews the techniques of discussing goals of care with patients and families. Includes concepts of patient adherence and the motivational interview. Emphasizes how to communicate within the confines of a family conference. Focuses on the importance of creating a congenial atmosphere of communication with one's office staff, and its connection to quality patient care. The caregiver's non-verbal communication, and its impact on the community served.

**GMDE 505 General Tools in Understanding Medical Professionalism (1)**

Defines professionalism in a health care practice. Emphasizes the psychology of professionalism, understanding human nature, and avoiding patient manipulations while remaining the professional. Also emphasizes understanding professionalism through the eyes of the patients, including how dress and appearance impact the perception of professionalism. Develops coping skills for dealing with the disruptive physician—the impaired healer; as well as presents through the lens of professionalism the subconscious games all people can fall into.

**GMDE 505A Physician Well-Being: Are You Always the Professional? (.5)**

Deals with the question, Who heals the healer? Understanding one's boundaries and the boundaries of the patient and staff. Making the transition from a professional work environment to the home environment, including appropriate integration back into the family unit. How sleep patterns and sleep deprivation can contribute to unprofessional behavior, as well as the means of optimizing sleep in the professional physician's world. How to recognize and provide help for the impaired physician, as well as avoid the pitfalls in one's personal experience.

**GMDE 505B Being a Professional in the Community (.5)**

Looks at the professional more in depth in the community. Integrating one's practice into a community by treating all patients the same—regardless of financial income. Knowing the resources available within one's community to assist patient care. Integrating into one's social community as a professional and physician without climbing on the pedestal.

**GMDE 505C Understanding and Applying the Knowledge of Personalities in One's Practice (.5)**

Emphasizes the importance of personality knowledge and analysis in the practice. Identifies the personality of the professional and provides tools to rapidly assess the personality of the health care receiver. Enables the professional to communicate more effectively, thereby better meeting the emotional needs of the patient. Applies the knowledge of personalities, giving the professional an added advantage in avoiding the pitfalls of unnecessary conflicts in the medical profession by fulfilling the needs of the patient, the worker, the peer, and the family.

**GMDE 505D Sex Essentials: What Health Professionals Need to Know About Sex (.5)**

Educates health care professionals about human sexual behavior. Provides essential information about a specific human sexuality topic. Provides an overall picture of critical issues in sexual behavior research and practice for the professional

**GMDE 505E Essentials of Professionalism (.5)**

Explores the concepts of professionalism in light of the rights and responsibilities of caregivers. Reviews the key element of trust in the patient-doctor relationship. Discusses how to remain professional when the patient-doctor relationship is “gamed.” Provides insight on delivering effective presentations. Discusses how caregivers should govern themselves in order to maintain professional integrity.

**GMDE 506 Getting Your Evidence-Based Medicine (EBM) Engine Started: The Anatomy of the EBM and Its Success (.5)**

Introductory course that develops the tools for understanding and applying evidence-based medicine. Introduces the basic model of EBM. Presents methods of acquiring medical knowledge through textbooks and the Internet. Concludes with the anatomy of an article, as well as understanding research design concepts in the assessment of an article.

**GMDE 506A On the Evidence-Based Medicine Road: Assessing the Medical Literature (.5)**

Looks critically at both therapeutic and diagnostic articles. Considers the question of when to make a shift in practice patterns that will benefit patients. Discusses statistical methods in the light of article analysis. Reviews article analysis relevant to predicting a good outcome or prognosis for patients.

**GMDE 506B Fine Tuning Your Evidence-Based Engine: Appraising, Assessing, and Implementing Medical Knowledge (.5)**

Brings all the relevant assessment tools together to examine review articles and practice guidelines. Critically analyzes what has often been touted as dogma to determine whether it will still improve patient care. Looks at the science of medicine in light of patient care while considering the issue of ultimate outcome through the lens of prayer, spirituality, and one's humanness. Summarizes the application of evidence-based medicine for the practicing physician.

**GMDE 506C Ethical Principles for Research Involving Human Subjects (.5)**

Profiles specific issues relating to the ethical conduct of research when human subjects are involved. Ethical principles delineated in the Belmont Report applied to the conduct of research with human participants. Attention given to special issues involved in developing a plan for approaching prospective research participants. Illustrates the role and responsibility of the local Institutional Review Board (IRB) by examining the criteria for IRB approval. Summarizes responsibilities of the investigator after initial IRB approval. Concludes with a review of the criteria an editor uses in the process of accepting or rejecting a paper for publication.

**GMDE 507 Introduction to Biomedical Ethics (.5)**

Reviews the essentials of ethical thinking in the context of clinical care. Provides the fundamental basis of ethical terminology and relevant issues, and then challenges the physician to think through various clinical situations or circumstances that may be encountered. Forms the foundation of ethical decision making, emphasizing clinical application of these fundamentals.

**GMDE 507A Advanced Ethical Thinking in Health Care (.5)**

Espouses critical thinking in the broad view of ethics in the practice of medicine. Emphasizes clinical application of this knowledge through discussion of case studies and examples. Emphasizes how a clinician develops a sound basis for practicing ethically in the global sense.

**GMDE 508 Whole-Person Care: For the Patient or for the Doctor? (.5)**

Looks at the uniqueness of the patient as a real person. Applies the concept of whole-person care in the real, harried world of managed care—emphasizing that the real product of health care includes not only good health care but also “people care.” Considers the impact of whole-person care for the caregiver personally.

**GMDE 509 Career Planning for Residents—Thriving, Not Just Surviving the Transition from Residency to 21<sup>st</sup> Century Medical Practice(1)**

Takes the resident through the transition from residency to practice. Highlights understanding practice options, assessing and analyzing a practice, knowing the types of reimbursement alternatives, and conducting the job interview. Discusses contracts one signs when joining a group, and the pros and cons of a solo versus group practice in the light of the ever-changing business models delivering health care. Looks at physician altruism in patient care within the health care system. Emphasizes medical care delivery changes in light of how patients and care givers can still be benefited. Highlights the use of information systems and patient safety in this new model of care giving.

**GMDE 510 Introduction to Managing the Delivery of Health Care (.5)**

Introduces physicians to practical information for successfully managing one's practice. Emphasizes leadership skills and understanding strategic planning. Introduces marketing—including internal methods of meeting patients' needs and building a bond for the physician-patient relationship. Overview of costs incurred by the physician as seen through the patient's eyes.

**GMDE 510A Advocating for the Patient in the Health Care Maze (.5)**

Focuses on patient advocacy by providing solid and evolving information on how to cope in an ever-changing reimbursement environment. Emphasizes physician innovation and creativity relevant to what they can and cannot control. Altering the office schedule for maximum efficiency and cost effectiveness, and understanding the maze of health care regulations. Reviews the legal system as it pertains to reimbursement schedules. Provides knowledge that will give the physician the tools to continue to be a patient advocate.

**GMDE 510B Financial Reimbursement from a Conflicted Health Care System (.5)**

Continues the systems-based practice domain, which focuses on working within the reimbursement system to obtain proper funding for care rendered. Stresses understanding of the process, including the physician's need to comply; and proper billing and coding procedures. Emphasizes the ethical issues of avoiding conflicts of interest and introduces conflict-resolution tools that can be used when differing opinions or outright roadblocks arise in the area of reimbursement.

**GMDE 511 Personal Finance (1)**

Provides an overview of personal finance—from initiating a budget to understanding how to invest properly for financial security and retirement needs. Reviews understanding of the various vehicles in the market, emphasizing diversification and long-term planning.

**GMDE 512 Concepts in Personal Insurance (.5)**

Provides an overview of the essentials of personal insurance needs. Emphasizes life insurance types, the pros and cons of whole life vs. term insurance, and using life insurance as an IRA. Reviews the benefits of various types of disability insurance, including the often-forgotten office overhead insurance should one become disabled long term. Reviews the factors underwriters assess when insurance risk is discussed.

**GMDE 513 Introduction to Risk Management in the Health Care System (.5)**

Takes the physician into the world of risk management, including how to decrease the risk of malpractice; and how to avoid errors in medical diagnosis, medication, and surgery. What to do if errors occur. Promotes understanding of the difference between practicing in a defensible, as opposed to a defensive, manner. The importance of documentation of professional work. What to do if one becomes involved in a lawsuit.

**GMDE 513A Professional Liability: Insurers, the Courts, and You (.5)**

Probes the workings of the American professional liability system, including what motivates plaintiffs, their attorneys, insurers, defense attorneys and the physician? What the physician should do when the Letter of Intent arrives? Reviews malpractice-insurance types, how to prepare for a court appearance, and what an out-of-court settlement may mean for the physician. Discusses issues of tort reform and physicians as expert witnesses.

**GMDE 513B Advanced Concepts of Risk Management in the Health Care System (.5)**

Takes the physician into the world of advanced risk-management issues—including how to decrease the risk of malpractice; avoiding errors in medical diagnosis, medication, surgery; and what to do if errors occur. Emphasizes understanding the difference between practicing in a defensible, as opposed to a defensive, manner. The importance of documentation of professional work. What to do if one becomes involved in a lawsuit.

**GMDE 523 The Clinical System (.5)**

Explores systems theory/concepts. Helps the learner “think” and “see” systems. Considers different clinical systems: the patient as the core of the system; the microteam (the patient-nurse-physician team), the smallest unit or replica of care; the clinical microsystem (practitioners and their supporting staff). Uses the chronic-care model as an example of how the different levels of systems interact together to achieve common goals.

**GMDE 523A The Macrosystem (Organization System) (.5)**

Studies health care organizations, such as medical centers, and evaluates the delivery of health care within these macrosystems. Emphasizes the systems in place that either enhance or detract from quality patient care. Reviews how errors can occur with normal systems. Emphasizes the organization as an enhancer or detractor of quality care.

**GMDE 523B The Megasytem (Community, Market, and Social Policy System) (1)**

Final systems-based practice course. Reviews concepts in the megasytem of health care. Emphasizes health care finance and all the regulations surrounding such financing. Discusses compliance with such regulations in light of patient care. Demonstrates issues surrounding fraud and abuse. Concludes with the final project the learner will perform, utilizing the Matrix, an assessment tool that links the IOM STEEEP quality measures with the GME core curriculum competencies.

**GRADUATE DENTISTRY (INTERDISCIPLINARY)****GRDN 514 Introduction to Biomedical Research (4)**

Provides basic information necessary to develop a research proposal. Focuses on applied statistics, as well as proposal writing—which emphasizes critical evaluation of the literature, proposal design, and proposal methodology. Culminates in an approved research proposal suitable for submission to the departmental Research Guidance Committee (RGC). Lectures, seminars.

**GRDN 531 Applied Surgical Anatomy (2)**

Surgical approach to anatomy as it relates to special anatomical regions.

**GRDN 535 Clinical Oral Pathology (2)**

Emphasizes oral manifestations of disease. Diagnosis, prognosis, and treatment of various oral neoplasms.

**GRDN 601 Practice Management (2)**

Prepares student for specialty practice. Concepts of employment, records, incorporating, insurance, and practice planning.

**GRDN 604 Topics in Medicine and Hospital Protocol (2)**

Topics presented in internal medicine and physical evaluation, with emphasis on diseases and physical conditions relating to dental treatment. Overview of hospital utilization. Local anesthesia, inhalation, and intravenous sedation techniques reviewed.

**GRDN 609 Professional Ethics (2)**

Provides students with a theological and philosophical framework for professional ethics. Topics include individual rights, autonomy, informed consent, and responsibilities of the professional person in the dental field, as well as in society as a whole.

**GRDN 622 Biomedical Science I (4)**

Advanced, two-quarter course offered every other year (alternating with GRDN 623) during Autumn and Winter Quarters. Course content includes applied oral bacteriology, immunology, topics in oral medicine, applied pharmacology, and orofacial pain. Since course is constructed on an advanced level of understanding, students expected to have prior basic knowledge in the various topic areas.

**GRDN 623 Biomedical Science II (4 or 5)**

Advanced, two-quarter course offered every other year (alternating with GRDN 622) during Autumn and Winter Quarters. Course content includes cell biology, applied oral pathology, biology of hard tissues, physiology, and biochemistry. Since course is constructed on an advanced level of understanding, students are expected to have basic knowledge in the various topic areas.

**GRDN 632 Basic Microsurgery Techniques (2)**

An integrated, forty-hour laboratory course tailored to the needs of the individual student. Principles and application of microscope operator and use, microinstrumentation, microdissection, micromanipulation, and microsuturing techniques. Performance of various microvascular and microneural repair procedures.

**GRADUATE SCHOOL CONJOINT****GSCJ 217 Integrated Language Skills (3)**

Gives students a firm foundation in reading and writing development, comprehension, vocabulary, oral communication, and cultural understanding. Prepares international students with language-skill deficits, students with a learning difference, or both, for the rigors of their course work in order to ground them in American academic and social-cultural practices.

**GSCJ 514 Editing, Style, and Grammar for Academic Writing and Publication (2)**

Focuses on mastery of the editing stage of academic manuscript preparation. Applicable to all academic works, including publishable research results, term papers, dissertations, theses, and proposals. Covers the self-editing option, editing techniques, grammar, punctuation, and style. Addresses APA and other styles.

**GSCJ 515 Researching and Writing Graduate-Level Papers (2-4)**

Provides skills for critical writing, including organization, development of idea, and presentation of conclusion. Develops skills applicable to the preparation of term papers in the students' disciplines.

**GSCJ 518 Interdisciplinary Professional Experience (1-4)**

Professional interdisciplinary experience. Experiences may occur in multiple settings, including field, clinic, outpatient and inpatient. May be repeated up to eight (8) times.

**GSCJ 615 Writing for Thesis/Dissertation (2-4)****GYNECOLOGY AND OBSTETRICS****GYOB 599 Gynecology and Obstetrics Directed Study (1.5-18)****GYOB 701 Gynecology and Obstetrics Clerkship (1.5-9)**

A six-week rotation that introduces women's reproductive health. Provides the student with a broad exposure to women's health and a glimpse of what is involved in the specialty of obstetrics and gynecology.

**GYOB 791 Gynecology and Obstetrics Third-Year Elective (3)**

A two-week elective in the third year of medicine.

**GYOB 891 Gynecology and Obstetrics Elective (60 to 720 hours)****HEALTH ADMINISTRATION****HADM 305 Health Care Communication (4)**

Basic communication applications of health care organizations. Communication theory, language, oral reporting, conducting meetings and conferences, interpersonal techniques of listening and interviewing, nonverbal communication, crises management, and public relations and multicultural as well as ethical considerations.

**HADM 310 Health Care Communication (4)**

Basic communication applications of health care organizations. Communication theory, language, oral reporting, conducting meetings and conferences, interpersonal techniques of listening and interviewing, nonverbal communication, crises management, public relations and multicultural as well as ethical considerations will be addressed.

**HADM 314 Health Care Macroeconomics (4)**

The nature and causes of economic growth, inflation, recession, and unemployment. Government monetary and fiscal policy. Keynesian and monetarist economic models, and introduction to the American financial system.

**HADM 315 Health Care Microeconomics (4)**

Supply-and-demand analysis, competition, oligopoly, and monopoly. Economic choices, comparative economic systems, pricing and production, international trade.

**HADM 328 Health Care Organizational Behavior (4)**

Applies behavioral-science concepts to understanding individual and group behavior in health care organizations. Topics include: attitude formation, perceptual processes, motivation, job design, reward systems, leadership, group processes, organizational structure and design.

**HADM 334 Health Care Law I (4)**

Legal institutions and principles; constitutional considerations, business torts and crimes; contracts; real and personal property; bailments; wills, trusts, and estates.

**HADM 335 Health Care Law I (4)**

Uniform commercial code, sales, commercial paper, secured transactions; creditors; rights and bankruptcy; agency; business organizations, limited and general partnerships; corporations; and government regulations.

Prerequisite: HADM 334.

**HADM 359 Health Care Marketing (4)**

Surveys major marketing topics including consumer behavior, product, pricing, placement, and promotions.

**HADM 374 Health Care-Human Resources (4)**

Purposefully explores how the strategic management of human resources creates value and delivers results in health care. Addresses an emerging human-resource paradigm in addition to focusing on the traditional perspectives of human resources that center around the personal function.

**HADM 375 Health Care-Information Systems (4)**

Conceptual basis of computer operations, logic, introduction to use of word processing, spreadsheet, and database software programs. Application to personal and business problems.

**HADM 401 Health Care-Operations Management (4)**

Explains quantitative methods used to analyze and improve organizational processes within a health care organization. Decision analysis, break-even analysis, materials management, linear programming, queuing theory, quality management, network modeling, and game theory.

**HADM 409 Principles of Public Health Administration (4)**

Introduction to the administration of organizations within the context of the economic, regulatory, and financial constraints of the health care-delivery system. Areas covered include: change is the name of the game in 21st century health care; concepts of organizational management; the management functions (planning, decision making, organizing, staffing, and directing and controlling); budgeting; committees and teams; adaptation, motivation, and conflict management; authority, leadership, and supervision; and human-resource management

**HADM 420 Long-Term Care Administration (4)**

Administration of long-term care facilities. Licensing requirements as presented in the California Code of Regulations Title 22 and the Code of Federal Regulations Title 42.

**HADM 425 Topics in Health Administration (1-4)**

Lecture and discussion focuses on current topic in health administration bearing on the theory or practice of one aspect of the discipline. Specific content varies from quarter to quarter. May be repeated for additional credit.

**HADM 444 Financial Accounting for Health Care Organizations (4)**

Fundamentals of preparing and understanding financial statements. Emphasizes relationships between the balance sheet, income statement, and cash-flow statement. Generally accepted accounting terminology.

**HADM 445 Health Care-Financial Accounting II (4)**

Continues the study of the fundamentals of preparing and understanding financial statement. Emphasizes relationships between the balance sheet, income statement, and cash-flow statement. Generally accepted accounting terminology.

Prerequisite: HADM 444.

**HADM 449 Health Care-Investment and Portfolio Issues (4)**

Broad picture of financial markets, instruments, and institutions covering the financial concepts and tools that have been used successfully by actual financial institutions and regulators in progressively managed firms. Combines a solid foundation of the theory of pricing of instruments used in financial markets and answers to basic questions regarding the determinants of the growth and nature of financial markets. Investment strategies such as diversification, dollar-cost averaging, and asset allocation examined in relation to the trade-off relationship between risk and reward.

Cross-listing: HADM 549.

**HADM 464 Health Care Finance (4)**

Reimbursement concepts and procedures, including public and private third-party payer; health care budgeting, financial planning techniques, and cost analysis and control.

Prerequisite: HADM 445.

**HADM 498 Health Care Policy and Strategy (4)**

Strategic planning process and tools needed to analyze external factors and internal capabilities as they relate to a particular organization. Development of a vision, mission, goals, objectives, and a control mechanism. Provides insight on how best to implement developed strategy as it relates to the human-resource management, marketing, and finance departments.

**HADM 509 Principles of Administration in Public Health (3)**

Introduces the administration of organizations within the context of the economic, governmental, and financial constraints of the health care-delivery system.

**HADM 510 Public Health Policy (3)**

Analyzes current issues in health policy, including history of the issues, arguments for various positions, and development of frameworks that will facilitate development of positions on the issues.

**HADM 514 Health Care Economic Policy (3)**

Concepts of health care supply and demand, and resource allocation in view of political constraints imposed in market and planned economies. Health-service pricing and policy issues in quantity, quality, and cost of health care in domestic and international environments.

**HADM 516 International Economic Policy (3)**

Focuses on how to effectively reduce dependence on foreign aid, improve access to capital, invest in the people, and bolster rates of currency exchange to improve regional and national economies. Provides overview of international economies along with an assessment of the impact privatization of state companies, democratic initiatives, free-trade, and tax reform have on a country shifting toward a market economy.

**HADM 520 Long-term Care Administration (3)**

Administration of long-term care facilities. Licensing requirements as presented in the California Code of Regulations Title 22 and the Code of Federal Regulations Title 42.

Cross-listing: HADM 420.

**HADM 525 Special Topics in Health Administration (1-4)**

Lecture and discussion on a current topic in health administration. May be repeated for a maximum of 4 units applicable to degree program.

**HADM 528 Organizational Behavior in Health Care (3)**

How human resources are utilized to accomplish organizational goals within health care settings. Development of basic contributions to administrative theory and practice. Focuses on human responses to varied organizational structures.

**HADM 534 Legal and Regulatory Issues in Health Care (3)**

Studies the legal and judicial processes as they relate to health care. Considers criminal and civil law. Emphasizes principles of contract law.

**HADM 542 Managerial Accounting for Health Care Organizations (3)**

Financial data used in decision making. Cost behavior, activity-based costing, cost allocation, product costing and pricing, operational budgets, capital budgeting, and behavioral aspects of control.

Prerequisite: HADM 444 or one course in financial accounting; or consent of instructor.

**HADM 549 Health Care Investment and Portfolio Issues (3)**

Provides overview of financial markets, instruments, and institutions addressing financial concepts and tools that have been used successfully in progressively managed firms. Discusses financial markets that corporations, governmental agencies, and financial institutions use while conducting business. Theory of pricing of instruments, institutional structure, and determinants of growth of financial markets.

Cross-listing: HADM 449.

**HADM 555 Health Care Policy (3)**

Reviews current trends in health care financing; integrated delivery systems; managed care, as well as some focus on health care operations, including billing, coding, pricing, utilization review, case management and systems. Reviews and discusses current events and research relating to the health care-system structure throughout the world and relative to U.S. health care policy.

**HADM 559 Health Care Marketing (3)**

Applies marketing concepts to health care-delivery systems. Emphasizes a strategic market-management approach for developing or evaluating strategies and programs for a health care organization.

**HADM 560 Asset-Protection Planning for Health Professionals (3)**

Introduces estate planning, asset-protection strategies, family limited partnerships (FLPs) and limited-liability companies (LLCs), life insurance, irrevocable life insurance trusts, durable powers of attorney, and revocable inter vivos trusts.

**HADM 564 Health Care Finance (3)**

Public and private health care financial issues, including third-party reimbursement, managed care, and health care-provision schemes. Financial planning for health care institutions, with consideration of capital markets and development of the tools of risk-return analysis, time valuation of money, and project selection.

Prerequisite: Consent of instructor.

**HADM 574 Managing Human Resources in Health Care Organizations (3)**

Purposefully explores how the strategic management of human resources creates value and delivers results in health care. Addresses an emerging human-resource paradigm, in addition to focusing on the traditional perspectives of human resources that center around the personnel function.

**HADM 575 Management-Information Systems in Health Care (3)**

Systems theory and application in the design and operation of integrated management-information systems in a health care setting. Examines hardware, software, and human interfaces.

**HADM 601 Health-Systems Operations Management (3)**

Uses quantitative methods to analyze and improve business processes within an organization. Regression analysis, simulation, decision analysis, capacity planning, inventory models, linear programming, scheduling, and cost-benefit analysis.

**HADM 604 Health-Systems Strategic Planning (3)**

Decision making and planned change through the strategic planning process. Performance review and evaluation of services and resource administration. Strategic plan and contingency plans, mission statement, objectives, courses of action, and resource allocation. Presentation and approval process.

**HADM 605 Health Care Quality Management (3)**

Focuses on quality systems that include developing clear mission or vision, setting measurable strategic quality goals, deploying goals for action by identifying specific activities to be done, and controlling results. Analysis of quality process in health care historically, with emphasis on key strategies for success.

**HADM 610 Synthesis Seminar in Health Administration (1)**

Integrates skills and concepts from previous courses taken in managerial problem solving. May be repeated for additional credit.

**HADM 696 Directed Study/Special Project (1-4)**

Individual arrangements for advanced students to study under the guidance of a program faculty member. May include readings, literature reviews, or other special projects. Minimum of thirty hours required for each unit of credit.

Prerequisite: Consent of instructor responsible for supervision and of program adviser.

**HADM 699 Applied Research (1-4)**

Assignment to private, government, international, or voluntary health agency or other approved organization where practical application of the materials studied on campus is made under the guidance of the department faculty and the organization involved. Research project that includes substantial analysis of data and discussion of results. Written report and oral presentation required.

Prerequisite: Consent of department adviser and of instructors responsible for supervision.

**HADM 724A Residency in Institutional Administration (3)**

Applies in a practical way, under the guidance of a preceptor in an institutional setting, the materials studied on campus. Must be taken during consecutive quarters until required hours have been completed. Limited to M.H.A. degree students.

**HADM 724B Residency in Institutional Administration (6)**

Applies in practical way, under the guidance of a preceptor in an institutional setting, the materials studied on campus. Must be taken during consecutive quarters until required hours have been completed. Limited to M.H.A. degree students.

**HADM 724C Residency in Institutional Administration (9)**

Applies in practical way, under the guidance of a preceptor in an institutional setting, the materials studied on campus. Must be taken during consecutive quarters until required hours have been completed. Limited to M.H.A. degree students.

**HADM 724D Residency in Institutional Administration (12)**

Applies in a practical way, under the guidance of a preceptor in an institutional setting, the materials studied on campus. Must be taken during consecutive quarters until required hours have been completed. Limited to M.H.A. degree students.

**HADM 798B Health Administration Field Practicum (6)**

Part-time, ten-week (20 hours/week) supervised experience in a public health-service organization. Opportunity to integrate skills and concepts from courses taken toward the M.P.H. degree in health administration.

Prerequisite: M.P.H. degree core courses.

**HADM 798D Health Administration Field Practicum (12)**

Full-time, ten-week (40 hours/week) supervised experience in a public health-service organization. Opportunity to integrate skills and concepts from courses taken toward the M.P.H. degree in health administration.

Prerequisite: M.P.H. degree core courses.

**HEALTH CODING SPECIALIST****HLCS 236 Pharmacology (3)**

Introduces pharmacology, including a review of pharmaceuticals used in diagnosis, prevention, and treatment of disease, as commonly encountered in medical records.

Prerequisite: HLCS 239 or equivalent.

**HLCS 238 Essentials of Human Diseases (3)**

Surveys human diseases, including the etiology, pathogenesis, and clinical manifestations of commonly encountered diseases.

Prerequisite or Concurrent: AH CJ 235.

Prerequisite or Corequisite: Human anatomy and physiology.

**HLCS 239 Introduction to Health Records Science (3)**

Introduces health care facilities and the information systems involving health records. In-depth study of health-record content, confidentiality of health care information, and professional ethics.

Prerequisite: AH CJ 235.

**HLCS 241 Medical Terminology (2)**

Prefixes, suffixes, and root words used in the language of medicine. Terms pertaining to pathology and surgery.

**HLCS 242 Coding I (4)**

Principles and conventions of ICD-9-CM coding in diseases and procedures pertaining to infectious disease; diseases of blood, endocrine, respiratory, digestive, genitourinary, skin, and musculoskeletal systems; and mental disorders. Includes one-hour weekly laboratory to enhance coding proficiency.

Prerequisite: HLCS 236 or equivalent.

**HLCS 243 Coding II (4)**

Principles and conventions of ICD-9-CM coding in diseases and procedures pertaining to pregnancy, perinatal conditions, poisonings, injuries, complications of medical and surgical care, the circulatory system, and neoplasms. Includes one-hour weekly laboratory using actual patient record to enhance coding proficiency.

Prerequisite: HLCS 242.

**HLCS 245 Coding III (4)**

Principles of current procedural coding (CPC) at the intermediate level—including: surgical coding for all body systems; medical procedures; anesthesia coding; radiology, pathology, and laboratory coding. Modifier assignment. Also includes two-hour weekly laboratory practice on 3M and Quadramed software.

Prerequisite: HLCS 243.

**HLCS 254 Evaluation and Management Coding for Billing and Reimbursement (3)**

Principles of billing and third-party reimbursement as they relate to physician professional coding and APC assignment for health care institutions. Includes E & M coding conventions and modifiers. Coding for physician-practice settings—including outpatient, inpatient, ER, observation, SNF, and other common settings. Principles of health service billing covered, including billing terminologies, the billing process, and the universal billing forms. Includes one-hour weekly laboratory practice using actual patient records and 3M encoding software to enhance student proficiency.

Prerequisite: HLCS 245.

**HLCS 257 Coding Special Topics (3)**

Coding-system usage by reimbursement agencies, laws governing these processes, and federally supervised coding auditing to assure that the laws of coding are followed. Health care-delivery systems and internal billing and reimbursement in these settings. Requirements of state and federal coding regulatory agencies, ethics of coding, coding quality, and coding compliance. Content varies to accommodate the changing nature of health care-reimbursement processes and laws.

Prerequisite: HLCS 245.

**HLCS 261 Coding Practicum I (3)**

Sixty-six hours of coding laboratory provides a capstone experience for students who have completed all academic course work in coding. Enables students to apply all state and national coding and reimbursement regulations to a variety of inpatient and outpatient records. Provides students the opportunity to improve speed and accuracy prior to entering the job force.

Prerequisite: HLCS 257.

**HLCS 262 Coding Practicum II (3)**

Continues HLCS 261. HLCS 262 includes an additional sixty-six hours of coding laboratory experience under direct supervision of an instructor.

Prerequisite: HLCS 261.

**HEALTH INFORMATION ADMINISTRATION****HLIN 301 Introduction to Health-Records Science (4)**

History of health records, professional ethics, and the administration of health-information management as a profession and as a health care-facility service. Techniques for numbering and filing records. Principles of indexes and registers, and retention of records. Overview of nomenclatures and classification systems. Philosophy of accreditation, certification, and licensure standards for hospitals. Introduces health care-reimbursement systems. In-depth study of patient records, including content and documentation formats. Compares hospital versus ambulatory-care records. Per week: lecture 4 hours, application laboratory 2-4 hours.

**HLIN 303 Basic Coding Principles and Techniques I (3)**

Principles of disease and operation classification (coding) using ICD-9-CM. Basic coding techniques for diagnoses, surgical procedures, symptomatology, and other reasons for health care encounters. Coding techniques by topic: infectious disease, endocrine, nutritional, metabolic, hematologic, nervous system, sense organs, respiratory, genitourinary, skin, and musculoskeletal diseases. Per week: lecture 3 hours, application laboratory 1-2 hours to enhance coding proficiency.

Prerequisite or Concurrent: AHCJ 402.

**HLIN 304 Basic Coding Principles and Techniques II (3)**

Continues review of disease and operation coding with ICD-9-CM. Emphasizes obstetrical and newborn coding, trauma, poisonings, complications of surgical and medical care, diseases and procedures of the circulatory system, and neoplasms. Includes history, principles, and purpose of other recognized systems of nomenclature and classification in health care, with associated use of disease and operation indices. Per week: lecture 3 hours; laboratory 1-2 hours per week, using actual patient records to enhance coding proficiency.

Prerequisite: HLIN 303; AHCJ 403 may be concurrent.

**HLIN 305 Hospital Census and Administrative Statistics (3)**

Basic census formulas and definitions. Development and use of statistics as required by health care facilities. Introduces research statistics. Project: Preparation of census report. Per week: lecture 2 hours, laboratory 1 hour.

**HLIN 306 E & M Coding for Billing and Reimbursement (2)**

Principles of evaluation and management coding and E & M modifier assignment pertaining to physician professional billing and institutional APC assignment. Coding for physician practice settings includes outpatient, inpatient, ER, observation, SNF, and other common practice settings. Principles of health-service billing covered, including billing terminologies, the billing process, and universal billing forms. Per week: lecture 2 hours; laboratory 1 hour, using actual patient records to enhance student proficiency.

Prerequisite: HLIN 303, 304.

**HLIN 325 Pharmacology for Health Information Administration (2)**

Introduces understanding of pharmacology as required for medical-record analysis, audits, and other related studies. Basic definitions, sources of information, classification of drugs, and principles and mechanisms of drug actions. Per week: lecture 2 hours.

**HLIN 361 Health Information Administration Laboratory I (1)**

Supervised experience in health information departments and other areas of health care facilities. Includes applied laboratory assignments for HIM professional courses. Per week: 4-8 hours.

**HLIN 362 Health Information Administration Laboratory II (1)**

Supervised experience in health information departments and other areas of health care facilities. Includes applied laboratory assignments for HIM professional courses. Per week: 4-8 hours.

**HLIN 363 Health Information Administration Laboratory III (1)**

Supervised experience in health information departments and other areas of health care facilities. Includes applied laboratory assignments for HIM professional courses. Per week: 4-8 hours.

**HLIN 395 Professional Practice Experience—Junior Affiliation (2)**

Two-week supervised clinical experience (80 clock hours) at the end of the junior year in a health facility or health-related organization. Written and oral reports of experience, with classroom discussion. Not required of accredited health information technicians.

Prerequisite: Completion of junior-year courses and clinical assignments, or permission of the department chair.

**HLIN 401 Survey of Health Systems Management (4)**

The science of information and its applications to management and patient care in the health care industry. Information-systems concepts, theories, technologies, and models; as well as an in-depth review of information-system creation and adaptation. General systems concepts in health care: analysis, design, implementation, and maintenance. Strategies for the successful management of information systems in an integrated or interfaced environment, with emphasis on health information applications. Future trends in information-system elements presented in conjunction with analysis of these trends in the health-record profession. Major term project includes the development of database specifications, inputs, outputs, implementation schedules, and maintenance plans. Laboratory includes hands-on utilization of health information-application software, with focus on systems analysis and development. Per week: lecture 4 hours, laboratory 1-2 hours.

**HLIN 421 Survey of Health Systems Management—Applied (4)**

Applies information-systems theory, within a health care facility, to the development of effective facility systems in preparation for transition to a paperless patient record. Data management-strategies—including data integrity, quality, and standardization. System security in all environments. Analyzes implementation of health care standards. Evaluates existing vendor software, hardware, and services. Major term project includes research, analysis, and presentation of a contemporary issue in information systems that impacts the practice of information management in health care. Laboratories include field trips to institutions for demonstrations of optical imaging and CPR applications. Per week: lecture 4 hours, laboratory 1-2 hours.

Prerequisite: HLIN 401.

**HLIN 441 Legal Aspects of Health Information Administration (4)**

Basic principles of law related to the health care field. Law-making process. Analysis of legislation. Risk-management aspects of medical documentation. Overview of the court system in the United States. Development of policies and procedures regarding confidentiality. Release of general, psychological, alcohol and drug, and HIV health documentation. Release of information in response to subpoenas, court orders, and search warrants. Analysis of consent forms. Assignment for The Federal Register. The concept of improper disclosure and negligence. Reporting Requirements. Introduction to the contents of the Health Insurance Portability and Accountability Act (HIPAA) and its impact on health care. Field trip to a local legal library. Per week: lecture 4 hours, laboratory 1 hour.

**HLIN 444 Corporate Compliance in Health Care (3)**

Practical application of the guiding principles of corporate compliance in health care organizations. Analyzes standards and policies established by the Center for Medicare and Medicaid Services. Studies in-depth Joint Commission on Accreditation of Health Care Organization, Health Insurance Portability and Accountability Act (HIPAA), qui tam laws, and fiscal intermediaries—emphasizing business ethics and integrity. Includes the process of institutional audits.

**HLIN 445 Coding Seminar (3)**

Advanced coding concepts and comprehensive review of all health care-coding systems; current procedural terminology (CPT) at the beginning and intermediate level. Addresses management issues in reimbursement using DRGs. Reviews federally supervised coding auditing process, including state and federal coding and billing regulations, coding ethics, coding quality, and coding compliance. Per week: lecture 3 hours; laboratory 3 hours, which includes laboratory practice on 3M and Quadramed encoding software.

Prerequisite: HLIN 304 or equivalent.

**HLIN 451 Quality Improvement in Health Care (3)**

Quality improvement methodology. Data retrieval, display, and follow-up for various sectors of health care. Mechanisms for promoting facility-wide participation in achieving optimum patient care, as delineated in medical staff-information management, accreditation, and government standards. Risk management as an integral facet of quality improvement. Relationship to corporate compliance. Per week: Lecture 3 hours.

**HLIN 461 Health Information Administration Laboratory (1-5)**

Supervised experience in health information departments, emphasizing management projects. Previous management experience considered when assigning the course load, the practicum environment, and the projects. To be taken by health information certificate students only. May be repeated for additional credit. Includes laboratory assignments for HIM professional courses. Per week: 4-8 hours per unit.

**HLIN 462 Health Information Administration Laboratory IV (1)**

Supervised experience in health information departments and other areas of health care facilities, with emphasis on the management. Includes applied laboratory assignments for HIM professional courses. Per week: laboratory 8 hours.

**HLIN 463 Health Information Administration Laboratory V (1)**

Supervised experience in health information departments and other areas of health care facilities, with emphasis on management. Includes applied laboratory assignments for HIM professional courses. Per week: laboratory 8 hours.

**HLIN 483 Long-Term and Alternative Delivery Systems in Health Care (4)**

Focuses on aspects of health information management in delivery systems other than acute care, and their interrelationships. Health record content, format, regulatory and accreditation requirements, the role of the HIM professional, data collection/reporting, risk management, utilization management, and quality improvement areas. Long-term care, hospital-based ambulatory care, free-standing ambulatory care, hospice, home-health care, dialysis treatment centers, veterinary medicine, subacute care, mental-health care, substance abuse, dental care, and managed-care organizations. Field trip to a skilled nursing facility. Per week: lecture 4 hours, laboratory 1-2 hours.

**HLIN 484 Current Topics in Health Information Administration (3)**

Topics of current interest in the field of health information administration, including career planning and professionalism. Content varies.

Prerequisite: AHCJ 408; HLIN 494.

**HLIN 494 Health Information Management (5)**

Advanced approach to record systems and technical aspects of health information administration. Topics include: ergonomics and workplace design; transcription management; productivity and organizational productivity; attracting, developing, and maintaining a workforce; innovation and change management; federal labor legislation; ethical and social responsibility in management; disaster preparedness and entrepreneurship. One course unit dedicated to administrative management and related topics, contemporary administrative management strategies, strategic planning, business planning, and employee relations at the administrative level. Organizational, interrelational, and managerial functions and concepts in the health care setting.

Prerequisite: AHCJ 408.

**HLIN 495 Professional Practice Experience—Senior Affiliation (3)**

Directed experience (120 clock hours) at an approved health care or health-related facility. Applies skills and knowledge to management. Written and oral reports of experience, with classroom discussion. International experience may be available. Prerequisite: Completion of the first two quarters of the senior year, or permission of the department chair.

**HLIN 499 Health Information-Administration Independent Study (1-4)**

Student submits a project or paper on a topic of current interest in an area of health information administration. Regular meetings to provide the student with guidance and evaluation. Elected on the basis of need or interest. May be repeated.

**HEALTH PROMOTION****HPRO 414 Personal Health and Fitness (4)**

Applies health principles to the student's physical, mental, spiritual, and social health.

**HPRO 415 Consumer Health (3)**

Studies fitness and health in terms of consumer welfare, marketing, and fraud. Discusses ethics as related to professional behavior.

**HPRO 416 Health through the Life Span (4)**

Examines changes in health status that may occur between birth and old age. Emphasizes tailoring wellness strategies and programs to the needs of various age groups.

**HPRO 417 Biomechanics (4)**

Studies the laws of motion and kinetics of human movement. Discusses basic body movements and how to maximize efficiency. Includes the role of exercise in injury prevention.

Prerequisite: Anatomy and physiology.

**HPRO 418 Introduction to Human Disease (3)**

Introduces acute and chronic disease processes by organ system: musculoskeletal, cardiovascular, nervous, digestive, urogenital, integumentary, respiratory, and endocrine.

**HPRO 421 Administration of Wellness Programs (4)**

Surveys the contribution wellness programs make to corporate, commercial, and community programs. Basic structure, organization, and management of fitness facilities and programs—including budgeting, marketing, and sales. Introduces legal, management, and accounting principles related to program sustainability. Includes program evaluation, cost-benefit analysis, cash-flow management, personnel development, and strategic planning.

**HPRO 424 Health Appraisal and Wellness Testing (4)**

Instruction and guided practice in performing a wide variety of fitness tests. Interprets test data and applies results to individualized exercise prescriptions. Laboratory included.

**HPRO 425 Exercise Science (3)**

The relationship of basic physiological responses to exercise and health, longevity, and athletic performance. Presents anatomy and physiology of exercise, including: cardiorespiratory fitness, muscular strength, muscular endurance, flexibility, and body composition.

Prerequisite: HPRO 424 and anatomy and physiology.

**HPRO 426 Fitness for Special Populations (4)**

Exercise as an adjunct to the treatment of illness and as an aid to the prevention of chronic disease. How to set up safe and effective exercise programs for the disabled, elderly, and other populations of interest.

Prerequisite: HPRO 424.

**HPRO 431 Psychology and Sociology of Sport (3)**

Role, effect, and importance of sport in society. Psychological principles that motivate individuals to initiate and continue sport activities.

**HPRO 432 Injury Prevention (2)**

Use of facility and equipment management to prevent injuries. Emphasizes common injuries, risk factors, training techniques that prevent or minimize injuries; development of facility rules and regulations; and equipment maintenance.

**HPRO 433 Athletic Training (3)**

Organization and management of athletic training programs. Includes instruction about the evaluation and treatment of heat exhaustion and heat stroke; and field injuries such as abrasions, cuts, and concussions. Leads to certification in basic CPR and first aid. Laboratory included.

Prerequisite: HPRO 432 and anatomy and physiology.

**HPRO 436 Programs in Health Promotion (4)**

Provides overview of existing health-promotion programs in corporate, commercial, and community settings. Gives special attention to the development of new programs designed to meet existing needs in a variety of venues.

**HPRO 443 Writing for Publication (2)**

Writing by health professionals for popular, lay, or professional publications. Student selects journal or magazine, writes query letter, prepares abstract and manuscript in final form for submission. Includes preparation of camera-ready art. Not a remedial writing course.

**HPRO 495 Wellness-Programs Laboratory (3)**

Agency-based guided practice designed to acquaint the student with existing and developing wellness programs. May be repeated for three quarters.

Prerequisite: HPRO 421.

**HPRO 498 Senior Project (1 or 3)**

Agency-based project during which the student addresses problems associated with and recommends solutions to a management and/or evaluation issue using problem-solving strategies.

Prerequisite: HPRO 421.

**HPRO 499 Directed Study/Special Project (1-4)**

Individual arrangements for undergraduate, upper-division students to study under the guidance of a program faculty member. May include readings, literature review, or other special projects. Minimum of thirty hours required for each unit of credit. A maximum of 4 units applicable to any undergraduate degree program.

**HPRO 501 Human Anatomy and Physiology I (4)**

Systematic investigation of the form and function of human biological systems. Laboratory included. Limited to doctoral degree students.

**HPRO 502 Human Anatomy and Physiology II (4)**

Continues HPRO 501. Systematically investigates the form and function of human biological systems. Laboratory included. Limited to doctoral degree students.

**HPRO 503 Human Anatomy and Physiology III (4)**

Continues HPRO 502. Systematically investigates the form and function of human biological systems. Laboratory included. Limited to doctoral degree students.

**HPRO 508 Aspects of Health Promotion (2)**

Dynamics of community and individual health. Factors in the promotion of a healthful lifestyle, including cardiovascular enhancement, stress reduction and coping mechanisms, nutritional awareness, weight management, and substance control. Available to nonmajor students.

**HPRO 509 Principles of Health Behavior (3)**

Introduces key health-behavior change theories and psychosocial determinants of health behaviors. Provides an overview of motivation, stress and coping, addiction, culture, and religion as related to health behavior. Laboratory emphasizes communication, leadership, and group-process activities.

**HPRO 514 Values, Culture, and Health (3)**

Specific values related to primary public health problems in today's multicultural society. Studies beliefs, attitudes, and values that affect behavior change. Includes value development and educational strategies that address values. Major project included.

**HPRO 515 Mind-Body Interactions and Health Outcomes (3)**

Studies the effect of the neurological system on physical health, with a focus on psychoneuro-immunology.

Prerequisite: Anatomy and physiology, biochemistry.

**HPRO 519 Pharmacology (3)**

Basic and clinical pharmacology. Emphasizes drugs of concern to health-promotion specialists. Principles of drug addiction, drug receptors and pharmacodynamics, pharmacokinetics, and practical uses for drugs.

Prerequisite: Anatomy and physiology, general chemistry, organic chemistry, biochemistry.

**HPRO 523 Maternal/Child Health: Policy and Programs (3)**

Examines national and global public health policy, initiatives, and programs targeting childbearing women as well as infants and children. Explores selected issues—such as poverty, access to and utilization of health care, violence, and perinatal chemical exposure—within socioeconomic, political, and ethical frameworks. Emphasizes interdisciplinary delivery of services within a public health setting.

**HPRO 524 Adolescent Health (3)**

Studies developmental and health problems unique to the adolescent period of life. Focuses on special needs and public health programs designed to reach adolescents. Gives attention to special problems, such as social adaptation, juvenile delinquency, drug abuse, suicide, adolescent pregnancy.

**HPRO 525 Topics in Health Promotion (1-4)**

Lecture and discussion of a current topic in health promotion bearing on the theory or practice of one aspect of the discipline. Specific content varies from quarter to quarter. May be repeated for additional credit.

**HPRO 526 Lifestyle Diseases and Risk Reduction (3)**

Discusses current lifestyle diseases, including: cardiovascular, metabolic, communicable, and nutritional. Concepts regarding risk factors, screening approaches, and risk reduction, with impact on specific health parameters.

Prerequisite: Anatomy and physiology, or consent of instructor.

**HPRO 527 Obesity and Disordered Eating (3)**

Explores causes and development of obesity, principles of weight management, and relapse prevention. Includes discussion of the causes and treatment of anorexia nervosa and bulimia.

Prerequisite: NUTR 509 or consent of instructor.

**HPRO 528 Controversial Health Practices (2 or 3)**

Epidemiological analysis of quackery in North America. Studies traditional and/or controversial health beliefs and practices, including why people advocate and use them. Topics include: allopathy, aromatherapy, ayurvedic medicine, Chinese medicine, chiropractic, energy medicine, faith healing, food faddism, herbalism, holistic health, homeopathy, iridology, medical dowsing, naturopathy, New Age medicine, pseudopsychologies, radionics, reflexology, spiritism, therapeutic touch, and more. Laboratory included for third unit of credit.

**HPRO 529 Preventive and Therapeutic Interventions in Chronic Disease (3)**

Specific preventive-care techniques dealing with lifestyle and chronic disease in the clinical environment. Multidisciplinary lifestyle interventions in the prevention and treatment of dyslipidemia, diabetes, hypertension, osteoporosis, sleep disorders, and other chronic conditions. Uses case studies and role playing to explore interventions in a variety of clinical scenarios. Limited to doctoral degree students.

Prerequisite: HPRO 526.

**HPRO 531 Pathology of Human Systems I (3)**

Fundamental mechanisms of disease, including degenerative changes and physical and chemical injury. Reviews diseases by organ system: endocrine, biliary, hepatic, respiratory, digestive, urogenital, skeletal, and central nervous. Limited to doctoral degree students.

**HPRO 532 Pathology of Human Systems II (3)**

Introduces micropathological organisms. Surveys tissue changes in infectious diseases. Growth disorders, including: basic genetic problems and neoplasia; cardiovascular, circulatory, and inflammatory systems. Limited to doctoral degree students.

Prerequisite: HPRO 531.

**HPRO 535 Health Education Program Administration (3)**

Analyzes the managerial role of the health education specialist within public and private health organizations. Emphasizes program administration, evaluation, and fiscal management.

**HPRO 536 Program Planning and Evaluation (3)**

Introductory course utilizes the planning cycle in addressing public health problems. Analyzes trends in health care planning. Applies planning cycle to selected topics. Provides overview of evaluation design, methodology, and instrument development for health education programs. Laboratory included.

**HPRO 537A Community Programs Laboratory-A (2)**

Curriculum design and materials development based on learning style, preference, and educational levels of learners identified during needs assessment. Opportunities to collaborate with multiple agencies and health education providers.

Corequisite: HPRO 590.

**HPRO 537B Community Programs Laboratory-B (1)**

Student designs marketing and evaluation plans for community-based health education program. Implements and evaluates programs developed during HPRO 537A.

Prerequisite: HPRO 589, 590.

Prerequisite or Concurrent: HPRO 538.

**HPRO 538 Health Education Program Development (3)**

Uses the Precede/Proceed Planning Model to design, deliver, and evaluate professional health education programs in a variety of settings: school, workplace, medical care, and community. Applies the educational process to setting behavioral and learner objectives, selecting appropriate interventions based on learning theories, and developing learner-centered instructional strategies for specific target populations.

Prerequisite: HPRO 536.

Corequisite: HPRO 509.

**HPRO 539 Policy and Issues in Health Education (3)**

Examines and discusses policy issues, trends, and strategies relating to health education—including but not limited to HIV/AIDS, women's health, injury prevention and control, tobacco and other drug issues, and health issues in ethnically diverse populations. Provides opportunities to develop and improve presentation skills. Project included.

**HPRO 542 Health and Dependency Counseling (3)**

Applies behavior change and addiction theory in a practical way to the counseling process. Gives attention to individuals with multiple, concurrent health issues such as stress, lifestyle problems, and addictions. Laboratory required.

Prerequisite: HPRO 509; HPRO 538 recommended.

**HPRO 543 Writing for Health Professionals (2 or 3)**

Writing by health professionals for popular, lay, or professional publications. Student selects journal or magazine, writes query letter, prepares abstract and manuscript in final form for submission. Includes preparation of camera-ready art. One publishable paper for 2 units; two papers for 3 units. Limited to graduate-degree students.

**HPRO 544 Health Education Evaluation and Measurement (3)**

Student selects and develops health education and psychosocial measurement instruments, determines validity and reliability of evaluation tools, provides overview of data-collection methods and protocols, analyzes and interprets results, and communicates evaluation findings.

**HPRO 548 Community and Domestic Violence (3)**

Provides overview of issues of violence in American society. Explores domestic and community violence as they affect selected population groups. Psychological approaches to etiology and intervention. Explores societal violence, including violence observed in populations such as gangs and high-risk youth. Topics include spousal, elder, and child abuse. Special attention directed toward co-factors, such as alcohol and drug abuse, and their relationship to domestic violence. Laboratory included.

**HPRO 550 Women in Development (3)**

Global epidemiological profile of women in terms of educational patterns, economic productivity, social status, and mortality patterns. Risks to physical and psychosocial health. National and international legal and regulatory issues and programs to promote access to health care, economic productivity, and the health of women.

Cross-listing: GLBH 550.

**HPRO 553 Addiction Theory and Program Development (3)**

Applies addiction process theory in a practical way to program development. Emphasizes alcohol, tobacco, and other drug (ATOD) problems, using case studies and extensive reading as part of a problem-solving approach. The epidemiological, pathological, physiological, psychological, and spiritual bases for prevention and treatment of addictions. Laboratory included.

**HPRO 555 Early-Age Parenthood (3)**

Causes, consequences, and interventions in adolescent pregnancy. Issues of adolescent fertility, including social and economic roots, relationship to cultural change, and individual developmental etiology. Explores consequences of early fertility, focusing primarily on interventions and assessment.

**HPRO 556 High-Risk Infants and Children: Policy and Programs (3)**

Examines development of at-risk infants and children, and evaluates interventions that may modify cognitive and social outcomes. Takes into account medical risk factors, such as preterm birth, prenatal substance exposure, and respiratory distress; as well as social factors, such as gender and socioeconomic status. Critically analyzes the efficacy of early-intervention strategies, such as UNICEF's Baby Friendly Hospital Initiative, child-survival strategies, and the Initiative for the Girl Child; as well as U.S.-based programs such as Head Start. Examines legal, regulatory, and ethical issues.

Prerequisite: Physiology or consent of instructor.

**HPRO 557 Issues and Programs in Family Planning (3)**

Examines options in contraceptive technology and accompanying social, cultural, political, and ethical considerations. Introduces policy issues and programmatic strategies related to development, organization, and management of family-planning programs—including logistics, education, politics, and social issues. Includes fertility issues, prevention and postponement of pregnancy, child spacing, and abortion. Explores information, education, and communication designs.

**HPRO 559 Lactation Management (3)**

Concepts of lactation management. Clinical problem assessment and solutions. Issues in lactation program design and implementation. Includes breast feeding within a developmental framework, and cultural impacts on lactation. Scope of practice and legal issues. Prepares for lactation-management examination.

**HPRO 564 Mental Health and Society (3)**

Interdisciplinary study of mental-health issues affecting society and its basic biologic unit, the family. Study and application of intervening strategies in life crises. Prevention of adjustment reactions evolving beyond the level of a life-process crisis. Laboratory included.

**HPRO 567 Reproductive Health (3)**

Focuses on issues of reproductive health of women and men within the context of public health policy, community-based planning, and ethical decision making. Examines public health interventions at various points of the reproductive life cycle, including pubertal, preconceptional, and menopausal. Explores issues that affect health and fertility—including sexually transmitted diseases; reproductive tract infections; sexual violence, such as rape, incest, and genital mutilation; sexual trafficking; and nutritional and lifestyle issues impacting directly on reproductive health.

**HPRO 573 Exercise Physiology I (3)**

Basic preparation for development and leadership of exercise programs. Includes exercise physiology, training, acute and chronic effects of exercise, simple assessment of fitness, role of exercise in prevention of common health problems, and management of selected risk factors. Discusses endurance, strength, flexibility, and aerobic exercises. Laboratory included.

**HPRO 575 Immune System: Public Health Applications (4)****HPRO 578 Exercise Physiology II (3)**

Physiologic basis of the normal body function during exercise. Emphasizes the training effects of aerobic exercise. Noninvasive laboratory methods of the study of the circulatory and respiratory systems. Laboratory included.

Prerequisite: HPRO 573 and basic physiology.

**HPRO 584 Aging and Health (3)**

Analyzes the physical, psychological, and social factors that influence the health of the aging population. Includes theories of aging, age-related changes, acute and chronic health problems of aging, medication use, and long-term care issues.

**HPRO 586 Introduction to Preventive Care (1)**

Provides overview of preventive care's role within public health. Orientation to doctoral program, with attention to professional portfolio preparation. Limited to doctoral degree students in preventive care.

**HPRO 587 Preventive Care Practice Management (2)**

Provides overview of issues and challenges in the operation of a preventive care practice. Emphasizes billing and reimbursement issues, and legal and ethical responsibilities of the preventive care specialist. Limited to doctoral degree students in preventive care.

**HPRO 588 Health Behavior Theory and Research (4)**

Analyzes in-depth factors contributing to decisions about health behavior. Theory and research relevant to individual, family, organization, and community behavior. Readings from original theorists and researchers on topics related to health behavior. Emphasizes development of critical thinking skills, professional written work, and oral presentation. Application of theory to development of a basic research proposal.

Prerequisite: HPRO 509 or equivalent. Consent of instructor for nondoctoral degree students.

**HPRO 589 Qualitative Research Methods (4)**

Applies qualitative methods to instrument design, sampling, and data collection. Focuses on public health issues, ethics, and theory building. Supervised needs assessment in a selected community.

**HPRO 590 Qualitative Data Analysis (1)**

Student interprets and presents qualitative data.

Prerequisite or Concurrent: HPRO 589.

**HPRO 606 Preventive Care Seminar (2)**

Current issues in the preventive care field, such as ethical limits, health care fraud, practice management, third-party reimbursement. Integrates course work with challenges expected in employment situations. Guest lecturers. Limited to preventive care students.

Prerequisite: Minimum of 90 units of course work toward Dr.P.H. (preventive care) degree.

**HPRO 608 Advanced Seminar in Health Education (2)**

Studies current issues in health promotion and education from the standpoint of historical setting. Explores emerging challenges to professional preparation in health promotion and education, and the place of professional health educators in the practice of public health. Must be taken for a total of 6 units.

Prerequisite: Consent of instructors for nondoctoral degree students.

**HPRO 614 Seminar in Maternal and Child Health Practice (2)**

Analyzes issues, trends, and current practices affecting maternal and child health. Discussion and student participation.

Prerequisite: Limited to Track I maternal-child health practitioners.

**HPRO 685 Preliminary Research Experience (2)**

Experience gained in various aspects of research under the guidance of a faculty member and by participation in an ongoing project. Must be completed prior to beginning dissertation/research project. Limited to doctoral degree students.

**HPRO 692 Health Education Research Consultation (1-4)**

Individual consultation on project design and data collection, analysis, and evaluation.

Prerequisite: Consent of instructor.

**HPRO 694 Research (1-14)**

Independent research on problems currently receiving study in the School of Public Health or in associated institutions; collaboration with researcher/faculty member. Research program arranged with faculty member(s) involved and approved by adviser. Research consultation toward dissertation available. Minimum of thirty hours required for each unit of credit. Written report required. Limited to qualified master's and doctoral degree students.

Prerequisite: Consent of instructor responsible for supervision and of program adviser.

**HPRO 695 Community Practicum (1-3)**

Individual arrangements for selected students to participate in a guided, structured, practical experience in ongoing clinical lifestyle-modifying situations. Minimum of thirty hours required for each unit of credit. A maximum of 4 units applicable to a degree program.

**HPRO 696 Directed Study/Special Project (1-4)**

Individual arrangements for advanced students to study under the guidance of a program faculty member. May include reading, literature review, or other special projects. Minimum of thirty hours required for each unit of credit. A maximum of 4 units applicable to any master's degree program.

Prerequisite: Consent of instructor and of program adviser.

**HPRO 698 Dissertation (1-14)**

Student prepares a manuscript presenting results of the doctoral research study. Limited to doctoral degree candidates.

**HPRO 703 Applied Research Experience (400 hours)**

Training and supervised experience with other health professionals in applied settings. Opportunity to work with individuals, families, and groups in assessing health and building relationships conducive to health-promoting behavior changes. Limited to doctoral (preventive care) degree students.

**HPRO 704A Internship (3)**

Training and supervised experience with other health professionals in applied settings. Opportunity to work with individuals, families, and groups in assessing health and building relationships conducive to health-promoting behavior changes. Limited to doctoral (preventive care) degree students. May be repeated for a total of up to 1,400 clock hours.

**HPRO 704B Internship (6)**

Training and supervised experience with other health professionals in applied settings. Opportunity to work with individuals, families, and groups in assessing health and building relationships conducive to health-promoting behavior changes. Limited to doctoral (preventive care) degree students. May be repeated for a total of up to 1,400 clock hours.

**HPRO 704C Internship (9)**

Training and supervised experience with other health professionals in applied settings. Opportunity to work with individuals, families, and groups in assessing health and building relationships conducive to health-promoting behavior changes. Limited to doctoral (preventive care) degree students. May be repeated for a total of up to 1,400 clock hours.

**HPRO 704D Internship (12)**

Training and supervised experience with other health professionals in applied settings. Opportunity to work with individuals, families, and groups in assessing health and building relationships conducive to health-promoting behavior changes. Limited to doctoral (preventive care) degree students. May be repeated for a total of up to 1,400 clock hours.

**HPRO 797 MIP Residency in Health Education (400 hours)**

Individual guided study in operational field practice under faculty supervision. Limited to graduate students in the HPRO Masters' International Program (M.P.H./MIP) whose projects have been approved by their committees.

**HPRO 798A Field Practicum (3)**

Allows the student an opportunity to demonstrate mastery of basic competencies in health education; strengthens areas of weakness; integrates theoretical constructs with practical applications in the community; and documents an intervention from design through evaluation stages. Student expected to implement a project with supervision from an experienced health educator at the M.P.H. or doctoral degree level. Concurrent attendance in seminars on campus required.

Prerequisite: Course requirements, satisfactory completion of the culminating activity, and consent of instructor(s) responsible for supervision and of program adviser.

**HPRO 798B Field Practicum (6)**

Allows the student an opportunity to demonstrate mastery of basic competencies in health education; strengthens areas of weakness; integrates theoretical constructs with practical applications in the community; and documents an intervention from design through evaluation stages. Student expected to implement a project with supervision from an experienced health educator at the M.P.H. or doctoral degree level. Concurrent attendance in seminars on campus required.

Prerequisite: Course requirements, satisfactory completion of the culminating activity, and consent of instructor(s) responsible for supervision and of program adviser.

**HPRO 798D Field Practicum (12)**

Allows the student an opportunity to demonstrate mastery of basic competencies in health education; strengthens areas of weakness; integrates theoretical constructs with practical applications in the community; and documents an intervention from design through evaluation stages. Student expected to implement a project with supervision from an experienced health educator at the M.P.H. or doctoral degree level. Concurrent attendance in seminars on campus required.

Prerequisite: Course requirements, satisfactory completion of the culminating activity, and consent of instructor(s) responsible for supervision and of program adviser.

**INTEGRATED BIOMEDICAL GRADUATE STUDIES****IBGS 501 Biomedical Communication and Integrity (2)**

Improves students' scientific communication skills as well as increases their awareness of proper ethical conduct in biomedical research. Teaches appropriate techniques for written and oral presentations; as well as ethics and standard practices for record keeping, data analysis, and authorship.

**IBGS 502 Biomedical Information and Statistics (2)**

Introduces students to the basics of statistical analysis in a relevant biomedical setting. Additionally, provides practical information on the use of database systems and software tools for data management and analysis.

**IBGS 503 Biomedical Grant Writing (2)**

Encompasses the process of writing a biomedical research grant from medical problem through final draft of an NIH-style research proposal. With guidance from the instructor, students design and write a research proposal that is ready for submission to the NIH. Familiarizes students with potential funding sources, the process of formulating a fundable research plan, and communicating that plan in an appropriate format.

**IBGS 511 Cellular Mechanisms and Integrated Systems I (10)**

The first quarter of a three-quarter sequence designed to give first-year graduate students a broad, integrated exposure to the molecular and cellular basis of modern human biology. Focuses on the structure and function of biological macromolecules such as proteins, RNA and DNA.

Prerequisite: Admission to one of the basic science graduate programs, including MSTP.

**IBGS 512 Cellular Mechanisms and Integrated Systems II (10)**

The second quarter of a three-quarter sequence designed to give first-year graduate students a broad, integrated exposure to the molecular and cellular basis of modern human biology. Focuses primarily on cellular structure and function.

Prerequisite: IBGS 511.

**IBGS 513 Cellular Mechanisms and Integrated Systems III (10)**

The third quarter of a three-quarter sequence designed to give first-year graduate students a broad, integrated exposure to the molecular and cellular basis of modern human biology. Focuses on how cells and molecules work together to create functioning organs, ending with a treatment of genetic, lifestyle, and microbial contributions to human pathology.

Prerequisite: IBGS 511, 512.

**IBGS 605 Integrative Biology Presentation Seminar (X)**

A seminar course that gives graduate students in the basic sciences an opportunity to practice oral presentations on current research or current literature covering the various aspects of regulatory and integrative biology as applied to molecules, cells, tissues, organs, systems and microbes. Students and faculty participate in a discussion and critical evaluation of the presentation.

**IBGS 607 Integrated Biomedical Graduate Studies Seminar (X)**

Weekly seminars presented by invited speakers in the biomedical sciences disciplines. Students required to register for course every quarter throughout their training.

**INTERNATIONAL DENTIST PROGRAM CLINICS****IDPC 825 General Clinics (1-10)**

The first three quarters of IDP general clinics. Repeated registrations required to fulfill the total units.

**IDPC 835 General Clinics (6-8)**

The fourth and fifth quarters of IDP general clinics. Repeated registrations required to fulfill the total units.

**IDPC 845 General Clinics (8-12)**

The final two quarters (sixth and seventh) of IDP general clinics. Repeated registrations required to fulfill the total units.

## INTERNATIONAL DENTIST PROGRAM GENERAL

**IDPG 750 Review of General Dentistry (14)**

Introduces and reviews dentistry, emphasizing procedures and protocol used in the IDP clinic. Includes reviews of charting, radiology, impressions, dental materials, dental anatomy, periodontics, anesthesia, restorative dentistry, prosthetics, disease control, photography, and oral surgery.

## INTERNATIONAL DENTIST PROGRAM ORAL PATHOLOGY

**IDPO 534 Oral Medicine-Orofacial Pain and TMD (2)**

Differential diagnosis of orofacial and temporomandibular joint pain, including basic guidelines for initial therapy.

**IDPO 535 Oral Pathology and Diagnosis (2)**

Graduate-level survey of pathology. Developmental, infectious, neoplastic, and metabolic disorders studied relative to their epidemiology, etiology, clinical and/or radiographic and microscopic features, and management. Emphasizes differential diagnosis of dental, oral mucosal and soft tissue, jaw, salivary gland, skin, and neck diseases.

**IDPO 826 Oral and Maxillofacial Surgery (1)**

Comprehensive review of oral and maxillofacial surgery for international dental students, including preprosthetic surgery, dental alveolar surgery, implant surgery, oral trauma, maxillofacial trauma, orthognathic surgery, reconstruction, infections.

neoplastic, and metabolic disorders studied relative to their epidemiology, etiology, clinical and/or radiographic and microscopic

**IDPO 826 Oral and Maxillofacial Surgery (1)**

Comprehensive review of oral and maxillofacial surgery for international dental students, including preprosthetic surgery, dental alveolar surgery, implant surgery, oral trauma, maxillofacial trauma, orthognathic surgery, reconstruction, infections.

## INTERNATIONAL DENTIST PROGRAM PROSTHODONTICS

**IDPP 754 Clinical Periodontics (1)**

Overview of clinical periodontics, including scaling, root planing, occlusal adjustment, antimicrobial therapy, phase-contrast microscopy, and a variety of surgical concepts and techniques. Includes anticipated results of therapy, including options of surgical versus nonsurgical approaches.

Prerequisite: IDPG 750.

**IDPP 755 Pediatric Dentistry Clinic—IDP (.5 or 1)**

Dental care of children in their primary, fixed, and young permanent dentition. Etiology of disease, prevention of oral disease, growth-and-development analysis, treatment planning, restorative procedures, and arch length control.

**IDPP 759 Special Topics in Periodontal Therapy (2)**

Variation in periodontal diseases related to differing host conditions, including age, hormones, habits, drugs, genetics, nutrition, stress, systemic disease, iatrogenic factors, trauma from occlusion, and endodontic interrelationships. Overview of surgical periodontal procedures and their roles, limitations, and effects. Surgery outcomes compared with short- and long-range effects of conservative therapy (with and without maintenance care, including effect of adjunctive chemical plaque control). Role of dental health care providers in periodontal therapy. Special problems in periodontal care.

## INTERNATIONAL DENTIST PROGRAM RESEARCH

**IDPR 845 Scientific Investigation and Research Design (1 or 3)**

Scientific methods in dental research. Includes critical evaluation of published articles, research design, evaluation of results, design of research reports, extensive reviews of various topics, experience in data collection and drawing conclusions, and library utilization.

**IDPR 846 Restorative Dentistry I—IDP (2)**

Dental technology and laboratory communications; diagnosis and treatment planning; fixed and removable prosthodontics; implantology; soft tissue management.

**IDPR 847 Restorative Dentistry II (2)**

Topics in restorative dentistry, including dental material sciences, operative dentistry, fixed prosthodontics, removable prosthodontics, and geriatric dentistry.

**IDPR 848 Restorative Dentistry III (2)**

Topics in restorative dentistry, including tooth-colored restorations, esthetic dentistry, cariology, occlusion, and practice management.

## INTERNATIONAL DENTIST PROGRAM TECHNICAL PROCEDURES

**IDPT 754 Advanced Topics in Dentistry (2)**

Advanced topics in anesthesiology, dental emergency, pediatric dentistry, radiology, oncology, jurisprudence, and other advanced topics in dentistry.

## IMPLANT DENTISTRY

**IMPD 505 Patient Presentation Seminar (1)**

Presents implant-patient treatment, discusses alternate methods of rehabilitation and related literature. Repeated registrations required to fulfill the total units.

**IMPD 533 Applied Radiology for Implant Dentistry (1.5)**

Gives the postdoctoral student fundamental aspects of radiology imaging as part of the diagnosis and treatment.

**IMPD 561 Dental Bioengineering (2)**

Studies structures and properties of dental implant materials and implant prosthodontic superstructures.

**IMPD 585 Implant Prosthodontics (2)**

Gives the graduate student in implant dentistry in-depth didactic and clinical instruction in techniques and procedures related to the rehabilitation of patients with prosthodontic devices supported by dental implants. Advanced clinical and laboratory procedures, emphasizing implant restorations for completely and partially edentulous patients. Emphasizes attachments and superstructure design. Repeated registrations required to fulfill the total units.

**IMPD 601 Literature Review in Implant Dentistry (1-2)**

Reviews historical and/or fundamental implant dentistry literature. Repeated registrations required to fulfill the total units.

**IMPD 604 Current Literature Review in Implant Dentistry (2)**

Gives the postdoctoral students in implant dentistry a deeper understanding of the research and literature currently available. Repeated registrations required to fulfill the total units.

**IMPD 611 Introduction to Implant Dentistry (2)**

Overview of the clinical science of implant dentistry, including etiology, therapy, clinical methods, and record keeping.

**IMPD 612 Advanced Implant Dentistry (2)**

Provides the resident with the knowledge and techniques of advanced prosthodontic and implant procedures—notably those involved in sinus-graft surgery, surgical repairs of implant defects, and the principles involved in immediate loading of implants.

**IMPD 625 Clinical Practice in Implant Dentistry (44 to 300 hours)**

Experience in clinical diagnosis and treatment of patients who may benefit from implant dentistry therapy. Repeated registrations required to fulfill the total clock hours.

**IMPD 626 Clinical Practice in Periodontics in Implant Dentistry (1-10)**

Clinical experience in the diagnosis and treatment of periodontal diseases. Repeated registrations required to fulfill the total clock hours.

**IMPD 627 Clinical Practice of Prosthodontics in Implant Dentistry (44 to 440 hours)**

Advanced clinical practice in the treatment of individuals with fixed, removable, maxillofacial and implant prostheses. Repeat registration required to fulfill total clock hours.

**IMPD 631 Oral Implant Surgery (1)**

Instruction in basic and advanced implant surgery principles. Repeated registrations required to fulfill the total units.

**IMPD 634 Diagnosis and Treatment Planning in Implant Dentistry (1)**

Didactic and clinical aspects of diagnosis and treatment planning for patients with complex dental problems. Repeated registrations required to fulfill the total units.

**IMPD 637 Peri-Implant Histopathology (1)**

Gives the postdoctoral student in implant dentistry a better understanding of the implant interface and biological changes that take place in the tissues surrounding dental implants following their placement.

**IMPD 654 Practice Teaching in Implant Dentistry (1-3)**

Teaching experience in implant prosthodontics and implant surgery.

**IMPD 697A Research (1)**

Student identifies a research project, prepares a proposal, and obtains approval for the protocol.

**IMPD 697B Research (1)**

Conducting the actual research project, including the data collection and evaluation.

**IMPD 698 Thesis (1-8)****MEDICINE CONJOINT****MDCJ 501 Introduction to Medicine (2)**

Taught by the Department of Medicine and the Faculty of Religion for students in the Early-Decision Program. Helps students develop the writing and reading skills essential to perform medical duties, and helps students develop the whole-person care focus necessary for success as physicians.

**MDCJ 502 Introduction to Medicine II (2)**

Taught by the Departments of Biochemistry, Medicine, Pathology (Division of Human Anatomy), and Surgery; and the Faculty of Religion for students in the Early-Decision Program. Helps students develop skills in problem-based learning and standardized patient assessment, as well as whole-person care, which are skills necessary for success as a physician.

**MDCJ 511 Neuroscience SM (7)****MDCJ 514 Immunology (2.5)**

Medical immunology, emphasizing the cellular, humoral, and molecular components of the immune system. Immune responses associated with host defense and disease processes. Immunologic techniques related to the practice of other basic and clinical sciences.

Cross-listing: MDCJ 543; MICR 520.

**MDCJ 515 Medical Biochemistry, Molecular Biology, and Genetics (1)**

Foundation courses [515, 516, 517, 518 sequence]—in conjunction with MDCJ 553, 556—for study of normal biology in the first-year curriculum. Comprehensive sequence in biochemistry and molecular biology establishes the biochemical basis for cell structure, emphasizes an integrated approach to the understanding of cellular metabolism, provides a biochemical/genetic/molecular basis for understanding disease, and examines the mechanisms for genetic information flow in prokaryotic and eukaryotic cells.

**MDCJ 516 Medical Biochemistry, Molecular Biology, and Genetics (2)**

Foundation courses [535, 536, 537 sequence]—in conjunction with MDCJ 553, 556—for study of normal biology in the first-year curriculum. Comprehensive sequence in biochemistry and molecular biology establishes the biochemical basis for cell structure, emphasizes an integrated approach to the understanding of cellular metabolism, provides a biochemical/genetic/molecular basis for understanding disease, and examines the mechanisms for genetic information flow in prokaryotic and eukaryotic cells.

**MDCJ 517 Medical Biochemistry, Molecular Biology, and Genetics (1)**

Foundation courses [515, 516, 517 sequence]—in conjunction with MDCJ 553, 556—for study of normal biology in the first-year curriculum. Comprehensive sequence in biochemistry and molecular biology establishes the biochemical basis for cell structure, emphasizes an integrated approach to the understanding of cellular metabolism, provides a biochemical/genetic/molecular basis for understanding disease, and examines the mechanisms for genetic information flow in prokaryotic and eukaryotic cells.

**MDCJ 518 Medical Biochemistry, Molecular Biology, and Genetics (2)**

Foundation courses [515, 516, 517, 518 sequence]—in conjunction with MDCJ 553-556—for study of normal biology in the first-year curriculum. Comprehensive sequence in biochemistry and molecular biology establishes the biochemical basis for cell structure, emphasizes an integrated approach to the understanding of cellular metabolism, provides a biochemical/genetic/molecular basis for understanding disease, and examines the mechanisms for genetic information flow in prokaryotic and eukaryotic cells.

**MDCJ 524 Pathophysiology and Applied Physical Diagnosis (1 or 4)**

Two parallel components that bridge the preclinical curriculum to the clinical curriculum: (1) Pathophysiology lectures build upon the courses in organ pathology and physiology, introduce students to the pathophysiologic principles underlying mechanisms of disease, and emphasize the application of these principles to a variety of new situations that require problem solving and synthesis in a clinical context. (2) Practical experience develops and applies skills that build on the first-year sequence in physical diagnosis.

Prerequisite: MDCJ 561, 562, 563, 564.

**MDCJ 525 Pathophysiology and Applied Physical Diagnosis (3)**

Two parallel components that bridge the preclinical curriculum to the clinical curriculum: (1) Pathophysiology lectures build upon the courses in organ pathology and physiology, introduce students to the pathophysiologic principles underlying mechanisms of disease, and emphasize the application of these principles to a variety of new situations that require problem solving and synthesis in a clinical context. (2) Practical experience develops and applies skills that build on the first-year sequence in physical diagnosis.

Prerequisite: MDCJ 561, 562, 563, 564.

**MDCJ 526 Pathophysiology and Applied Physical Diagnosis (2)**

Two parallel components that bridge the preclinical curriculum to the clinical curriculum: (1) Pathophysiology lectures build upon the courses in organ pathology and physiology, introduce students to the pathophysiologic principles underlying mechanisms of disease, and emphasize the application of these principles to a variety of new situations that require problem solving and synthesis in a clinical context. (2) Practical experience develops and applies skills that build on the first-year sequence in physical diagnosis.

Prerequisite: MDCJ 561, 562, 563, 564.

**MDCJ 535, 536, 537 Medical Biochemistry, Molecular Biology, and Genetics (1, 2, 1, 2)****MDCJ 543 Medical Neuroscience (1)**

Fundamentals of neuroanatomy and neurophysiology integrated in a clinical context with principles of the human nervous system.

**MDCJ 544 Medical Neuroscience (4)**

Fundamentals of neuroanatomy and neurophysiology integrated in a clinical context with principles of the human nervous system.

**MDCJ 553 Cell Structure and Function (1)**

Fully integrated, comprehensive course that develops knowledge and skills relating normal microscopic and submicroscopic anatomy to cellular biology, cellular physiology, and immunology. General pathology, the common thread for the course, familiarizes students with morphologic and functional changes affecting cells exposed to a variety of normal and, to a lesser extent, abnormal environments.

**MDCJ 554 Cell Structure and Function (3)**

Fully integrated, comprehensive course that develops knowledge and skills relating normal microscopic and submicroscopic anatomy to cellular biology, cellular physiology, and immunology. General pathology, the common thread for the course, familiarizes students with morphologic and functional changes affecting cells exposed to a variety of normal and, to a lesser extent, abnormal environments.

**MDCJ 555 Cell Structure and Function (2)**

Fully integrated, comprehensive course that develops knowledge and skills relating normal microscopic and submicroscopic anatomy to cellular biology, cellular physiology, and immunology. General pathology, the common thread for the course, familiarizes students with morphologic and functional changes affecting cells exposed to a variety of normal and, to a lesser extent, abnormal environments.

**MDCJ 556 Cell Structure and Function (1)**

Fully integrated, comprehensive course that develops knowledge and skills relating normal microscopic and submicroscopic anatomy to cellular biology, cellular physiology, and immunology. General pathology, the common thread for the course, familiarizes students with morphologic and functional changes affecting cells exposed to a variety of normal, and to a lesser extent, abnormal environments.

**MDCJ 561, 562, 563, 564 Physical Diagnosis and Interviewing (1, 2, 3, 1)**

Provides a core foundation of knowledge, skills, values, and attitudes necessary for effective physician-patient communication and physical examination.

**MDCJ 566 Evidence-Based Medicine and Information Sciences (1)**

Introduces freshman medical students to basic concepts of evidence-based medicine and helps facilitate lifelong self-directed learning. Describes the challenges of the information needs of the twenty-first century physician. Teaches a process by which students can efficiently and effectively acquire the answers to their clinical questions and apply them to the care of the patients they see. Teaching methodologies include large-group didactic presentations, small-group discussions, and self-study online exercises. Sets the foundation for a lifelong learning process in which all physicians will engage.

**MDCJ 567 Evidence-Based Medicine and Information Sciences (2)**

Introduces freshman medical students to basic concepts of evidence-based medicine and helps facilitate lifelong self-directed learning. Describes the challenges of the information needs of the twenty-first century physician. Teaches a process by which students can efficiently and effectively acquire the answers to their clinical questions and apply them to the care of the patients they see. Teaching methodologies include large-group didactic presentations, small-group discussions, and self-study online exercises. Sets the foundation for a lifelong learning process in which all physicians will engage.

**MDCJ 568 Evidence-Based Medicine and Information Sciences (1)****MDCJ 569 Evidence-Based Medicine and Information Sciences (1)****MDCJ 599 Medicine Conjoint Directed Study (6)****MDCJ 701 Orientation to Clinical Medicine (120 hours)**

Builds on the second-year course MDCJ 525, 526. Diagnosis to provide the knowledge, skills, values, and attitudes necessary to facilitate a smooth transition from the preclinical to the clinical curriculum.

**MDCJ 821 Ambulatory and Community Medicine (60 to 240 hours)**

Interdisciplinary, four-week rotation broadens exposure to community-based health care done mainly in primary-care clinics. Clinical experience in areas not otherwise covered in the curriculum: dermatology and STDs, clinical preventive medicine, and integrative/whole-person care in ambulatory and managed-care settings.

**MDCJ 891 Whole-Person Care (240)**

Student works with Loma Linda Family Practice faculty to provide both inpatient and outpatient care.

**MEDICINE****MEDN 599 Medicine Directed Study (1.5–18)****MEDN 701 Medicine Clerkship (1.5–18)**

The internal medicine junior rotation is a twelve-week rotation focused on developing the knowledge, skills and attitudes necessary to care for adult patients. Students have two four-week blocks of inpatient experience and four weeks of exposure in the outpatient setting. At midrotation each student meets with the clerkships director to discuss the student's progress at that time, including a formative session with a standardized patient observed by a faculty member who will give feedback on clinical skills.

**MEDN 821 Medicine Clerkship (60 to 240 hours)**

Medicine subinterns work under the direct supervision of second- and third-year medicine residents. In cooperation with the first-year medicine resident, each subintern follows assigned patients from admission to discharge (seven to eight patients on wards; four or five patients on intensive care units). The attending physician is ultimately responsible to assure appropriate patient care and authenticate the subintern's work.

**MEDN 822 Senior Intensive Care (60 or 120 hours)**

MICU subinterns will work under the direct supervision of the second- and third-year medicine residents on the service. The attending physician will have the ultimate responsibility to assure appropriate patient care. The supervising resident assigns newly admitted patients to the subintern who will be responsible for performing and recording a complete history and physical examination on the patient's chart in a timely manner. The attending physician will authenticate the subintern's work.

Prerequisite: MEDN 701.

**MEDN 891 Medicine Elective (60 to 720 hours)****MARRIAGE AND FAMILY****MFAM 416 Theories of Personality (3)**

Covers genetic and environmental factors, such as personality detriments, theories of personality, personality development, structure and assessment of personality, personality dynamics, and the complex process in implementation.

**MFAM 417 Abnormal Behavior (3)**

Introduces the psychology of behavioral disorders, with an emphasis on etiology and symptomatology and an overview of treatment modalities.

Prerequisite: A course in personality theory or consent of instructor.

**MFAM 501 Research Tools and Methodology I (3)**

Current social research methods, practice in the use of techniques, consideration of the philosophy of the scientific method, and familiarization with MFAM test instruments.

Prerequisite: An introductory course in statistics as an undergraduate research-methods course.

**MFAM 502 Research Tools and Methodology II (3)**

Qualitative methodology. Prepares students to undertake research projects using the intensive interview method of qualitative research. Explores practical and epistemological issues and problems in qualitative research in a workshop format.

Prerequisite: MFAM 501.

**MFAM 515 Crisis-Intervention Counseling (3)**

Experiential course that presents theory, techniques, and practices of crisis intervention, with special attention to the development of the basic communication skills of counseling. Areas included that are intended to contribute to the development of a professional attitude and identity are: confidentiality, interprofessional cooperation, professional socialization, and organization. Presents therapeutic tapes covering topics such as death and dying, incest, spousal abuse, and rape. Laboratory required.

**MFAM 516 Play Therapy (2)**

Experiential course that teaches practitioners and graduate students to apply play-therapy techniques in dealing with childhood problems such as molestation, physical abuse, depression, trauma, and family conflict.

**MFAM 524 Psychopharmacology and Medical Issues (3)**

Introduces common physical and medical issues that relate to the practice of marriage and family therapy. Students learn a biopsychosocial spiritual model to assess and intervene—with emphasis given to psychopharmacology, neuroanatomy, the mind-body relationship, and research relative to the field of medical family therapy.

**MFAM 525 Therapeutic Group (2)**

A process group that provides opportunities for self-exploration, with particular emphasis on personal concerns likely to influence one's ability to function as a professional. Students learn more about their style of relating to others. Helps trainees identify potential blocks to their effectiveness as counselors and provides the tools to develop strengths.

**MFAM 526 Theory and Practice of Group Counseling (3)**

Critically evaluates ten major models of group counseling, as well as overviews stages in the development of a group. Uses didactic and experiential methods to apply diverse theories and techniques to actual group sessions. Theories explored include psychodynamic approaches, existential/humanistic and relationship-oriented approaches, psychodrama, and action-oriented approaches.

**MFAM 527 Training/Supervision Workshop in Group Counseling (3)**

Opportunities for supervised practice in co-facilitation of the classroom group. Students function in the role of group members and also co-lead the group several times during the quarter. An experiential course that studies group process in action and teaches ways to apply diverse techniques to an ongoing group.

**MFAM 534 Clinical Training (50 to 100 hours)**

Supervised clinical counseling of individuals, couples, families, and children. At least one hour of individual supervision per week and two hours of case-presentation seminar per week. Continuous registration for this portion of the clinical training until completion of at least 200 clock hours.

**MFAM 535 Case Presentation and Professional Studies (4)**

Formally presents ongoing individual, marital, and family cases by clinical trainees. Taping, video playbacks, and verbatim reports with faculty and clinical peers. Explores the interface between MFTs and other professionals. Examines licensure procedures; applying to professional organizations (AAMFT, etc.). Develops professional attitude and identity. Limited to students in clinical training.

**MFAM 536 Case-Presentation Seminar (2)**

Formally presents ongoing individual, marital, and family cases by clinical trainees. Taping, video playbacks, and verbatim reports with faculty and clinical peers. Examines and trains in applied psychotherapeutic techniques, assessment, diagnosis, prognosis, and treatment of premarital, couple, family, and child relationships; dysfunctional and functional aspects examined, including health promotion and illness prevention. Limited to students in clinical training.

**MFAM 537 Case-Presentation Seminar (2)**

Formally presents ongoing individual, marital, and family cases by clinical trainees. Taping, video playbacks, and verbatim reports with faculty and clinical peers. Examines and trains in applied psychotherapeutic techniques, assessment, diagnosis, prognosis, and treatment of premarital, couple, family, and child relationships; examines dysfunctional and functional aspects, including health promotion and illness prevention. Limited to students in clinical training.

**MFAM 538 Theory and Practice of Conflict Resolution (2)**

Overviews the field of conflict management and resolution. Basic theories and methodologies in the field, with opportunity to develop basic clinical mediation skills.

**MFAM 539 Solution-Focused Family Therapy (2)**

Provides an in-depth understanding of solution-focused family therapy and practice. Focuses on the work of de Shazer and Berg, along with the foundational constructs of MRI.

**MFAM 544 Family and Divorce Mediation (4)**

Comprehensive coverage of concepts, methods, and skills in family and divorce mediation. Includes the relational and legal aspects of property division and child custody. Substantial experience in role plays.

**MFAM 545 Gender Perspectives (2)**

Explores the identities, roles, and relationships of women and men in light of social, cultural, and historical perspectives. Explores implications for the family therapist.

**MFAM 546 Brain and Behavior (3)**

Provides general background information in neuroanatomy, neurochemistry, neurophysiology, and psychopharmacology; and expands the student's understanding of basic physiological mechanisms and how they influence behavior. Studies physiological mechanisms, including: nerve cells and neural transmission, the central and peripheral nervous systems, the peripheral neuromuscular system, the sensory systems, and the endocrine system. Examines behaviors influenced by these systems including: addictions, emotional behavior, human communication, ingestive behavior, learning and memory, mental disorders, movement, perceptual processes, reproductive behavior, and sleep. Introduces special topics, including: neuro-psychology and neuropsychological assessment, the effects of traumatic brain injury on cognition and behavior, and therapy with brain-injured clients. Gives student general information on methods and strategies of research in the field of brain and behavior.

**MFAM 547 Social Ecology of Individual and Family Development (3)**

Studies human individual development and its relationship to the family life cycle from birth through aging and death of family members. Discusses biological, psychological, social, and spiritual development in the context of family dynamics involving traditional two-parent families, alternative partnerships, single parents, blended families, and intergenerational communities.

**MFAM 548 Men and Families (2)**

Surveys the experience of contemporary men in American and global contexts. Examines the reciprocal influences of society, men, and their families in the contexts of close relationships—including friendships, marriages, parenting, and therapeutic relationships.

**MFAM 549 Christian Counseling and Family Therapy (2)**

Integrates Christian concepts and family therapy in a conceptual and clinical context.

**MFAM 551 Family Therapy: Theory and Practice I (3)**

Overviews the major theories in marriage and family therapy. Explores systems theory concepts in light of the major models of family therapy.

**MFAM 552 Couples Therapy: Theory and Practice (3)**

Overviews the marital therapy literature, with a focus on clinical theory and techniques.

**MFAM 553 Family Systems Theory (3)**

Reviews Bowen theory of family systems. Introduction to family psychotherapy as an outgrowth of the theory. Students examine their own families of origin.

**MFAM 555 Narrative Family Therapy (2)**

Narrative therapy and social construction as important developments in social theory and in clinical practice. Uses narratives and the role they play in a person's life through language and meaning systems. Examines issues of power, collaboration, culture, community, and re-authoring narratives, particularly in the works of Michael White and David Epston.

**MFAM 556 Psychopathology and Diagnostic Procedures I (3)**

Explores the history and development of psychopathology and how it relates to current clinical practice in general and marriage and family therapy in particular. Utilizes the multiaxial classifications of the DSM-IV as a practical basis for diagnostics.

Prerequisite: A course in abnormal psychology.

**MFAM 557 Object Relations Family Therapy (2)**

Seminar format that acquaints students in marriage and family therapy with the basics of object-relations theory. Emphasizes the unique properties of object-relations systems theory in bridging intrapsychic and environmental forces.

**MFAM 558 Advanced Human Growth and Development (3)****MFAM 559 Cognitive Behavioral Couples Therapy (2 or 3)**

Experiential course that surveys major cognitive behavioral family therapy therapists, and integrates treatment techniques into practice in laboratory.

**MFAM 564 Family Therapy: Theory and Practice II (3)**

Comprehensively surveys more recent therapy models, such as narrative, collaborative language systems, and solution-focused theory. Using these models, student learns to assess and consider diagnosis; as well as learn the role of language, meaning, and process in relationships. Class examines the theoretical strengths and limitations of these models in relation to culturally diverse populations.

Prerequisite: MFAM 551 or consent of instructor.

**MFAM 565 Advanced Bowen Theory and Practice (2)**

Provides advanced knowledge and training in Bowen theory as it applies to couples and family therapy.

Prerequisite: MFAM 553.

**MFAM 566 Psychopathology and Diagnostic Procedures II (2)**

Focuses on the etiology of marital dysfunction, specifically from a dual function of individual and systems psychopathology.

Prerequisite: MFAM 556.

**MFAM 568 Group Process, Theory, and Procedures (3)**

Surveys major theoretical approaches surveyed include individual theories, marital groups, network, and family therapy groups. Group laboratory experience provided wherein students apply theory to practice and develop group-leadership skills.

**MFAM 569 Advanced Group Therapy (2)**

Provides advanced knowledge and training in leading structured groups. Students design a structured group treatment based on a therapeutic, psychoeducational and/or educational model—to be used in a community setting.

Prerequisite: MFAM 568.

**MFAM 574 Family Therapy: Theory and Practice (4)**

Covers the basic epistemological principles defining family-systems practice; major family-therapy models; and unique values, ethics, and professional issues associated with systems/relational practice. Course may be used by MFT majors for elective credit.

**MFAM 584 Treatment of Child and Adolescent Problems (3)**

Psychodynamics involved in child and adolescent problems with respect to the family relationship. Demonstrates a variety of counseling approaches to the treatment of children and adolescents, with emphasis on diverse settings (e.g., education, hospital, and agency).

**MFAM 585 Internship in Family Mediation (1-4)**

Internship includes 50 hours of observation in the court room, 100 client-contact hours of mediation experience, twenty cases of mediation experience, and six mediation case studies.

**MFAM 605 Gestalt Family Therapy (2)**

Principles of Gestalt psychology and therapy; the relationship between the individual and the physical, emotional, societal, and spiritual environment. Group experience that permits the spiritual and affective aspects of Gestalt therapy to be expressed and integrated with systems theory.

**MFAM 606 Emotionally Focused Couples Therapy (2)**

Students examine the theory of emotionally focused therapy and concentrate on the work and research of Susan Johnson.

Prerequisite: MFAM 551 or consent of instructor.

**MFAM 614 Law and Ethics (3)**

Laws pertaining to the family: child welfare, separation, divorce, and financial aspects of family maintenance.

Case management, referral procedures, professional and client interaction, ethical practices (AAMFT), ethical relations with other professions, legal responsibilities, liabilities, and confidentiality. Current legal patterns and trends in the mental health profession. Exploration between the practitioner's sense of self and human values and his/her professional behavior and ethics.

**MFAM 615 Reflective Practice (2)**

Develops narrative-therapy ideas and emphasizes a reflective process in both therapy and research. Focuses on developing the student's skills as an active agent in therapy and research.

Prerequisite: MFAM 555.

**MFAM 616 Cognitive Assessment (4)**

Reviews major psychometric instruments in the area of intelligence, verbal and nonverbal skills, academic, motoric, and adaptive behavior skills. Supervised administration, scoring, and report preparation.

Prerequisite: Introductory statistics course, recommended (tests and measurements).

**MFAM 617 Personality and Behavior Testing (4)**

Introduces administration and interpretation of standard nonprojective instruments and personality/behavior inventories that function primarily in the assessment of children and adolescents. Offers some application to adults but focuses primarily on testing minors. In addition to scoring and evaluation of test protocols, facilitates the writing of an integrated clinical report based on instruments designed to measure personality or behavioral components of the person's functioning. Initial practice of all the instruments considered part of the laboratory component of the course. Students expected to have field activity where, at a clinical site, they complete a test protocol on identified subjects. Requires further supervision in the administration, scoring, and interpretation of these instruments for chartering as a psychologist in Alberta. Course meets the instructional requirements for personality and behavioral assessment of individuals.

Prerequisite: Provisionally chartered as a psychologist or advanced psychopathology, tests and measurements on at least an undergraduate level, personality theories.

**MFAM 624 Individual and Systems Assessment (3)**

Applies psychological testing methods in the diagnostic assessment of individual, family, and group behavioral dynamics as encountered in marriage and family counseling. Observations and/or laboratory experience.

**MFAM 634 Advanced Clinical Training (50 to 100 hours)**

Supervised clinical counseling of individuals, couples, families, and children. At least one hour of individual supervision per week and two hours of case presentation seminar per week. Continuous registration for this portion of the clinical training until completion of a total of at least 300 clock hours.

**MFAM 634A Advanced Clinical Training (50 hours)**

Supervised clinical counseling of individuals, couples, families, and children. At least one hour of individual supervision per week and two hours of case-presentation seminar per week. Continuous registration for this portion of the clinical training until completion of at least 300 clock hours.

**MFAM 634B Advanced Clinical Training (100 hours)**

Supervised clinical counseling of individuals, couples, families, and children. At least one hour of individual supervision per week and two hours of case-presentation seminar per week. Continuous registration for this portion of the clinical training until completion of at least 300 clock hours.

**MFAM 634C Advanced Clinical Training (200 hours)**

Supervised clinical counseling of individuals, couples, families, and children. At least one hour of individual supervision per week and two hours of case-presentation seminar per week. Continuous registration for this portion of the clinical training until completion of at least 300 clock hours.

**MFAM 635 Case-Presentation Seminar (2)**

Clinical trainers formally present ongoing individual, marital, and family cases. Taping, video playbacks, and verbatim reports with faculty and clinical peers. Limited to students enrolled in clinical training.

**MFAM 636 Case-Presentation Seminar (2)**

Clinical trainers formally present ongoing individual, marital, and family cases. Taping, video playbacks, and verbatim reports with faculty and clinical peers. Limited to students enrolled in clinical training.

**MFAM 637 Case-Presentation Seminar (2)**

Clinical trainers formally present ongoing individual, marital, and family cases. Taping, video playbacks, and verbatim reports with faculty and clinical peers. Limited to students enrolled in clinical training.

**MFAM 638 Family Therapy and Chemical Abuse (2 or 3)**

Current theories and treatment of chemical dependencies. Emphasizes family therapy, assessment techniques, understanding of how chemicals affect the mental and biological systems, issues of dual diagnosis.

**MFAM 639 Interdisciplinary Professional Seminar (1)**

Designed from different mental health disciplines to orient the student to the arena of professional issues regarding family counseling.

**MFAM 644 Child Abuse and Family Violence (3)**

Definition and incidence of physical and emotional abuse, neglect, sexual molestation, dynamics of family violence; offender and nonoffender characteristics. Treatment of children, adolescents, the family, and adults abused as children. Treatment modalities, including individual, group, and family therapy. Ethical and legal issues, referral sources, multidisciplinary approach to child abuse, assessment, interview techniques, and confidentiality. Minimum of thirty contact hours.

**MFAM 645 Advanced Substance-Abuse Treatment Strategies (3)**

Presents information about addictions treatment for adults, adolescents, families, groups, and those with multiple diagnoses.

Prerequisite: MFAM 638.

**MFAM 651 AAMFT-Approved Supervisor Training (3)**

Postgraduate: The didactic component requirement for AAMFT-approved supervisor designation.

**MFAM 658 Reality Theory and Family Therapy (2)**

A clinically oriented seminar where students learn the theory of reality therapy and how to integrate it into the practice of marriage and family therapy. Emphasizes practice and therapeutic skills in using reality therapy with clients.

**MFAM 659 Current Trends (2)**

Acquaints students with the field of health care management by analyzing the important areas with which the manager should be concerned. In addition to the basic functions of health care manager—planning, organizing, directing, and controlling—emphasizes growing concerns regarding external environmental changes, rising health care costs, emergence of new types of health care providers, medical and legal issues, and quality assurance.

**MFAM 664 Experiential Family Therapy (2)**

Examines various experiential family theories. Laboratory experience included.

**MFAM 665 Structural Family Therapy (2)**

Enhances observational, conceptual, planning, and intervention skills. Increases ability to understand verbal and nonverbal communication. Broadens understanding of structural family therapy.

**MFAM 670 Seminar in Sex Therapy (2)**

Discusses major male and female sexual dysfunctions. Therapeutic processes of treatment.

Prerequisite: MFAM 669.

**MFAM 674 Human Sexual Behavior (3)**

Sexuality in contemporary society from the sociopsychological viewpoint. Anatomy and physiology of human sexuality: reproduction, normal and abnormal sexual response, psychosexual development, human fertility, human sexual dysfunction. Integrates systems theory. A minimum of thirty contact hours.

**MFAM 675 Clinical Problems in Marriage and Family Therapy (1 or 2)**

Intensive, clinically focused course uses videotape, live interview, and role playing. Observes marriage and family counseling methods and applies to problems representative of clinical practice.

**MFAM 678 Consultation and Leadership (3)****MFAM 679 Universal Psychiatric Care (1 or 2)**

Provides opportunity to participate in an international institute featuring world leaders in psychiatric care. Topics include: world diagnostic guidelines, psychotropic medications and issues in treating ethnic populations, spirituality and psychiatry, transpersonal psychiatry in theory and practice, multidisciplinary teams in the practice of mental health services, and problems of mental health in immigrant populations. Students registering for 1 unit participate in 10 hours of lecture, including a pre- and postsession. Those taking 2 units also develop a major paper on one of the institute topics.

**MFAM 694 Directed Study: Marriage and Family (1-4)**

Individual study in areas of special interest concerning the family and its problems. May be repeated for credit at the discretion of the faculty.

**MFAM 695 Research Problems: Marriage and Family (1-4)**

Directed research in the student's special field of interest in the family.

Prerequisite: MFAM 501 or concurrent registration with the consent of the coordinator.

**MFAM 697 Project (1)**

Student submits a written modality paper and a case description, and makes a videotape presentation of a final case project to a three-member committee selected by the student. Oral response to a case vignette required.

Prerequisite: Advancement to candidacy.

**MFAM 704 Marital and Family Therapy State Board Written Examination Review (2)**

Training for candidates preparing to take the written examination for MFT licensure.

**MFAM 705 Marital and Family Therapy State Board Oral Examination Review (2)**

Provides training to candidates preparing to take the oral examination for MFT licensure.

**MFAM 734 Professional Clinical Training (1.5-3)**

Supervised clinical counseling of individuals, couples, families, and children. At least one hour of individual supervision per week and two hours of case-presentation seminar per week. Continuous registration for this portion of the clinical training until completion of at least 50 clock hours.

**MFAM 744 Clinical Internship (1)**

Supervised clinical counseling of individuals, couples, families, and children. One hour of individual supervision per week. Postgraduates only. Approved by internship coordinator.

**MARRIAGE AND FAMILY THERAPY****MFTH 501 Supervision in Marital and Family Therapy (2)**

Studies research and theory regarding the supervision of marriage and family therapy trainees and interns. Can be used toward the requirements for certification as an AAMFT-approved supervisor.

**MFTH 502 Advanced Supervision in Marital and Family Therapy (2)**

Supervised clinical supervision of MFT trainees and interns in a clinical setting. Can be used toward the requirements for certification as an AAMFT-approved supervisor.

**MFTH 504 Advanced Theory in Marital and Family Therapy (4)**

Provides an overview of theories that use metaphors of system, pattern, interaction, and communication to describe human behavior and relationships; and examines their relevance to the practice of marriage and family therapy. Explores how philosophical, religious, political, sociological, and ecosystemic notions have influenced the field. Assists students in developing a personal epistemology.

**MFTH 505 Advanced Family Studies (4)**

Critically surveys the research and theory growing out of the fields of family studies and family sociology. Provides students with a background on the social and historical factors that form the contexts within which families are defined and function. Students apply course material to the practice of marriage and family therapy.

**MFTH 506 Clinical 1—Cybernetics (MRI, Milan) (3)**  
Studies those systemic therapies informed by cybernetics and oriented to the social organization of communication. Emphasizes the work of the Mental Research Institute and the Milan Group.

**MFTH 507 Clinical 2—Meaning (Narrative, Solution-Focused) (3)**  
Studies those systemic therapies oriented to the meaning expressed in communication, emphasizing current developments such as narrative therapies, reflecting teams, and solution-oriented therapy.

**MFTH 508 Clinical 3—Natural Systems (Structural, Bowen, etc.) (3)**  
Studies the basic concepts of the natural-systems approach to family therapy. Emphasizes structural, family-of-origin issues, multigenerational systems processes, and sociological and biological contributions to the understanding of human systems.

**MFTH 509 Clinical 4—Clinical Issues (3)**  
Examines issues of treatment related to specialized content areas of marriage and family therapy. Focuses on topics such as sexual dysfunction, divorce counseling and mediation, the abusive/violent family, addicted family members, suicidal problems, and ethical and professional issues in treating marriages and families.

**MFTH 514 Child and Family Therapy (2)**  
Specific advanced therapeutic techniques to address current relational and mental health problems in children and adolescents.

**MFTH 515 Couples Therapy (2)**  
Examines research, models, and techniques of marital and couples therapy. Applies course material to clinical work. Emphasizes intimacy and sexual issues.

**MFTH 516 Divorce and Remarriage (2)**  
A family-systems approach to separation, divorce, remarriage, and step-family formation. Reviews research and family-intervention strategies.

**MFTH 517 Group Therapy (2)**  
Examines theory, research, and techniques of group therapy from a family-systems perspective.

**MFTH 518 Addictions and Eating Disorders (3)**  
A family-systems approach to the assessment and treatment of eating disorders, alcoholism, and other addictions.

**MFTH 519 Teaching in Higher Education (2)**  
Discusses theory, techniques, and processes in the teaching of MFT, including an examination of didactic and experiential techniques.

**MFTH 524 Administration in Marital and Family Therapy (3)**  
Specific administration, leadership, and management skills for use in MFT clinics, hospitals, schools, churches, and other organizations.

**MFTH 525 Advanced Marital and Family Therapy Assessment (3)**  
Critically evaluates the individual and systemic assessment tools utilized in MFT, and their application to clinical work.

**MFTH 526 Advanced Psychopharmacology (3)**  
Overviews medications commonly used in relationship and mental health counseling, with discussion of the interrelationship between marriage and family therapy and medication.

**MFTH 527 Advanced Legal and Ethical Issues (3)**  
Reviews the AAMFT code of ethics and the California legal codes pertaining to the practice of marriage and family therapy. Develops skills and knowledge that assist student to be an expert witness and family mediator (therapeutic), and that help student understand how to work with the legal system.

**MFTH 528 Organizations: Structure, Process, and Behavior (3)**  
Helps students understand how organizations operate and how different contingency factors can affect the choices managers make. Covers essential theories and concepts for managing in the twenty-first century. Treats behavioral processes with reference to organizational structure and design. Larger-systems theory and leadership skills.

**MFTH 529 Advanced Psychopathology and Diagnosis (2)**  
Focuses on the etiology of marital and family dysfunction, drawing on the perspectives growing out of individual and systems psychopathology.

**MFTH 534 Family Therapy and Medicine (4)**  
Final course in the medical family-therapy track for MFT students. Provides students with practical experience in applying the theory, research, and practice of marriage and family therapy in medical and health care settings. Reviews treatment paradigms leading to the design of interventions to address common medical issues, such as patient noncompliance and the over- and underutilization of services. Develops an in-depth, family-centered care plan for patients and their families that incorporates significant others into the healing or coping process, including blood and nonblood kin. Research provides information related to the role of social support in morbidity and mortality rates, doctor/patient factors related to health outcomes, and culturally-sensitive medical practice.

**MFTH 536 Family Theory (4)**  
Examines and critiques the major theories of family from the fields of family studies and family sociology.

**MFTH 537 Contemporary Issues in Marriage and the Family (4)**  
Examines a variety of issues that are the subject of current research, theorizing, and debate within the field—particularly those that are of relevance to the challenges and changes faced by families. Examines different family forms in U.S. society and around the world.

**MFTH 538 Introduction to Relational Practice (2)**  
Examines relational practice through observation and team involvement with on-going cases. Emphasizes conceptualization and clinical skills and techniques using systems/relational approaches. Helps students distinguish and clarify what it means to practice from a systems/relational perspective.

**MFTH 544 Health and Illness in Families (3)**  
Examines phenomenological aspects of health and illness in families from the patient's and family's perspectives. Explores in current research and theoretical literature the impact of illness on families and the impact of families upon illnesses. Expands the traditional integration of mind-body to include mind, body, spirit, and relationships. Studies ethnographies and personal experiences to inform clinicians about the unique cultures created in the wake of serious illnesses. From these explorations, students research the culture of one group of medical patients that is bound together by a specific illness and prepare psychoeducational materials to be used in clinical work for that group.

**MFTH 555 Organizational Development and Change (3)**

Helps students understand the application of behavioral and family science knowledge to improve organization performance and organization functioning. Discusses the process of planned change and the change process. Includes interpersonal and group processes such as T-groups, process consultations, and team building. Addresses conflict resolutions, organizational life span, leadership skills, and critical-incident stress debriefing.

**MFTH 556 Management Consulting and Professional Relations (3)**

Prepares the student to consult with organizations and management. Covers subjects such as: developing proformas; budgets and proposals; the goals of consulting; methods, strategies, and conclusions; organizational life style; and organizational culture. Includes the following additional areas: coordinating consulting with employee assistance and human resources professionals, developing training programs and identifying target audiences and appropriate interaction methodologies, understanding the role of technology and information systems.

**MFTH 557 Organizational Assessment (3)**

How to make an assessment of an organizational system. Addresses data collection and analysis, outcome evaluation, and how to present assessment in a systemic manner.

**MFTH 564 Social Context of Health (4)**

Introductory course that provides a sociological overview of the mental and physical health care system in the United States. Examines the social, contextual, and structural factors that give rise to access and treatment within the health care system. Topics include the history of family therapy and medical institutions in the U.S.; theoretical perspectives on health and illness; examination of the health care industry; social inequality in health and illness; culture and health; mental health consequences of mental illness to individuals, families, and society; mental health over the life course.

**MFTH 601 Statistics I (4)**

Thorough introduction to regression analysis and analysis of variance (ANOVA), with emphasis on hypothesis testing and the development of general models that partition overall variability. Topics covered include simple and multiple regression, one-way and factorial, repeated-measures of ANOVA, and analysis of covariance. Evaluation and assumptions of nonparametric alternatives.

**MFTH 602 Statistics II (4)**

Broad introduction applying linear (matrix) algebra to maximum likelihood estimation, generally—using several important multivariate statistical techniques, including but not limited to multivariate analysis of variance, multivariate regression, path analysis and structural equations causal modeling, log-linear models, and time-series analysis. Evaluates alternatives to maximum-likelihood estimation.

Prerequisite: MFTH 601.

**MFTH 603 Statistics III (4)**

Advanced course in multivariate statistics that includes topics such as multidimensional scaling, cluster analysis, factor analysis, path analysis, structural equations modeling, log-linear modeling, time-series analysis, and hierarchical linear models. Focuses on understanding these advanced techniques and their application to data analysis.

Prerequisite: MFTH 602.

**MFTH 604 Advanced Qualitative Methods (4)**

Overviews qualitative methods and their application to research of marriage and family therapy. Includes examination of ethnographies, naturalistic inquiry, phenomenological research, the grounded theory approach, and narrative inquiry.

Prerequisite: MFTH 606.

**MFTH 605 Advanced Quantitative Methods (4)**

Provides advanced overview of quantitative research methods in marriage and family therapy, including experiments and quasi-experiments, survey methodology, and outcome studies.

**MFTH 606 Overview and Critique of Research in Families and Therapy (4)**

Critically examines existing research on marriage and family therapy. Draws on prior courses in qualitative and quantitative research methods, which enable students to evaluate the current and prominent research in the field. Helps students identify those areas of the field in which further research is needed.

**MFTH 607 Computer (1)**

Provides the basic tools and information for using computer applications to analyze quantitative and qualitative information, to present marriage and family systemic information, and to conduct project management.

**MFTH 608 Analysis and Presentation Issues in Research (3)**

Brings together and integrates material from the previous research classes. Deals with the ethics of research, and with questions of reliability and validity in both quantitative and qualitative methods. Emphasizes problems of coherently and succinctly presenting research results in proposals, posters, brief reports, and articles.

Prerequisite: MFTH 604, 605.

**MFTH 624 Program Development for Families and Communities (3)**

Examines core components of systemic/relational programs designed to address problems in families and larger systems. Explicates the elements of systemic programming that address clinical treatment problems/populations; as well as prevention and intervention issues affecting schools, neighborhoods and other communities. Using the systemic/relational paradigm of the field, students design programs reflecting their areas of interest.

**MFTH 625 Grant Writing (3)**

Study and practice in finding, developing, and responding to great opportunities in areas of interest of marriage and family therapists. Participants develop their own systemic/relational program, training, research, or dissertation grant idea; locate potential funding sources; tailor applications and proposals to each funding source; and critique and refine proposals to meet professional standards.

**MFTH 626 Program Evaluation and Monitoring (3)**

Examines quantitative and qualitative methods of evaluating system/relational programs and treatment approaches. Participants learn to design formative and summative internal monitoring procedures in areas of organizational functionality, program-process performance, service delivery, and program/clinical outcomes. Examines methods of evaluating MFT program/treatment efficacy.

**MFTH 627 Advanced Program Development and Evaluation (2)**

Participants develop DMFT project proposals through intensive literature review, consultation with organization and community stakeholders, discussion with faculty and peers, and refinement resulting from feedback following formal presentations. The DMFT proposal is the expected outcome from this two-quarter class. (For DMFT degree students only.)

Prerequisite: MFTH 624, 625, 626.

**MFTH 634 Practicum (2)**

Supervised clinical practice with individuals, couples, and families in Loma Linda University's MFAM clinic or another approved clinical setting. Three quarters, 2 units per quarter.

Prerequisite: At least 200 clinical hours.

**MFTH 635 Research in Family Systems Health Care (4)**

Applies qualitative and quantitative research methods to the clinical study of family systems health care.

**MFTH 636 Family Research (4)**

Examines and critiques research pertaining to marriage and family relationships.

**MFTH 637 Special Projects in Health and Illness in Families (1)**

Independent study in which students who have taken MFTH 544 participate in research activities related to relational health and wellness.

Prerequisite or Concurrent: MFTH 544.

**MFTH 668 Qualitative Research Practicum (2)**

Students gain practical experience in conducting and evaluating qualitative research. Emphasizes methods of analysis and presentation of the research. Students develop a manuscript that is ready for submission to an academic journal and critically review the work of others.

Prerequisite: MFTH 604.

**MFTH 685 Clinical Training in MFT (50 or 100 hours)**

Supervised experience in the practice of marital and family therapy. Hours represent face-to-face client contact. May be repeated.

**MFTH 686A Internship in Marital and Family Therapy (50 to 400 hours)**

Full-time doctoral level experience in marital and family therapy under the supervision of a senior level family therapist. Must be arranged in advance in the department. Must enroll for at least three consecutive quarters (i.e., nine months).

**MFTH 686B Internship in Marital and Family Therapy—Clinical (50 to 250 hours)**

Supervised client contact (face-to-face hours only) in the practice of marital and family therapy completed while enrolled in MFTH 686A. Concurrent enrollment in MFTH 686A required.

**MFTH 694 Research/Dissertation Seminar (1)**

Students develop and refine their dissertation proposals through presentation and discussion with faculty and other students in a workshop format. The dissertation proposal is an expected outcome of this series of courses. (For Ph.D. degree students only.) (3 quarters x 1 unit).

**MFTH 695 Doctoral Project (3)**

Required capstone project for the D.M.F.T. degree. Students must also enroll in 9 units of MFTH 697 while completing the project.

**MFTH 697 Research (1-6)**

Independent research relating to marital and family therapy, under the direction of a faculty adviser.

**MFTH 698 Doctoral Dissertation (3)**

Completion of independent research contributing to the field of marital and family therapy. Students must also enroll in 17 units of MFTH 697 while completing research. (Ph.D. degree students only.)

**HEALTH INFORMATION SYSTEMS****MHIS 501 Information Systems in Health Organizations (3)**

Concepts of information management, including decision support, executive/management systems, and computer/workstation technology. Explores new options for technology in information systems and current hardware and software in use. Required in the first quarter of instruction.

**MHIS 504 Data Base Concepts (3)**

Essentials of database environment and development processes. Concepts of database analysis and design, including various database models and available software. Management principles of data warehouses included. Emphasizes management and implementation issues pertinent in an information-systems curriculum, although sufficient technical detail also provided.

**MHIS 508 Managing Information Resources (3)**

Technology as information. Information as a return on investment. Theory and practice of managing existing information systems. Responsibilities and interactions of the successful information professional in a health care organization. Project selection and prioritization, project management and control, staffing, organizational integration, and communication with other elements of the organization. Scheduled laboratory assignments using project-management and application-development software.

**MHIS 511 Security and Data Communications (3)**

How information systems work. Fundamentals of information-systems hardware and software, including existing databases on local and national networks. Internet and Intranet projects required. Distributed data processing, client-server systems, local-area networks (LAN), wide-area networks (WAN), and data communications, including voice and image. Field trips. Scheduled laboratory assignments using various database environments.

**MHIS 515 Maintenance and Operation of Information Systems (3)**

Process of maintenance and management of data communication systems. Network administration. Analyzes and develops information-security systems, system auditing, information-system documentation, and system-maintenance plans. Student develops maintenance plan and security plan. Scheduled laboratory.

**MHIS 574 Project-Management Skills (3)**

Fundamentals of project planning in information systems, including building the project team, defining project objectives, structuring and scheduling the project, and establishing a project time line. Use of Microsoft Project for documentation requirements. Presents reporting, monitoring, analysis, and control.

**MHIS 575 Market-Research Methods in Health Care (3)**

Applies health care-market data sources—including the Internet, Dartmouth Health Care Atlas, government and health care agencies, health care market-research firms, publications, and others. Effective presentation of market-research data for decision-support systems using multiple communication formats—including written analysis, public speaking/LCD presentations, media strategic-planning/business-planning documents, accreditation reports, and other resources.

**MHIS 595 Seminar in Health Information Systems (3)**

Projects and case studies designed to prepare the student for the internship. Techniques of personnel selection, interviewing, vendor evaluation, and management of an HIS department. Includes concentrated, hands-on experience with technology as it relates to health information system. Flexible content tailored to the needs and prior experience of the students. Taken in the last quarter before the internship.

**MHIS 602 Health-Systems Operations Management (3)**

Use of quantitative methods to analyze and improve business processes within an organization. Regression analysis, simulation, decision analysis, capacity planning, inventory models, linear programming, scheduling, and cost-benefit analysis.

**MHIS 604 Strategic Health Information Systems Management (3)**

Decision making and planned change through the strategic-planning process. Purpose, vision, mission, and strategic objectives. Develops strategic alternatives and choices incorporating information technology. System life-cycle method. Concepts of marketing strategy and competition analysis in the health care market. Integration mergers, restructuring, and downsizing; and their effects. Presents a health information-system technology business plan.

**MHIS 605 Health Information-Systems Internship (5)**

Practical application of the principles of classroom theory in a health care setting. Major project required.

Prerequisite: Completion of all M.H.I.S.-degree course work, or permission of department chair.

**MHIS 699 Directed Study (1-6)**

Individual arrangements for students to study under the guidance of a program faculty member. May include literature review, research, or other special projects.

**MICROBIOLOGY / IMMUNOLOGY****MICR 501 Principles of Microbiology DN (1 or 3)**

Fundamental techniques and concepts of microbiology. Principles of infection. Systematically studies microorganisms pathogenic for man. Bacteria, spirochetes, viruses, and the parasitic protozoa and metazoa. Emphasizes dental aspects that are applicable. Lecture and laboratory.

**MICR 511 Medical Microbiology (1 or 6)**

Systematically studies microorganisms of medical importance, pathogenic mechanisms, host-parasite relationships, and methods of identification.

**MICR 515 Introduction to Bioinformatics and Genomics (2)**

Introduces computer-aided analysis of macromolecules and the study of genes and their products on the level of whole genomes.

Prerequisite: MICR 539 or equivalent.

**MICR 520 Basic Immunology (2.5)**

Studies cellular and molecular aspects of the immune system, immune responses associated with host defense and disease processes, cellular interaction, and modern immunologic technology. Identical to the immunology section of MDCJ 514.

Prerequisite: Permission of department.

**MICR 521 Medical Microbiology (8)**

Systematic study of bacteria, fungi, viruses, and animal parasites of medical importance; pathogenic mechanisms; methods of identification and prevention; and clinical correlation.

Cross-listing: MICR 511.

**MICR 530 Immunology (4)**

Introduces selected topics of modern immunology to graduate students, emphasizing understanding key paradigms. Identical to immunology section of CMBL 503.

**MICR 533 Biological Membranes (3)**

Comprehensive description of biological membranes, oxidative phosphorylation, active transport, and signal transduction. Identical to membranes, transport, and signal transduction sections of CMBL 503.

Prerequisite: A course in biochemistry.

**MICR 534 Microbial Physiology (3)**

Provides in-depth coverage of microbial nutrition and growth kinetics, structure and function, bioenergetics and metabolism, nutrient transport, and special bacterial groups and processes unique to microorganisms.

Prerequisite: MICR 521 and a course in biochemistry.

**MICR 536 Laboratory in Gene Transfer and Gene Expression (4)**

Intensive (two-week) laboratory course in the methods of gene transfer and gene regulation in prokaryotes and eukaryotes. Evaluates and discusses experimental results in group sessions. Suitable for students, faculty, and post-doctoral fellows who wish to learn modern molecular biology techniques. Limited to fifteen participants.

Prerequisite: CMBL 501, 502; or equivalent.

**MICR 537 Selected Topics in Molecular Biology (2)**

Critically evaluates current progress in a specific research area of molecular biology, including recently published papers and unpublished manuscripts. May be repeated for additional credit.

Prerequisite: MICR 539; CMBL 502.

**MICR 539 Molecular Biology of Prokaryotes and Eukaryotes (8)**

Surveys prokaryotic and eukaryotic molecular biology. Topics include genome structure and organization, recombination and repair, transcription and translation, control of gene expression, posttranslational modification of proteins, protein folding and degradation, gene transfer and mobile genetic elements, control of development, methods and applications of genetic engineering, and bioinformatics.

Prerequisite: CMBL 501.

Cross-listing: CMBL 502 or equivalent.

**MICR 545 Molecular Biology Techniques Laboratory (4)**

Laboratory course in modern molecular biology techniques for gene manipulation and analysis in prokaryotes and eukaryotes. Evaluates and discusses experimental results in group sessions.

Corequisite: CMBL 539.

**MICR 546 Advanced Immunology (4)**

Emerging concepts of immunology first discussed by the class and then reviewed by guest lecturers on a weekly schedule.

Prerequisite: MICR 530 or equivalent.

**MICR 565 Virology (3)**

Fundamental aspects of virus-cell relationships of selected groups of animal viruses. Lectures and a library research project. Guest lecturers.

Prerequisite: MICR 511 or 521; or consent of instructor.

**MICR 566 Cell Culture (3)**

Practical aspects of growth of animal cells in culture. Experience with both primary cell cultures and established cell lines.

**MICR 604 Seminar in Microbiology (1)**

Students required to register for this course every quarter throughout their training.

**MICR 605 Colloquium (1)**

Presentations by peers on a topic selected and directed by a faculty member. (All students required to attend the colloquium. Students registered for colloquium are required to give a presentation.)

**MICR 606 Graduate Seminar (1)**

Student presentation in the form of a seminar. (Course requirement normally fulfilled by presentation of the dissertation or thesis seminar. Other major student presentations may also qualify.)

**MICR 624 Special Problems in Microbiology (2-4)**

Designed primarily for students enrolled in a course work M.S. degree program who elect to work on a research problem.

**MICR 625 Independent Study in Microbiology Literature (2-4)**

Explores in depth a specific topic, selected in consultation with the mentor, such as the antecedents for theses or dissertation research. (Formal proposal for the scope and evaluation of the independent study must be approved by the faculty prior to enrollment in this course. Does not satisfy an elective requirement in the microbiology and molecular genetics program.)

**MICR 626 Special Topics in Microbiology (2-4)**

Critically evaluates current progress in a specific research area, including recently published papers and unpublished manuscripts. (Each course taught by a resident or a visiting scientist who is a recognized authority in the research area under discussion. Students may register for multiple courses under this designation.)

**MICR 634 Clinical Microbiology Practicum (4)**

Rotations through the clinical microbiology laboratory at Loma Linda University Medical Center. Includes exposure to all aspects of testing procedures necessary for the identification of microorganisms isolated from patient specimens. Instrumentation, automation, and rapid-testing identification methods included with "hands-on" experience. Rotation to include tuberculosis and mycology, anaerobic bacteriology, blood, special microbiology, parasitology, and general bacteriology.

Prerequisite: Consent of instructor.

**MICR 697 Research (1-7)****MICR 698 Thesis (1-3)****MICR 699 Dissertation (2-5)****MICR 891 Microbiology Elective (120 to 720 hours)****MEDICINE ELECTIVE****MNES 501 Orientation to Medicine (2)**

Provides an interactive, patient-centered contextual learning experience for the purpose of fostering professionalism. A six-week course divided between Summer (2 weeks) and Spring (4 weeks) Quarters in the freshman year. Students observe and participate in patient care, work collaboratively with peers and faculty in small groups, and discuss assigned readings as they relate to integrated, whole-person care.

**MNES 791 Junior Elective (3)**

Gives students an opportunity to spend time (two weeks) in a specialty that holds particular interest to them, allowing them to develop their skills to a level that will be beneficial in their fourth-year electives.

**MUSIC****MUHL 205 Introduction to Music (4)**

Basic music literature, with some attention to other arts.

**NEUROLOGY**

**NEUR 599 Directed Elective Study (60 to 720 hours)**

**NEUR 701 Neurology Clerkship (1.5–18)**

**NEUR 791 Surgery Third-Year Elective (120 hours)**  
A two-week elective in the third year of medicine.

**NEUR 821 Neurology Clerkship (60 to 240 hours)**  
Basic neurology lectures, weekly neuroradiology conferences, neurology grand rounds, clinical neurology conference, and biweekly neuropathology conference. Student attendance required. Student participates in the outpatient neurology clinics during neurology rotation.

**NEUR 891 Neurology Elective (60 to 270 hours)**

**NEUROSURGERY**

**NEUS 891 Neurosurgery Elective (120 to 720 hours)**

**NURSING BRIDGE**

**NRSB 101 Critical Thinking and Learning Strategies for Nursing (2)**

Focuses on the development of critical thinking methods as well as learning strategies and study skills important to success in nursing. Emphasizes application of critical thinking, nursing process, study skills, and wholeness to student life and to nursing content.

**NRSB 102 Science Principles Applied to Nursing (2)**

Focuses on basic science concepts as applied to nursing. Includes a review of anatomy; and applies principles of physiology, microbiology, chemistry, and physics to critical thinking in nursing.

**NRSB 103 Introduction to Math for Nursing (1)**

Includes a review of basic mathematics, equivalent values, ratios, and proportions. Applies concepts to nursing situations in which medication dosage calculations are used. Computer-assisted instruction modules and a ninety-minute laboratory each week, utilized to assist students in developing the necessary skills in a supportive environment.

**NRSB 104 Medical Terminology for Nursing (2)**

Introduces basic medical terminology by the study of prefixes, combining forms, and suffixes. Emphasizes understanding, interpreting, and spelling of singular and plural forms; pronunciation; and correct usage of terms in a variety of situations.

**NRSB 105 Writing for Nursing (3)**

Focuses on developing the writing skills necessary for nursing. Includes a review of principles of grammar and application of writing skills to a research paper related to a nursing topic. Includes a computer component that enables the student to search nursing data bases and apply word-processing skills.

**NRSB 106 Reading in Nursing (2)**

Focuses on improving vocabulary, reading comprehension, and reading speed using nursing and health-related literature. Students expected to use specific prereading and reading strategies to monitor comprehension and summarize reading.

**NURSING**

**NRSB 214 Fundamentals of Professional Nursing (8)**

Introduces the profession of nursing. Emphasizes the basic health needs of the adult-client system, with the goal of optimal wellness/wholeness. Identifies stressors to the client system's lines of defense. Develops beginning-nursing decision-making skills. Supervised experience in application of nursing knowledge to adult-client systems in acute-care settings. Socializes into the role of professional nursing, including exploration of historical, ethical, cultural, and legal aspects. Current issues in professional nursing/health care.

**NRSB 216 Basic Nursing Skills and Health Assessment (4)**

Introduces the basic skills required to assess, maintain, and strengthen client lines of resistance and defense. Supervised practice in therapeutic communication skills and nursing measures to achieve optimal client wellness. Foundation for clinical decision-making and client education. General concepts and techniques for performing a head-to-toe examination and for properly documenting assessment findings.

**NRSB 217 Psychiatric Mental Health Nursing I (6)**

Introduces the care of client systems exhibiting psychiatric mental-health symptoms related to impaired lines of defense or resistance. Emphasizes primary, secondary, and tertiary interventions to strengthen lines of defense/resistance for the client.

Prerequisite: NRSB 214, 216.

**NRSB 224 Nursing Pathophysiology (4)**

Overview of the physiological function of a client system under stress, the common stressors that threaten system stability/integrity, and the consequences that result to the individual whose lines of resistance and defense are breached. Foundation for understanding the rationale behind assessment findings and nursing intervention.

**NRSB 225 LVN Bridge Course (4)**

Designed for the LVN transfer student. Content includes introduction to baccalaureate nursing, physical assessment, and gerontology.

**NRSB 244 Skills for Academic Success (1)**

Assessment of student's learning needs, with individualized approaches to learning strategies essential for success in nursing education and practice.

**NRSB 299 Directed Study (1-8)**

Opportunity for clinical learning in a selected area of nursing.

Prerequisite: Consent of instructor and the associate dean.

**NRSB 305 Nursing Pharmacology (3)**

Overview of the major drug classifications. Introduces the therapeutic use of drugs in the maintenance and strengthening of the client-system lines of resistance and defense.

**NRSB 308 Nursing of the Adult and Aging Client (8)**

Emphasizes the wholistic nature of the adult/aging client system in response to acute, short-term stressors. Uses the nursing process to assist the client system in achieving optimal wellness through strengthening lines of resistance and defense. Supervised practice in caring for the adult-client system in acute-care settings.

Prerequisite: NRSB 214, 216.

**NRSRG 309 Nursing of the Older Adult (4)**

Focuses on older client systems experiencing normal aging. Examines age-related stressors to client variables—physiological, psychological, sociocultural, developmental, and spiritual. Guided learning experiences in nursing care of the older client in long-term care and community settings.

Prerequisite: NRSRG 214, 216.

**NRSRG 314 Nursing of the Childbearing Family (6)**

Emphasizes primary prevention strategies that promote optimal wellness for the mother and neonate, and identification of stressors that influence the family's normal lines of defense. Applies the nursing process, using a wholeness approach when caring for the maternal-fetal and maternal-infant dyads.

**NRSRG 315 Child Health Nursing (6)**

Focuses on the client from infancy through adolescence within the family system. Wholistic nursing care emphasizing optimal wellness in relation to potential or actual stressors, including primary, secondary, and tertiary interventions. Individualization of the nursing process guided by physiological, psychological, sociocultural, developmental, and spiritual variables of the client system.

**NRSRG 316 Health Promotion across the Life Span (4)**

Prepares the student to promote optimal wellness throughout the life span. Examines the impact of common life span stressors on students, clients, and family systems. Primary preventions—including theories of behavior change, motivation, and health education—applied to strengthen lines of defense.

**NRSRG 317 Nursing of the Adult and Aging Family I (8)**

Continues NRSRG 308. Explores relationships among client-system variables in the development of primary, secondary, and tertiary interventions for chronic stressors that require comprehensive nursing care. Guided practice in caring for the adult client system in a variety of community settings.

Prerequisite or Concurrent: NRSRG 217.

**NRSRG 337 Strategies for Professional Transition (4)**

Focuses on growth and enhancement of the professional nurse. Based on learning objectives for career growth, students assess and strengthen the application of skills in communication, research, professional responsibility, teaching and learning process, management, nursing process, and individual empowerment—for themselves and for clients. Assessment and development of learning objectives. Student designs personal strategies to attain goals. Includes critical thinking, reflective journaling, and development of professional portfolio. Limited to RNs returning for B.S. or M.S. degree.

**NRSRG 399 Nursing Externship (1)**

An elective work-study course that provides opportunity for experiential understanding of the nature of nursing in the work place. Focuses on application of the Neuman framework. The student, under the supervision of an RN preceptor, applies previously learned skill in providing direct patient care.

Prerequisite: NRSRG 317.

**NRSRG 407 Integration of Essential Concepts (6)**

Broadens current nursing knowledge through application of Neuman's framework in client care, developing and evaluating health care plans as well as employing the nursing interventions of advanced pathophysiology.

Prerequisite: NRSRG 337.

**NRSRG 408 Nursing of the Adult and Aging Family II (6)**

Students study and participate in complex clinical nursing practice (critical care). Students utilize the nursing process in primary, secondary, and tertiary prevention with critically ill clients and their families. Emphasizes the scientific basis of the effects of stressors on the lines of defense and resistance. Promotes collaborative efforts of the members of the health care team in the care of the critically ill client.

Prerequisite: NRSRG 314, 315, 316, 317.

**NRSRG 409 Home Health (3)**

Wholistic care of the client system across the life span within the home. Clinical experience focuses on acute and chronic stressors. Introduces community resources to facilitate continuity of care and to promote optimal wellness.

Prerequisite: NRSRG 314, 315, 316, 317.

**NRSRG 410 Professional Nursing Issues I (1)**

Issues relating to licensure and entry into nursing practice of the registered nurse—including delegation, quality improvement, and managed care. Socialization and beginning management concepts.

**NRSRG 414 Nursing Management (6)**

The health care agency or nursing unit viewed as the core system, with lines of defense and lines of resistance. The management process as the set of interventions aimed at maintaining or restoring a state of equilibrium and order within the organization. The role of the first-line manager observed and some aspects experienced.

**NRSRG 415 Community Mental Health Nursing (4 or 6)**

Student delivers psychiatric nursing care in a variety of clinical settings within the community. Guidance given in assessing stressors and developing primary, secondary, and tertiary interventions within populations at risk for psychosocial stress. Student practices case management strategies and psychoeducational interventions. Clinical experience directed toward optimizing lines of defense and resistance for families, groups, and communities.

**NRSRG 416 Community Health Nursing (8)**

Focuses on the optimal wellness of the community as client. Intervention strategies emphasizing primary, secondary, and tertiary prevention with micro-/macroclient systems. Develops skills in assessment; diagnosis; planning based on outcomes; and implementation within inter-, extra-, and intrasystem of both aggregate and geopolitical clients.

**NRSRG 417 Professional Nursing-Practice Elective (6)**

Enhances the process of professional socialization from the academic to the practice setting by providing an opportunity for synthesis and application of theoretical knowledge and skills to a preceptored clinical experience selected by the student. Focuses on using the nursing process to protect and promote intact lines of resistance and defense of individuals, families, and groups in diverse circumstances. Students develop personal learning objectives under the guidance of the instructor.

**NRSG 421 Professional Nursing Issues II (2)**

Current issues regarding the baccalaureate nurse's responsibility to the nursing profession and society.

**NRSG 429 Clinical Nursing Research (4)**

Prepares knowledgeable consumers of nursing research who can apply the scientific research process utilizing quantitative and qualitative methods, and who can critique research for use in the practice setting. Focuses on using research to discover ways the professional nurse can facilitate optimal wellness through retention, attainment, and maintenance of client-system stability.

**NRSG 497 Advanced Clinical Experience (40 to 400 hours)**

An elective course open to students seeking clinical experience in nursing.

**NRSG 498 Research Methods (3)****NRSG 499 Directed Study (1-8)**

Opportunity for clinical experience in a selected area of nursing.

Prerequisite: Consent of instructor and the associate dean.

**NRSG 508 Nursing in Community Systems (2)**

Utilizes the perspective of population-focused primary health care and examines theoretical frameworks and strategies for working with population groups in community systems. Utilizes functions of assessment, planning, intervention, and assurance in providing advanced practice nursing to populations at risk.

**NRSG 509 Guided Study (1-6)**

Opportunity for study in a particular area of nursing, under faculty direction.

**NRSG 512 School Nursing Services (4-6)**

Explores the role of the school nurse and the administrative styles in school-health programs. School-health program planning. Examines methods of implementation and evaluation within the context of school systems, family systems, and health care-delivery systems. Students registered for 5 or 6 units are involved in clinical experience designed to develop competencies in school nursing. Offered alternate years.

**NRSG 515 Health Policy: Issues and Process (2)**

Examines the impact of the sociopolitical system. Current trends and issues affecting health and the changing profession of nursing; as well as the impact of nursing on these systems in the workplace, government, professional organizations, and the community.

**NRSG 516 Advanced Role Development (2)**

Examines transition into the advanced practice nursing role through consideration of the history, theoretical bases, role competencies, selected professional strategies, and legal requirements necessary for role enactment.

**NRSG 541 Nursing Administration Practicum I (3)**

Observation and practice in selected levels of nursing administration.

Prerequisite: NRSG 543; HADM 528; 6 quarter units of clinical nursing.

**NRSG 542 Nursing Administration Practicum II (3)**

Observation and practice in selected levels of nursing administration.

Prerequisite: NRSG 547 or HADM 528; 6 quarter units of clinical nursing.

**NRSG 544 Teaching and Learning Theory (3)**

Explores the components of the teaching-learning process. Opportunity provided for students to practice specific teaching strategies.

**NRSG 545 Teaching Practicum (3 or 4)**

Assists the student in developing the ability to teach nursing in the clinical area of choice. Emphasizes the nurse-teacher as facilitator of learning. Integrates knowledge and skills related to educational methodology and clinical nursing. Practice in teaching students in clinical and classroom settings.

Prerequisite: 12 quarter units of clinical nursing.

Prerequisite or Concurrent: NRSG 544, 546.

**NRSG 546 Curriculum Development in Higher Education (3)**

Examines principles of curriculum development—including the selection, organization, and evaluation of learning experiences—with emphasis on the nursing major.

Examines the nature, place, and interrelationship of general and specialized education in higher education.

**NRSG 547 Management: Principles and Practices (3)**

Analyzes administrative issues in health care settings. Organizational complexities, power distribution, political strategies, interdependence of management, and clinical teams. Focuses on the application of selected management theory to the practice of nursing.

**NRSG 551 Pediatric Primary Health Care I (4)**

Focuses on the PNP primary-care role in health promotion, wholistic assessment, and management of minor common illnesses for children from newborn through adolescence.

Prerequisite: NRSG 651.

Concurrent: Clinical experience.

**NRSG 552 Pediatric Primary Health Care II (6)**

Continues development of the PNP primary-care role for children from newborn through adolescence, related to assessment and management of common or acute illnesses while incorporating health maintenance and prevention.

Prerequisite: NRSG 551.

Concurrent: Clinical experience.

**NRSG 553 Pediatric Primary Health Care III (7)**

Continues the development of the PNP primary-care role for children from newborn through adolescence in assessment and management of chronic or complex illnesses.

Prerequisite: NRSG 552.

Concurrent: Clinical experience.

**NRSG 554 Pediatric Primary Health Care IV (7)**

Continues development of the PNP primary-care role for children from newborn through adolescence in assessment and management of chronic or complex illnesses.

Prerequisite: NRSG 553, clinical experience.

**NRSG 555 Pharmacology in Advanced Practice I (3)**

Principles of pharmacodynamics, pharmacotherapeutics, and pharmacokinetics. Overview of specific major drug classifications, and discussion of the therapeutic use of drugs in maintaining and strengthening client-system lines of resistance and defense.

**NRSRG 556 Pharmacology in Advanced Practice II (2)**

Builds on principles discussed in NRSRG 555, with a focus on additional specific major drug classifications and discussion of the therapeutic use of these drugs in maintaining and strengthening client-system lines of resistance and defense. Addresses specific legal and ethical issues for advanced nursing practice.

Prerequisite: NRSRG 555.

**NRSRG 557 Pediatric Primary Health Care V (5)**

Focuses on integration and synthesis of knowledge and skills, under the guidance of an expert preceptor, with the goal of working independently and collaboratively within a health care team.

Prerequisite: NRSRG 554.

**NRSRG 560 Neonatal Pharmacology (2)**

Builds on the principles of NRSRG 555—focusing application to the neonate—with additional overview of specific drug classifications and the therapeutic use of drugs for this population.

Prerequisite: NRSRG 555.

**NRSRG 561 Adult Primary Health Care I (4)**

Introduces the role, professional responsibilities, and clinical practice of the adult nurse practitioner (ANP). Focuses on primary health care concepts related to health maintenance and promotion of optimal wellness of the adult.

Prerequisite: NRSRG 651, clinical experience.

**NRSRG 562 Adult Primary Health Care II (6)**

Continues development of the ANP primary-care role for adults through wholistic assessment and management of common chronic and acute illness, using a systems approach. Incorporates health maintenance and prevention.

Prerequisite: NRSRG 561.

Concurrent: Clinical experience in a variety of primary care settings with diverse adult populations.

**NRSRG 563 Adult Primary Health Care III (6)**

Continues the aspects of health maintenance and promotion and evaluation of common health problems—integrating the student's understanding of pathophysiology, epidemiology, pharmacology, diagnostic studies, and physical assessment skills to formulate diagnoses (medical and nursing) and management plans.

Prerequisite: NRSRG 562.

**NRSRG 564 Adult Primary Health Care IV (7)**

Continues development of the ANP primary-care role for adults through assessment and management of chronic and complex illnesses.

Prerequisite: NRSRG 563; clinical experience.

**NRSRG 565 Adult Primary Health Care V (6)**

Focuses on integration and synthesis of knowledge and skills, under the guidance of an expert preceptor, with the goal of working independently and collaboratively with the health care team.

Prerequisite: NRSRG 564.

**NRSRG 574 Philosophical Foundations of Nursing Science (2)**

Companion course to PHIL 616. Explores the development of knowledge within the discipline of nursing. Examines sources of knowledge and the assumptions underlying major approaches to scientific inquiry. Critiques these approaches in relation to the expansion of nursing science.

Prerequisite: PHIL 616.

**NRSRG 575 Strategies for Theory Development in Nursing (4)**

Engages the student in examining and applying the process of concept and theory development. Students analyze phenomena of interest, use selected strategies to construct conceptual relationships, and evaluate theoretical frameworks for development of nursing science.

Prerequisite: PHIL 616.

**NRSRG 604 Nursing in Family Systems (3)**

Concepts and theories guiding advanced nursing practice related to families—including systems, stress and coping, role, change, and family-assessment models.

Prerequisite: NRSRG 507, clinical experience.

**NRSRG 617 Clinical Practicum: Growing Family (2-12)**

Prepares the student for the clinical nurse specialist role in the area of growing family through clinical experience focused on the competencies and roles of the CNS under the guidance of an expert preceptor.

Prerequisite or Concurrent: NRSRG 646.

**NRSRG 619 Neonatal Critical Care I: Neonatal Advanced Physical Assessment (3)**

Focuses on neonatal assessment—including maternal and environmental factors, gestational age, behavioral and developmental assessment, comprehensive history and neonatal physical examination, diagnostic testing, and family assessment.

**NRSRG 620 Neonatal Critical Care II (5)**

Focuses on concepts and principles of genetics, embryology, growth and development, physiology/pathophysiology, and pharmacology/toxicology as relevant to the assessment and management of the health promotion and maintenance needs of the newborn.

Prerequisite: NRSRG 619.

Concurrent: Clinical practicum that focuses on development of assessment and history skills and delivery-room management and resuscitation.

**NRSRG 621 Neonatal Critical Care III (8)**

Focuses on concepts and principles of pathophysiology, neonatal disease entities, and disorders in relation to the clinical management of the sick neonate.

Prerequisite: NRSRG 620.

Concurrent: Clinical practicum that focuses on sick/critically ill ventilated and nonventilated neonates.

**NRSRG 622 Neonatal Critical Care IV: Practicum (9)**

Focuses on concepts and principles of pathophysiology and neonatal disease entities and disorders in the management of the sick/critically ill neonate.

Prerequisite: NRSRG 621.

Concurrent: Clinical practicum that focuses on sick/critically ill ventilated and nonventilated neonates.

**NRSRG 623 Neonatal Critical Care V: Practicum (13)**

Synthesizes concepts, principles, theories, knowledge, and skills from the preceding advanced neonatal critical-care nursing courses to practice.

Prerequisite: NRSRG 622.

**NRSRG 624 The Adult and Aging Family I (2 or 4)**

Focuses on concepts and theories relevant to the practice of the advanced practice nurse caring for adult and aging clients. Applies theory to clinical practice in a selected segment of the population.

Prerequisite: NRSRG 604.

**NRSNG 626 The Adult and Aging Family II (3)**

Focuses on concepts and theories relevant to the practice of the advanced practice nurse caring for clients within the adult and aging family population, with application to a selected segment of the population. Examines the role, competencies, and outcomes relevant to the practice of the clinical nurse specialist.

Prerequisite: NRSNG 624.

**NRSNG 628 Clinical Practicum: Adult and Aging Family (2-12)**

Prepares the student for the clinical nurse specialist role in the area of adult and aging family through clinical experience focused on the competencies and roles of the CNS under the guidance of an expert preceptor.

Prerequisite or Concurrent: NRSNG 626.

**NRSNG 645 Growing Family I (2-4)**

Focuses on concepts and theories relevant to the advanced practice nurse caring for clients within the growing family life span (perinatal through pediatrics). Applies clinical practice in a selected population.

Prerequisite or Concurrent: NRSNG 604.

**NRSNG 646 Growing Family II (3)**

Focuses on concepts and theories relevant to the advanced practice nurse caring for clients within the growing family life span (perinatal through pediatrics), with application to a selected population. Examines the role, competencies, and outcomes for clinical nurse specialist practice.

Prerequisite: NRSNG 645.

**NRSNG 651 Advanced Physical Assessment (3)**

Reviews physical assessment skills and knowledge in depth to prepare the student to successfully conduct a complete history and physical throughout the patient's life span. Incorporates lecture, audiovisual aids, laboratory-skills practicum, and individual study.

**NRSNG 652 Family Primary Health Care I (5)**

Introduces the role, professional responsibilities, and clinical practice of the family nurse practitioner (FNP). Focuses on primary health care concepts related to health maintenance and promotion of optimal wellness of the family (child through adult).

Prerequisite: NRSNG 651.

Concurrent: Clinical experience.

**NRSNG 653 Family Primary Health Care II (6)**

Develops the FNP primary-care role of families through wholistic assessment and management of common chronic and acute illness, using a systems approach. Incorporates health maintenance and prevention.

Prerequisite: NRSNG 652.

Concurrent: Clinical experience in a variety of primary care settings with diverse family populations.

**NRSNG 654 Family Primary Health Care III (7)**

Third quarter continues the development of the FNP primary care role of families through wholistic assessment and management of common or acute illness using a systems approach. Incorporates health maintenance and prevention.

Prerequisite: NRSNG 653.

Concurrent: Clinical experience in a variety of primary care settings with diverse family populations.

**NRSNG 655 Family Primary Health Care IV (7)**

Develops the FNP primary care role for adults through assessment and management of chronic and complex illnesses.

Prerequisite: NRSNG 654.

Concurrent: Clinical experience.

**NRSNG 656 Family Primary Health Care V (7)**

Focuses on integration and synthesis of knowledge and skills under the guidance of an expert preceptor, with the goal of working independently and collaboratively with the health care team.

Prerequisite: NRSNG 655.

**NRSNG 664 Nursing Science Seminar (1)**

Provides a forum for in-depth examination of the state of the science in selected nursing phenomena. Focus varies according to national emphases in nursing research and focus areas of participants. Emphasizes critical examination of conceptual, theoretical, and methodological issues relative to the selective topic.

Prerequisite: Doctoral standing or consent of instructor.

**NRSNG 680 Intermediate Statistics (3)**

Applies selection and application of statistical procedures to nursing science and practice. Selects topics in ANOVA, multiple regression, and other multivariate statistical procedures. Interprets computer output.

**NRSNG 684 Research Methods (4)**

Guides the student in understanding scientific thinking and research methods beyond the introductory level. Uses the research literature in nursing and related fields to illustrate the application of these principles. Student begins developing an area of research interest, identifies a research problem, reviews empirical literature, provides evidence for theoretical connections among identified research variables and scientific support for a clinical nursing intervention, and develops a scientific research proposal.

Prerequisite: NRSNG 680.

**NRSNG 686 Advanced Quantitative Research Methods (4)**

Examines advanced quantitative research methods applicable to advancing and developing nursing science. Topics range from the formulation of research problems and questions to discussing and identifying complex designs and methods. Guides the student in development of a quantitative research proposal that focuses on an area of study that may serve as the initial step in conducting independent dissertation research.

Prerequisite: PSYC 501, 502.

**NRSNG 693 Experience Portfolio (1-16)**

Portfolio preparation documents nurse practitioner educational program, including the clinical practice component.

Prerequisite: Certified nurse practitioner with current nurse practitioner practice of at least two years; at least five years of postbaccalaureate nurse practitioner practice experience.

**NRSNG 696 Directed Research (2)**

Student participates in the research process or engages in research activities guided by mentors. Experience contributes to the ongoing development of the student's knowledge in research planning, design conduct, analysis, or dissemination. Monthly seminars. Prerequisite: Acceptance into the Ph.D. degree program in nursing.

**NRSNG 697 Research (1-4)****NRSNG 698 Thesis (2)**

**NATURAL SCIENCES****NSCI 124 Rocky Mountain Field Geology (2 or 3)**

Introduces basic principles of geology, with specific studies of field sites in the Rocky Mountains. Two units for the field course, with a third, optional unit of credit for additional academic work to be assigned. Upper-division college students or teachers should register for GEOL 325. Summer only.

**NSCI 125 Biology of Birds (3)**

Introduces the natural history of birds, along with their field identification and ecology. Emphasizes local species in lectures and in the field. Focuses on identifying species and on learning techniques of study. Three Sunday field trips.

**NSCI 126 Biology of Reptiles (3)**

Introduces the natural history of reptiles; their identification, morphology, physiology, behavior, and ecology. Describes all recognized orders and emphasizes local species in lecture and in the field. Focuses on identifying species and on learning techniques of study in both the field and laboratory. Three Sunday field trips.

**NSCI 127 Rocks and Minerals (3)**

Introductory course on the identification, composition, structure, and origin of rocks and minerals. All of the mineral classes and major rock types covered in a lecture and laboratory setting, with field trips to local collecting sites.

**NSCI 205 Field Tropical Marine Biology (3)**

Provides an overview of tropical marine ecosystems, with special emphasis on coral reefs and associated invertebrate organisms. Emphasizes taxonomy and the ecology of marine taxa. A large proportion of time spent snorkeling to collect organisms and to survey the inshore and patch reefs. Surveys rocky intertidal and mangrove ecosystems.

**NSCI 234 Science and the Study of Origins (3 or 4)**

Studies biological and geological issues related to origins. Analyzes data and its implications for various models of earth history. Discusses nature and limits of the scientific process in the study of origins. Three-to-four class hours per week.

**NSCI 235 Dinosaur Biology and Fossil Record (3 or 4)**

Overview of the dinosaur fossil record and analysis of dinosaur behavior, physiology, and ecology by comparison of dinosaur fossil evidence and living animals. Reviews current theories on dinosaur extinction.

**NSCI 236 Faith, Family, and Nature (3)**

Studies natural history, with emphasis on behavior and ecology of southern California flora and fauna. Special feature: developing skills of field observation in the setting of family and intergenerational communication. Lectures emphasize themes of design in nature. Three Sunday field trips.

**NSCI 239 Introduction to Marine Life (3)**

Introduces marine life and intertidal ecology of the Pacific coast for the nonscientist. Discusses oceanography, waves and tides, the deep sea, intertidal ecology, and the types of plants and animals found in the local intertidal and near-shore environment. Three Sunday field trips.

**NSCI 241 The Natural History of Fossils (3 or 4)**

Introduces fossils: their preservation, ecology, and occurrence in the geologic record. Invertebrate, vertebrate, and plant fossils from a variety of localities worldwide.

**NSCI 286 Topics in Biology (1-4)**

Reviews current knowledge in specified areas of the biological sciences. Registration should indicate the specific topic to be studied. May be repeated for additional credit. Offered on demand.

Prerequisite: Consent of instructor.

**NSCI 287 Topics in Ecology (2-4)**

A customized course for students to study various aspects of ecology, such as the ecology of a specific region or a specialized taxonomic group. Significant field experience normally required. Registration should indicate the specific topic to be studied. May be repeated for additional credit. Offered on demand.

Prerequisite: Consent of instructor.

**NSCI 288 Topics in Geology (1-4)**

Reviews current knowledge in specified areas of the earth sciences. Registration should indicate the specific topic to be studied. May be repeated for additional credit. Offered on demand.

Prerequisite: Consent of instructor.

**NSCI 386 Biology of Marine Life (4)**

Examines marine organisms in depth, with emphasis on higher invertebrates and vertebrates around the world. Study of marine environments provides opportunities to understand some of the theoretical principles of general ecology. Presentations and specific readings combined with a final field trip and written reports. Requires an understanding of basic oceanography as taught in NSCI 239.

**NUTRITION****NUTR 474 Nutrition and Fitness (3)**

Basic principles of nutrition and healthful eating for fitness and exercise. Role of nutrition and exercise in optimizing health from a scientific standpoint. Myths prevalent among consumers in the area of nutrition and fitness.

**NUTR 490 Topics in Foods and Food Preparation (1)**

On-line course provides an introduction to foods and food preparation. Includes relationship of food composition to food preparation, cultural and ethnic food patterns, sensory evaluation of food, and culinary techniques.

**NUTR 504 Nutritional Metabolism (5)**

Studies the static and dynamic aspects of the metabolism of carbohydrates, lipids, amino acids, proteins, nucleic acids, enzymes, hormones, vitamins, and minerals in the normal healthy human.

**NUTR 509 Public Health Nutrition (3)**

Introduces the concepts of nutrition as related to public health. Includes life-cycle issues as well as discussion of major nutrition-related diseases and their prevention. Not applicable toward a major in nutrition.

**NUTR 510 Advanced Public Health Nutrition (3)**

Studies applied and preventive aspects of nutrition as related to public health.

Prerequisite: NUTR 504 or equivalent.

**NUTR 517 Advanced Nutrition I: Carbohydrates and Lipids (4)**

Advanced study of the nutrition, metabolism, and function of carbohydrates and lipids as related to health and disease.

**NUTR 518 Advanced Nutrition II: Proteins, Vitamins, and Minerals (4)**

Advanced study of the nutrition, metabolism, and function of proteins, vitamins, and minerals as related to health and disease.

**NUTR 519 Phytochemicals (2)**

Discusses the role of phytochemicals in disease prevention and treatment. Reviews current research in this area.

**NUTR 525 Nutrition Policy, Programs, and Services (3)**

Develops professional skills in management of nutrition programs. Includes legislative advocacy and analysis of current nutrition programs at local, state, and federal levels. Laboratory.

**NUTR 526 Nutrition Counseling (2)**

Counseling skills, specifically counseling one-on-one and with families, in order to facilitate changes in nutrition status. Teaching/learning styles, development of therapeutic relationships with patients/clients, and development of listening skills. Laboratory focuses on case-study evaluation, including practice of nutrition counseling with patients at chosen sites.

**NUTR 527 Assessment of Nutritional Status (3)**

Techniques of individual nutrition assessment: dietary intake and evaluation, use of computer software (1 unit); anthropometric, clinical, and biochemical methodologies (1 unit); principles and practice in nutrition counseling in a supervised community setting (1 unit). Laboratory or practicum included in each unit.

**NUTR 528 Symposium: Adventist Philosophy of Nutrition (1)**

The science of nutrition as related to the Seventh-day Adventist philosophy of health.

**NUTR 534 Maternal and Child Nutrition (3)**

Advanced study of the role of nutrition in human growth and development during the prenatal period, lactation, infancy, and childhood.

**NUTR 535 Research Applications in Nutrition (2)**

Concepts and application of research methods for public health nutrition.

**NUTR 536 Nutrition and Aging (2)**

Effect of nutrition on aging and chronic degenerative diseases, and their effects on nutritional status. Geriatric nutrition screening and assessment. Anorexia of aging. Nutrition support, supplement use, and services for older Americans.

Prerequisite: Basic nutrition or consent of instructor.

**NUTR 537A Community Nutrition Projects-A (1)**

Provides training and practice in selected community outreach skills, especially community nutritional assessment, social marketing, program evaluation, and the use of mass media. Includes at least forty hours of dietetic practice.

**NUTR 537B Community Nutrition Projects-B (1)**

Experiential course that applies medical nutrition therapy in the assessment and counseling of individuals and groups across the life cycle in an outpatient setting. Includes training in counseling, educational materials development, and cultural sensitivity. Includes at least forty hours of dietetic practice.

**NUTR 538 Principles of Effective Nutrition Education (3)**

Teaching methods appropriate to the nutrition educator. Definition of an effective teacher. Learning environment, lesson design, and use of teaching models. Strategies to improve student motivation and the retention of information. Evaluation of learning outcomes. Laboratory included. Includes thirty hours of dietetic practice.

**NUTR 539 Research Methods in Nutrition (2)**

Discusses the steps in the research process as they relate to clinical nutrition investigation. Validity of biological parameters and dietary intake measurements, study design, subject selection, and ethical issues.

Prerequisite: STAT 509 or equivalent.

**NUTR 543 Concepts in Nutritional Epidemiology (3)**

Prepares students to conduct research relating diet to health/disease outcomes. Reviews methodological issues related to dietary assessment for clinical/metabolic and epidemiological research. Topics include variation in diet, measurement error and correction for its effects, advantages and limitations of different diet-assessment techniques, design and development of a food-frequency instrument, total energy intake in analyses.

Prerequisite: STAT 521; EPDM 509; or consent of instructor.

**NUTR 545 Clinical Nutrition I (3)**

Medical nutrition therapy and care for a variety of clinical disorders with nutritional implications. Laboratory included.

Prerequisite: NUTR 527 or equivalent.

**NUTR 546 Clinical Nutrition II (3)**

Continues medical nutrition therapy for a variety of clinical disorders with nutritional implications: renal disease, chronic obstructive pulmonary disease, inborn errors of metabolism, AIDS, pancreatitis, care of the critically ill and/or obese patient. Includes forty-five practicum hours.

Prerequisite: NUTR 545.

**NUTR 554 Critical Care Nutrition I (3)**

Current issues related to the nutritional needs of patients with diabetes, heart disease, and renal disease. Drug-nutrient interactions, laboratory values, treatment modalities; and their effect on nutrition in the critical care of these patients. Counseling strategies for each. Laboratory included.

Prerequisite: RD, RD eligible with appropriate experience, M.D., or consent of instructor.

**NUTR 555 Critical Care Nutrition II (3)**

Current issues related to the nutritional needs of preterm neonate, transplant, oncology, AIDS, and COPD patients. Enteral/parenteral feeding products and their administration. Counseling strategies for the client and/or caregiver in each instance. Laboratory included.

Prerequisite: RD, RD eligible with appropriate experience, M.D., or consent of instructor.

**NUTR 564 Contemporary Issues of Vegetarian Diets (1 or 2)**

Introduces contemporary issues and controversies related to vegetarian diets. Background information on the history and rationale of vegetarian diets, ecologic and environmental issues, health benefits as well as risks of the vegetarian lifestyle.

**NUTR 565 Ethnic Food Practices (2)**

Introduces major ethnic and religious food practices in the United States. Cultural background and other data for the purpose of preparing health professionals to serve their clients in a culturally sensitive manner.

**NUTR 575 Food Systems Management (4)**

Develops administrative skills in effective management of food systems. Qualitative and quantitative standards, budget development and analysis, labor-management relations, computer-assisted information system.

Prerequisite: HADM 509 or equivalent.

**NUTR 577 Nutrition-Care Management (3)**

Translates institutional mission into goals, objectives, and standards of care. Applies operations analysis, financial management, quantitative decision making, and productivity-management techniques to enhance the delivery of nutrition care. Ethical and legal behavior. Staff recruitment, selection, development, and retention. Develops quality-assurance indicators. Skills in managing the human and technological resources available to the registered dietitian.

Prerequisite: RD, RD eligible with appropriate experience, M.D., or consent of instructor.

**NUTR 578 Exercise Nutrition (2-3)**

Nutritional needs of professional and recreational athletes. The role of macro- and micronutrients as ergogenic aids. Presents overview of current research in the areas of exercise nutrition. Third unit requires a term paper on current research topic in exercise nutrition.

**NUTR 585 Topics in Global Nutrition (4)**

Discussion of current issues of importance in international nutrition.

**NUTR 597 Special Topics in Clinical Nutrition (1)**

Current topics in clinical nutrition. May be repeated for additional credit.

Prerequisite: NUTR 554, 555.

**NUTR 605 Seminar in Public Health Nutrition (1)**

Explores current major issues in nutrition. Students choose and research a topic or problem and discuss their findings in class. Written report required. May be repeated for additional credit.

Prerequisite: 5 graduate units in nutrition or consent of instructor.

**NUTR 608 Doctoral Seminar in Public Health Nutrition (1)**

Enhances skills relative to scientific literature review, critical thinking, scientific discussion with peers, presentation using advanced audiovisual aids, writing review paper and abstract as per peer-reviewed journal requirements. Maximal interaction with faculty, peers, and visiting nutritional professionals. Limited to doctoral degree students in nutrition. May be repeated for additional credit. Not to exceed 3 units.

**NUTR 685 Preliminary Research Experience (2)**

Experience in various aspects of research under the guidance of a faculty member and by participation in an ongoing project. Must be completed prior to beginning dissertation/research project. Limited to doctoral degree students.

**NUTR 692 Research Consultation (1-4)**

Individual advice on project design and on data collection, analysis, and evaluation. Restricted to School of Public Health students and staff.

**NUTR 694 Research (1-12)**

Independent research for doctoral degree candidates and qualified master's degree students on problems currently being studied in the department, or in other department(s) with which they collaborate. Research program arranged with faculty member(s) involved. Minimum of 100 hours required for each unit of credit. Written report required.

Prerequisite: Consent of instructor responsible for supervision and of the program adviser.

**NUTR 695 Thesis (2)**

Student prepares report of individual, guided experimental-research study in nutrition, under direct faculty supervision. Limited to graduate students whose thesis project has been approved by their research committee.

**NUTR 696 Directed Study/Special Project (1-4)**

Individual arrangements for advanced students to study under the guidance of a program faculty member. May include readings, literature reviews, or other special projects. Minimum of thirty hours required for each unit of credit. A maximum of 4 units applicable to any master's degree program.

**NUTR 698 Dissertation (1-14)**

Student prepares manuscript presenting results of doctoral research study. Limited to doctoral degree students.

**NUTR 699 Applied Research (2)**

Assignment to private, government, or international voluntary health agency, hospital, or other school-approved organization where practical application of the materials studied on campus is made, under the guidance of the department faculty and of the organization involved. Research project that includes substantial analysis of data and discussion of results. Written report and oral presentation required.

Prerequisite: Consent of department adviser and of instructors responsible for supervision.

**NUTR 798B Field Practicum (6)**

Assignment to private, government, or international voluntary health agency, hospital, or other school-approved organization where practical application of the materials studied on campus is made, under the guidance of the department faculty and of the organization involved. May consist of a research project. Meets the dietetic practice hours of the Graduate Coordinated Program in Public Health Nutrition and Dietetics. May be repeated for additional credit.

Prerequisite: Approval of academic variance needed if practicum begins before completion of comprehensive examinations.

**NUTR 798D Dietetic Practicum (12)**

Assignment to hospital or other School of Public Health-approved organization where practical application of the materials studied regarding food service and medical nutrition therapy is made under the guidance of department faculty and the organization involved. Intended to meet the dietetic practice hours of the Graduate Coordinated Program in Public Health Nutrition and Dietetics. May be repeated for additional credit.

**OCCUPATIONAL THERAPY ASSISTANT****OCTA 201 Introduction to Occupational Therapy (1)**

Introduces occupational therapy as a profession, and its role in the health care-delivery system. Nature of occupation and occupational performance. Foundational learning through addressing the occupational needs of populations within the context of their physical, social, and cultural environments. Student identifies, develops, and integrates OT foundation, practice, and knowledge; as well as articulates the uniqueness of occupational therapy within our scope of practice.

**OCTA 214 Applied Anatomy (2)**

Foundational course reviews basic muscle-skeletal anatomy and its importance to the occupational therapy practitioner. Practical, hands-on approach to anatomy, with laboratory sessions emphasizing assessments and functional significance of client intervention. Per week: Lecture 1 hour, laboratory 2 hours.

**OCTA 215 Introduction to Functional Neuroanatomy (2)**

Introduces basic anatomy and function of the central and peripheral nervous systems, common clinical manifestations of neurologic dysfunction, and occupational performance impact on the individual with neurologic dysfunction.

**OCTA 217 Occupational Therapy Assistant Practicum I (2)**

Introduces functional groups, observation, and supervision in varied health care settings and community-based programs. Per week: Practicum 8 hours.

Prerequisite: Must be completed in sequence with OCTA 218.

**OCTA 218 Occupational Therapy Assistant Practicum II (2)**

Continues introduction to functional groups, observation, and supervision in varied health care settings and community-based programs. Per week: Practicum 8 hours.

Prerequisite: Must be completed in sequence with OCTA 217.

**OCTA 224 Therapeutic Activities I (2)**

Enhances understanding of the meaning of occupation and purposeful activities, and introduces purposeful activities within the context of occupational therapy. Identifies, develops, and integrates client goals with occupational roles and purposeful activities. Per week: lecture 1 hour, laboratory 2 hours.

**OCTA 225 Therapeutic Activities II (2)**

Introduces assistive technology and focuses on how it enables individuals with disabilities to reach various levels of function independence. Incorporates basic splinting activities used by the occupational therapy assistant in therapeutic settings. Problem-solving approach to splinting used. Emphasizes clinic maintenance and safety. Per week: lecture 1 hour, laboratory 2 hours.

**OCTA 226 Occupational Therapy Assistant Seminar (2)**

Student integrates foundational, practice, and professional knowledge identified within occupational therapy function. Through practice learning, student builds on previously acquired skills and applies this information to various practice settings and clients. Per week: lecture 2 hours.

**OCTA 228 Intervention Techniques (2)**

Introduces intervention strategies as they relate to performance areas within temporal and environmental contexts. Emphasizes safety issues and hands-on performance of techniques related to problem solving for specific classifications of dysfunctions. Major topics include: functional mobility and transfers, self-care skills, assistive technology, joint protection and energy conservation, body mechanics, universal precautions, home management and leisure activities, and client's rights. Per week: lecture 1 hour, laboratory 2 hours.

**OCTA 233 Occupational Therapy Practice I (5)**

Normal and abnormal growth development. Diagnosis and treatment of disorders associated with early childhood and adolescent development. Per week: lecture 4 hours, laboratory 2 hours.

**OCTA 234 Occupational Therapy Practice II (5)**

Course continues integrating and synthesizing the basic knowledge of occupational therapy treatment approaches for commonly encountered physical dysfunction diagnoses. Continues building upon previously acquired foundational learning and working toward analyzing and applying this knowledge throughout the course. Per week: lecture 4 hours, laboratory 2 hours.

Prerequisite: OCTA 233.

**OCTA 235 Occupational Therapy Practice III (5)**

Introduces psychosocial intervention in occupational therapy as it applies across the human lifespan. Emphasizes therapeutic use of self, activity selection and implementation, and therapeutic interventions based on evidence of pathology or resulting impact on occupation. Per week: lecture 4 hours, laboratory 2 hours.

**OCTA 241 Rehabilitation Principles (2)**

Introduces general rehabilitation principles and clinical reasoning. Course work emphasizes OT process, documentation, professional self-development, cultural awareness, and basic clinical reasoning skills. Per week: lecture 1 hour.

**OCTA 251 Human Pathology I (2)**

Basic function of the human body, intended to acquaint students with the variety of disease processes that can and do affect treatment outcomes. Reviews specific systems. Problem solves to find simple methods of modifying treatment to meet patients' needs.

**OCTA 252 Human Pathology II (2)**

Introduces psychiatric diagnosis, personality disorders, and pervasive developmental disorders across the lifespan. Considers areas of impact on occupation. Adapts information from the Diagnostic Statistical Manual-IV TR. Per week: lecture 2 hours.

Prerequisite: OCTA 251.

**OCTA 253 Human Pathology III (2)**

Studies basic function of the human body to acquaint students with variety of disease processes that can affect treatment outcomes. Reviews specific systems. Problem-solves to find simple methods of modifying treatment to meet patient needs. Per week: lecture 2 hours.

**OCTA 256 Professional Self-Management (2)**

Assists in transition from student to professional occupational therapy practitioner. Emphasizes professional self-development—from engaging in strategic career planning to analysis of current state and national issues that affect all occupational therapy practitioners. Facilitates professional engagement in occupational therapy as a career, not simply as a job. Critically examines the concept of “professional” in terms of definition, privilege, and responsibilities. Per week: lecture 2 hours.

**OCTA 261 Aging (2)**

Provides students with an understanding of the core concepts of occupation in elderly and aging populations, including developmental stages, practice settings, public policy, ethics, and special needs. Integrates components found in occupational therapy and occupation with the needs of “the well elderly” population. Per week: lecture 2 hours.

**OCTA 271 Group Dynamics (2)**

Introduces functional groups, theories, models, and dynamics; and their process and development. Opportunity for understanding and developing group membership and leadership through participation in the group experience. Applies knowledge and techniques of group process and interaction to achieve identified therapeutic goals. Per week: lecture 1 hour, laboratory 2 hours.

**OCTA 291 Occupational Therapy Assistant Affiliation I (12)**

Supervised clinical experience in hospitals or community health care programs, with emphasis on treatment of patients with psychosocial dysfunction. Successful completion necessary before student is eligible to take the certification examination. Summer, ten weeks (400 clock hours).

**OCTA 292 Occupational Therapy Assistant Affiliation II (3)**

Supervised clinical experience in hospitals, rehabilitation centers, or community health care programs, with emphasis on treatment of patients with neurophysiological and sensorimotor dysfunction. Successful completion necessary before student is eligible to take the certification examination. Summer, ten weeks (400 clock hours).

**OCTA 299 Directed Study (1-2)**

Under direction of faculty adviser, student is assigned a special project or clinical assignment related to occupational therapy. Regular discussion with the faculty regarding progress and status of assignment.

**OCCUPATIONAL THERAPY****OCTH 301 Introduction to Occupational Therapy (2)**

Defines occupational therapy from basic philosophical and historical perspectives. Describes uniqueness of the profession and various practice areas of occupational therapy. Explores the roles of occupational therapist and describes professional organizations of occupational therapy. Examines the uniqueness of self in relation to professional development. Five weeks: per week—lecture 4 hours, laboratory 2 hours.

**OCTH 305 Introduction to Terminology for Occupational Therapy Practice (2)**

Language of medicine, including word construction, word analysis, definitions, and the use of terms related to occupational therapy. Introduces components of medical charts and language of documentation for therapy services.

**OCTH 306 Group Dynamics and Intervention (2)**

Introduces functional groups, theories, models, and dynamics; and group process and development. Provides opportunity for understanding and development of group membership and leadership through participation in the group experience. Applies knowledge and techniques of group process and interaction to achieve identified therapeutic goals. Per week: lecture 1 hour, group process 2 hours.

**OCTH 309 Human Occupation Across the Lifespan (5)**

Considers how occupation embedded in a diverse social-cultural context is shaped and changed through the human lifespan. Defines occupation in occupational therapy and occupational science, and examines it in historical relationship to human adaptation and health. Introduces and explores delineations among academic studies, theories, models, and frames of reference related to occupation as potential foundations influencing occupational therapy.

**OCTH 314 Task Analysis (2)**

Emphasizes analysis of occupational performance. Identifies occupational profiles and patterns of occupation. Interactive acquisition and analysis of areas of occupation, performance skills, performance patterns, context, activities demands, and client factors. Per week: lecture 2 hours.

**OCTH 315 Therapeutic Media (2)**

Applies occupational therapy through purposeful activity. Analyzes and applies crafts, hobbies, and recreation. Provides practice in development of resources, presentation skills, observation techniques, and therapeutic use of self. Per week: laboratory 4 hours.

Prerequisite: OCTH 314.

**OCTH 316 Design and Technology (2)**

Supports development of basic competencies for assistive technology by examining and assessing theoretical and societal issues, population and policy trends, scientific advances, environmental constraints, funding opportunities, advocacy, and effective outcome evaluation. Case studies allow assistive technology evaluation, basic design, and resource coordination. Per week: 3 hours.

**OCTH 317 Occupational Therapy Practicum I (2)**

Observation and supervised experience in clinical and/or community-based programs. Per quarter: 80 hours.

**OCTH 318 Occupational Therapy Practicum II (2)**

Observation and supervised experience in clinical and/or community-based programs. Per quarter: 80 hours.

**OCTH 321 Intervention Techniques and Strategies I (2)**

Introduces treatment of performance areas within the temporal and environmental contexts. Emphasizes safety issues and hands-on performance of techniques as they relate to solving problems for specific classifications of dysfunctions. Major topics include functional mobility and transfers, self-care skills, assistive technology, joint protection and energy conservation, body mechanics, universal precautions, home management, and leisure activities. Per week: lecture 1 hour, laboratory 2 hours.

**OCTH 331 Functional Kinesiology (3)**

Applies anatomical and mechanical fundamentals of human motion to the analysis of motor skills, including muscle testing and goniometry. Emphasizes the upper extremities. Per week: lecture 2 hours, laboratory 2 hours.

Prerequisite: AHCJ 412.

**OCTH 341 Neuroanatomy (3)**

Basic anatomy and function of the central and peripheral nervous systems, common clinical manifestations of neurologic dysfunction, and occupational performance impact on the individual with neurological dysfunction. Per week: lecture 2 hours, laboratory 2 hours.

Prerequisite: AHCJ 312.

**OCTH 411 Introduction to Occupational Therapy Research (2)**

Critically analyzes evidence-based research and qualitative studies. Introduces various approaches to questioning professional practice outcomes. Springboard to OCTH 571, 572, 573. Per week: lecture 2 hours.

**OCTH 417 Occupational Therapy Practicum III (2)**

Observation and supervised experience in clinical and/or community-based programs. Per quarter: 80 hours.

Prerequisite: OCTH 317, 318.

**OCTH 418 Occupational Therapy Practicum IV (1 or 2)**

Observation and supervised experience in clinical and/or community-based programs. Per quarter: 80 hours.

Prerequisite: OCTH 317, 318, 417.

**OCTH 431 Intervention Techniques and Strategies II (3)**

Introduces the intervention process, using specific occupational therapy theory and frames of reference applied to various populations. Emphasizes sensorimotor integration and neurodevelopmental approaches using case studies. Per week: lecture 2 hours, laboratory 3 hours.

**OCTH 435 Upper-Extremity Rehabilitation and Splinting (3)**

Introduces hand rehabilitation and uniqueness of the occupational therapy approach—including anatomical review of the upper extremity, etiology of common hand diseases and trauma-tissue healing, evaluation of the hand, intervention planning, outcome measures, advanced certification, and relevant California laws. Laboratory includes current concepts in the design and fabrication of upper-extremity orthotics and custom-made assistive devices for the hand. Emphasizes use of low-temperature thermoplastics and alternative splinting materials. Per week: lecture 2 hours, laboratory 2 hours.

Prerequisite: OCTH 451, 452, 453.

**OCTH 441 Fundamentals of Case Management (4)**

Introduces application of critical-reasoning process, effective communication, documentation, and overall professional skill building. Applies case-management skills, evaluation, assessment, intervention planning, implementation, re-evaluation, and termination, when appropriate.

Prerequisite: OCTH 311.

**OCTH 442 Case Analysis, Reasoning, and Management I (2)**

Introduces application of critical-reasoning process; effective communication skills with clients, patients, families, and team members. Documentation and overall professional skill-building.

Prerequisite: OCTH 451.

**OCTH 443 Case Analysis, Reasoning, and Management II (2)**

Continues case-management process as a means of addressing questions of importance to occupational therapy practice through theoretical perspectives. Applies case-management skills, evaluation, intervention planning, implementation, re-evaluation, and termination, when appropriate. Emphasizes critical reasoning through clinically based case presentations. Per week: seminar/discussion 2 hours.

Prerequisite: OCTH 442, 451, 452.

**OCTH 451 Disorders of Human Performance I (5)**

Presents overview of the etiology, clinical course, evaluation, management, and prognosis of congenital, developmental, acute and chronic-disease processes; and of traumatic injuries. Includes problems associated with individuals and families having difficulty with social-cultural expectations. Emphasizes the effect of such conditions on human occupational performance across the lifespan.

Prerequisite: OCTH 309, 341.

**OCTH 452 Disorders of Human Performance II (5)**

Continues overview of etiology, clinical course, evaluation, management, and prognosis of congenital, developmental, acute, and chronic-disease processes; and of traumatic injuries. Includes problems associated with individuals and families having difficulty with social-cultural expectations. Effect of such conditions on human occupational performance across the lifespan.

Prerequisite: OCTH 306, 331, 451.

**OCTH 453 Disorders of Human Performance III (4)**

Continues overview of etiology, clinical course, evaluation, management, and prognosis of congenital, developmental, acute, and chronic-disease processes; and of traumatic injuries. Includes problems associated with individuals and families having difficulty with social-cultural expectations. Effect of such conditions on human occupational performance across the lifespan.

Prerequisite: OCTH 452.

**OCTH 491 Fieldwork Experience I (12)**

Supervised fieldwork experience in clinical and/or community-based programs. Emphasizes assessment, planning, treatment, problem solving, administration, and professionalism. Successful completion necessary before student is eligible to take the certification examination (480 clock hours each).

**OCTH 492 Fieldwork Experience II (6)**

Supervised fieldwork experience in clinical and/or community-based programs. Emphasizes assessment, planning, treatment, problem solving, administration, and professionalism. Successful completion necessary before student is eligible to take the certification examination (480 clock hours each).

**OCTH 499 Occupational Therapy Independent Study (1 to 4)**

Student submits a project or paper on a topic of current interest in an area related to occupational therapy. Regular meetings to provide the student with guidance and evaluation. Elected on the basis of need or interest.

**OCTH 513 Case Analysis, Reasoning, and Management III (3)**

Continues case-management process as a means of addressing questions of importance to occupational therapy practice through theoretical perspectives. Applies case-management skills, evaluation, intervention planning, implementation, re-evaluation, and termination when appropriate. Emphasizes critical reasoning through community-based case practice.

Prerequisite: OCTH 442, 443, 451.

**OCTH 525 Program Seminar (2)**

Develops critical-reasoning skills. Evaluates program effectiveness in providing tools to assess, plan, and implement treatment; make referrals; and discontinue occupational therapy services. Emphasizes professional portfolio and transition to entry-level occupational therapy practitioner.

Prerequisite: Senior standing.

**OCTH 526 Business Topics in Health Care (2 or 3)**

Introduces business for occupational therapy practitioners—including financial statements and budgetary processes, marketing, management, and consultation. Emphasizes use of strategic planning for decision-making processes of program development, productivity, and accountability. Major paper and presentation required for the additional unit.

**OCTH 533 Advanced Fieldwork Experience (40 to 480 hours)**

Advanced fieldwork experience in selected areas of professional practice. Completion of the agreed-upon clock hours required to receive a grade.

**OCTH 541 Current Trends in Occupational Therapy Practice I (3)**

Analyzes current trends in the field of occupational therapy. Includes health care economics, health care administration, legal and regulatory issues, professional responsibilities, political and professional trends, and advocacy.

Prerequisite: senior standing.

**OCTH 542 Current Trends in Occupational Therapy Practice II (3)**

Explores new and future developments in occupational therapy and health care. Addresses issues of social-political involvement, advocacy, alternate employment possibilities, and management; health care systems, including international occupational therapy perspectives.

**OCTH 544 Advanced Occupational Therapy History (3)**

Provides the student with an extensive understanding of the history of occupational therapy by critically reviewing historical incidents, the history of occupational therapy and societal theories and practices, political conditions, and historical incidents. Facilitates the student's ability to enact advocacy and to better understand future projections in the field.

**OCTH 551 Theoretical Perspectives on Occupation I (3)**

Provides the student with an expansive view of diverse influences on occupation and occupational therapy practice by critically investigating occupational theories and academic disciplines, such as anthropology, sociology, psychology, and philosophy.

**OCTH 552 Graduate Seminar (3)**

Provides the student with a view of diverse influences on occupational therapy practice by critically investigating practice theories and issues that will affect the student's transition into professional life.

Prerequisite: OCTH 551.

**OCTH 561 Program Development/Design I (3)**

Focuses on selection, research, and design of programs pertinent to occupational therapy practice.

**OCTH 562 Program Development/Design II (3)**

Implements program planning, culminating with program evaluation and outcome assessment.

Prerequisite: OCTH 561.

**OCTH 563 Professional Competency Development (3)**

Student pursues an area of special interest under the direction of the faculty adviser. Topic must be approved by the OT department.

**OCTH 571 Research I (2)**

Student develops and implements a scholarly research proposal by systematically identifying and investigating a problem, issue, or question of relevance to occupational therapy practice.

Prerequisite: OCTH 411; AH CJ 351, 461.

**OCTH 572 Research II (2)**

Student develops and implements a scholarly research project. Focuses on seeking IRB approval and initiating data-gathering and preliminary analysis of findings.

**OCTH 573 Research III (2)**

Student develops and implements a scholarly research project. Emphasizes analysis of data and presentation of findings in a research colloquium.

Prerequisite: OCTH 572.

**OCTH 598 Occupational Therapy Advanced Specialty Tracks (1 to 3)**

Presents in-depth practice application in an area of occupational therapy. Opportunity to pursue various topics related to current trends. Develops advanced clinical skills, where appropriate.

**OCTH 699 Directed Study (2 or 3)**

Student pursues an area of special interest, under the direction of the faculty adviser. Topic must be approved by the OT department.

**ORAL DIAGNOSIS, RADIOLOGY, AND PATHOLOGY****ODRP 311 General and Oral Pathology DH (5)**

Basic disease processes and selected organ-system diseases. Classification, etiology, and recognition of common oral diseases.

**ODRP 701 Radiology I: Clinical Procedures (1.5)**

Techniques for producing intraoral radiographs, including film processing. Principles of extraoral radiographic techniques. Radiation protection and safety.

**ODRP 725 Patient Assessment and Data Management (1-3)**

Introduces physical evaluation, data collection, and the problem-oriented dental record. Supervised clinical experience with fellow students as “patients.” Student develops a treatment plan and presents it to the patient.

Prerequisite: ODRP 751.

**ODRP 726 Patient Diagnosis and Treatment Planning (1.5)**

Student develops a treatment plan and presents it to the patient. Case-based, small-group treatment-planning exercises. Introduces computer-based treatment-plan management.

**ODRP 735 Dental Emergency Diagnosis and Treatment (1)**

Diagnosis and management of dental emergencies, including caries control, endodontic and prosthodontic emergencies, myofascial pain, hard- and soft-tissue trauma, and forensic issues.

**ODRP 751 General and Systemic Pathology I (4)**

Studies basic disease mechanisms and disease processes, including host responses to pathogens and injury. Studies disease processes of some organs and systems, emphasizing disease mechanisms, epidemiology, disease manifestations, and major treatment modalities.

**ODRP 752 General and Systemic Pathology II (4)**

Continues study of disease processes of the various organs and systems. Emphasizes disease mechanisms, epidemiology, disease manifestations, and major treatment modalities.

Prerequisite: ODRP 751.

**ODRP 755 Radiology II: Theory and Interpretation (2)**

Radiation physics and biology. Intraoral and extraoral radiographic interpretation, including anatomy and pathology. Principles of radiographic selection criteria and quality assurance.

**ODRP 761 Oral Pathology and Diagnosis (6)**

Studies oral mucosal and soft-tissue lesions, developmental and genetic disorders, jaw lesions, salivary gland disorders, oral manifestations of systemic diseases, and some diseases of the skin and head and neck. Includes epidemiology, etiology, clinical and/or radiographic features, microscopic features, and management of disease, emphasizing differential diagnosis.

**ODRP 807 Oral Medicine I (1)**

Signs, symptoms, laboratory tests, medical management, and suggested dental modifications for patients with medical problems of the respiratory, cardiovascular, neurologic, genitourinary, hematopoietic, and endocrine systems.

**ODRP 808 Oral Medicine II (2)**

Differential diagnosis of orofacial and temporomandibular joint pain, including basic guidelines for initial therapy.

**ODRP 811 Oral Medicine III (1)**

Reviews basis of diagnosis and treatment for patients with orofacial pain and temporomandibular dysfunction. Current temporomandibular dysfunction treatment methods from which a practicing dentist may select appropriate therapies. Medical and psychological background necessary for diagnosis and management of temporomandibular dysfunction patients.

**ODRP 821 Special Care Dentistry (1)**

Considerations in the dental treatment of special populations, including the handicapped patient, the hospitalized patient, the medically compromised patient, and the elderly.

**ODRP 825 Oral Diagnosis, Radiology, and Pathology Clinic (.5-3)**

Clinical practice in evaluation, diagnosis, and treatment planning of early-to-intermediate dental and oral disease. Practice in dental-emergency diagnosis and management.

**ODRP 826 Oral Medicine IV (2)**

Differential diagnosis, laboratory studies, and initial management of oral disease utilizing clinical case studies. Epidemiology, methods of detection, diagnosis, and management of oral and maxillofacial cancer. Principles of cancer therapy by surgical, radiation, and medical modalities. Includes discussion of cancer prevention and post-therapy reconstruction.

**ODRP 875 Oral Diagnosis, Radiology, and Pathology Clinic (1-4)**

Clinical practice in evaluation, diagnosis, and treatment planning for patients with intermediate to advanced dental and oral disease. Dental-emergency diagnosis and management.

**ORAL AND MAXILLOFACIAL SURGERY****OMFS 604 Selected Topics in Oral and Maxillofacial Surgery (1)**

A rotating, two-year schedule of weekly seminars covering selected topics in oral and maxillofacial surgery. Following a lecture on these topics, recent representative clinical cases presented and used as the basis for review and discussion—enhancing the knowledge base and critical thinking. Monthly grand rounds, given by respected guest speakers considered to be experts in their respective fields, cover current topics in oral and maxillofacial surgery and in practice management. Repeated registrations required to fulfill the total units.

**OMFS 605 Integrated Orthodontic and Surgical Correction of Dentofacial Deformities (1)**

A monthly multidisciplinary seminar course emphasizing preoperative diagnosis, planning, intraoperative procedures, and postoperative care of orthognathic patients. Includes description of congenital and developmental deformities, emphasizing all aspects of surgical-orthodontics patient management leading to critical thinking and decision making. Patients selected include a wide range of dentofacial deformities. Preoperative skeletal, dental, and soft-tissue analyses performed. Emphasizes the importance of accurate cephalometric analysis in treatment planning, including accurate prediction tracings. Repeated registrations required to fulfill the total units.

**OMFS 606 Applied Surgical Anatomy (1)**

Enables the resident to master the anatomic principles involved in clinical diagnosis and in assessing clinical problem areas encountered in various health care-delivery situations. Discusses in detail the applied anatomic consequences of various surgical and treatment procedures and the anatomic aspects of emergencies occurring in practice, including cadaveric dissection. Emphasizes knowledge of the vascular supply and neuroinnervation of the structures of the oral cavity and adjacent areas of the head and neck. Applies material discussed in terms of actual clinical case presentations.

**OMFS 607 Principles of Medical History, Physical Examination, and Clinical Medicine (2)**

Focuses on developing accurate history-taking and physical examination skills. Specific topics include review of organ systems and associated pathology (physical and laboratory), hospital protocol, and charting. Residents perform history and physical (H&P) on medical and surgical patients. Emphasizes proficiency in developing differential diagnoses of common medical and surgical problems.

**OMFS 608 Surgical Oral and Maxillofacial Pathology Conference (.5)**

Uses recent pathology cases as the basis for review and discussion of common and ominous lesions encountered. Emphasizes differential diagnosis and patient management. Guest lecturers cover selected topics in oral and maxillofacial pathology. Repeated registrations required to fulfill the total units.

**OMFS 609 Literature Review in Oral and Maxillofacial Surgery (.5)**

A monthly discussion of recent literature from selected journals. Reviews classic landmark articles and their impact on the specialty. Repeated registrations required to fulfill total units.

**OMFS 614 Clinical Experience in Oral and Maxillofacial Surgery Practice (7)**

Training in various aspects of oral and maxillofacial surgery. Training in dentoalveolar surgery, complicated fractures of the facial bones, reconstructive maxillofacial surgery, surgical orthognathic correction, treatment of developmental and acquired deformities of the jaw, implant surgery, temporomandibular joint surgery, and osseous grafting of postresection and posttraumatic maxillofacial defects. Study continues in the application of general anesthesia to ambulatory outpatient surgery patients. Residents trained to assume full responsibility for all aspects of the oral and maxillofacial surgery practice. Advanced clinical training in the subspecialty areas of oral and maxillofacial surgery, as well as training through off-service rotations with internal medicine, plastic and reconstructive surgery, head and neck surgery, general surgery, and other specialties. Repeated registrations required to fulfill the total units.

**OMFS 615 Current Trends in Medicine and Surgery (2)**

Off-service specialty seminars on a wide range of topics, including anesthesia, internal medicine, ICU care, general surgery, and various specialty topics. Repeated registrations required to fulfill the total units.

**OMFS 616 Application of Surgical Principles to Orthognathic Surgery (1)**

Introductory multidisciplinary lecture-seminar emphasizing preoperative diagnosis, treatment planning, intraoperative procedures, and postoperative care of orthognathic patients; description of congenital and developmental deformities, emphasizing all aspects of surgical-orthodontic patient management.

**OMFS 617 Critical Decision Making in Oral and Maxillofacial Surgery (1)**

A weekly seminar designed to expand the participants' skill in critical decision making as it pertains to patient care in the field of oral and maxillofacial surgery. Students present cases weekly of proposed surgical experiences—reviewing data gathering, treatment alternatives, and treatment of complications. Additionally, selected posttreatment cases presented to review the proposed treatment versus the actual outcome as an opportunity for the participant to be involved with an outcome assessment analysis. Repeated registrations required to fulfill the total units.

**OMFS 697A Research (1)**

Student identifies a research project, prepares a proposal, and obtains approval for the protocol.

**OMFS 697B Research (1)**

Student conducts the actual research project, including the data collection and evaluation.

**OMFS 698 Thesis (1)****OMFS 805 Oral and Maxillofacial Surgery I (1)**

Theory of oral surgery. Etiology, diagnosis, and surgical treatment of oral conditions and diseases commonly encountered in general practice. Familiarizes student with fundamental surgical techniques, principles involved in extraction of teeth, and selection and use of equipment.

**OMFS 811 Oral and Maxillofacial Surgery II (1)**

Continues preparatory topics for general practice. Medications used in oral maxillofacial surgery, surgical complications, assessment of oral maxillofacial surgery for impacted third molars, surgical treatment of cysts, pre-prosthetic surgery, recognition and evaluation of trauma, introduction to orthognathic surgery.

Prerequisite: OMFS 805.

**OMFS 819 Intravenous Sedation (1.5)**

Theory and practice of intravenous sedation as an adjunct to dental treatment. Physical diagnosis, venipuncture, intravenous fluid administration, monitors, medications, sedation techniques, emergencies. Only students accepted to the OMSF Honors Program may register for this course.

**OMFS 825 Oral and Maxillofacial Surgery Clinic I (1)**

Clinical application of the principles of oral maxillofacial surgery. Opportunities to gain experience in cases of the type treated by the general dentist.

**OMFS 875 Oral and Maxillofacial Surgery Clinic II (1)**

Clinical application of the principles of oral maxillofacial surgery. Opportunities to gain experience in cases of the type treated by the general dentist.

**OPHTHALMOLOGY****OPHM 891 Ophthalmology Elective (60 to 720 hours)****ORTHODONTICS AND DENTOFACIAL ORTHOPEDICS****ORDN 524 Introduction to Graduate Orthodontics (12)**

Lecture course outlining the principles of applied design, the application of forces to produce tooth movement, and the tissue response to such forces. Overview of orthodontics to prepare the student for clinical practice of orthodontics diagnosis and treatment planning, including cephalometrics, growth forecasting, and preparation of visual treatment objectives.

**ORDN 524L Introduction to Graduate Orthodontics Laboratory (6)**

Selected laboratory projects to enhance the didactic portion of the course.

**ORDN 525 Materials Science and Mechanics (2)**

Structure and properties used in orthodontics. Analyzes the effects of mechanical and heat treatment. Surveys strength and mechanics in force-delivery systems.

**ORDN 526 Applied Anatomy (2)**

Fundamentals of anatomy as applied to a special region or application.

**ORDN 527 Clinical Photography (1)**

Clinical proficiency in intraoral and extraoral photography. Discusses and uses photographic equipment and techniques on orthodontic patients. Camera, lens, and flash required.

**ORDN 535 Advanced Cephalometrics (2)**

Studies cephalometrics from a historical perspective to the present time, including most of the major analyses.

**ORDN 536 Concepts of Physical Anthropology (2)**

Basic and classic concepts of physical anthropology as they relate to orthodontics.

**ORDN 545 Growth and Development (3)**

Principles of growth and development from the subcellular to the tissue level. Emphasizes myogenesis and osteogenesis. Prenatal and postnatal development of the face and jaws, including the classic concepts of facial growth. Considers general growth, with the goal of developing ability to recognize abnormal signs, observe variations, diagnose pathological conditions, know the normal, predict height, and use various standards to assess growth and development.

**ORDN 546 Fundamentals of Occlusion (2)**

The development of the human face and dentition. A concept of dynamic functioning occlusion.

**ORDN 571 Diagnosis and Treatment Planning I (2)**

Student diagnoses and treats assigned patients.

**ORDN 574 Diagnosis and Treatment Planning II (2)**

Continues ORDN 571, with follow-up of clinical cases with progress records.

**ORDN 584 Current Orthodontics Literature I (2)**

Presents current papers in various subspecialties of orthodontics.

**ORDN 591 Current Orthodontics Literature II (2)**

Presents current papers in various subspecialties of orthodontics.

**ORDN 597 Orthognathic Surgery Theory and Literature Review (2)**

Presents current papers in various subspecialties of orthodontics, with primary emphasis on surgical orthodontics. Presents cases with various problems requiring surgery.

**ORDN 604 Seminar in Orthodontics (1)**

Critically reviews suggested etiological factors of malocclusion. Problems of diagnosis and the rationale of various treatment philosophies. Liberally uses current literature. Discussion by guest lecturers with demonstrated competence in the field.

**ORDN 605 Advanced Seminar in Orthodontics (1)**

Second-year seminar. Design of clinical diagnosis, and practice management.

**ORDN 606 Craniofacial Genetics (2)**

Basic genetics. Introduces craniofacial clinic.

**ORDN 608 Physiology and Pathology of Speech (1)**

Studies specific areas of oral myofunctional disorders that influence the occlusion.

**ORDN 625 Clinical Practice in Orthodontics (200 to 900 hours)**

Students diagnose and treat assigned patients, including adults. Repeated registrations required to fulfill the total units.

**ORDN 634 Orthodontic Clinical Conference (2)**

Students prepare and present diagnosis, case analysis, and treatment plan—with primary emphasis on difficult and unusual cases.

**ORDN 635 Finishing Mechanics I (2)**

Orthodontic treatment modalities, emphasizing finishing mechanics for the patient.

**ORDN 636 Finishing Mechanics II (1)**

A seminar course created for first-year graduate orthodontic students, exposing them to alternate treatment philosophies and modalities. Guest orthodontists present the main portion of the course and demonstrate their treatment concepts in finishing orthodontic cases.

**ORDN 654 Practice Teaching in Orthodontics (1-4)**

Students gain experience in teaching clinical orthodontics to predoctoral dental students. Repeated registrations required to fulfill the total units.

**ORDN 655 Temporomandibular Function and Dysfunction (2)**

The temporomandibular joint and dysfunction in health and disease. Diagnosis, treatment planning, and treatment of the temporomandibular joint, emphasizing the integration of orthodontics and temporomandibular joint treatment.

**ORDN 657 Orthodontic Board Preparation (1-6)**

Student presents finished orthodontic cases to faculty and residents. Prepares for the American Board of Orthodontics. Repeated registrations required to fulfill the total units.

**ORDN 697A Research (1)**

Student identifies a research project, prepares a proposal, and obtains approval for the protocol.

**ORDN 697B Research (1)**

Research, including data collection and evaluation.

**ORDN 698 Thesis (3)****ORDN 751 Principles of Orthodontics I (1)**

Objectives and science of orthodontics. Incidence, etiology, and recognition of malocclusion. Craniofacial growth and development. Diagnostic procedures, aids, and interpretation.

**ORDN 801 Minor Tooth Movement (2)**

Lecture, laboratory demonstration, and clinical exercise prepares students to diagnose and treat limited clinical problems. Applies theory. Minor tooth movement.

**ORDN 811 Principles of Orthodontics II (1)**

Biophysical principles. Removable and fixed orthodontic appliances, adult orthodontics, surgical orthodontics. Treatment planning. Interaction with other disciplines. National Board Examination preparation. Selected topics in orthodontics.

**ORDN 875 Orthodontics Clinic (1)**

Clinical application of skills that have been learned in the laboratory to manage minor tooth movement and early-treatment cases.

**RADIOLOGY****ORPA 533 Radiology (2)**

Utilization of the physical nature of x-rays to better understand image production, biological effects of x-rays, radiation safety, application of principles of radiographic techniques. Risk estimation and radiographic interpretation.

**ORTHOPAEDICS****ORTH 891 Orthopaedic Surgery Elective (60 to 720 hours)****OTOLARYNGOLOGY****OTOL 891 Otolaryngology Elective (60 to 720 hours)****PHYSICIAN ASSISTANT SCIENCES****PAST 401 Anatomy and Physiology I (3)**

Gross and microscopic anatomy of the human body. Lecture, laboratory with cadaver dissection, demonstration, and slides. Orientation to structure of various systems of the body.

Prerequisite: Series to be taken in sequence.

**PAST 402 Anatomy and Physiology II (3)**

Gross and microscopic anatomy of the human body. Lecture, laboratory with cadaver dissection, demonstration, and slides. Orientation to structure of various systems of the body.

Prerequisite: Series to be taken in sequence; PAST 401.

**PAST 403 Anatomy and Physiology III (3)**

Gross and microscopic anatomy of the human body. Lecture, laboratory with cadaver dissection, demonstration, and slides. Orientation to structure of various systems of the body.

Prerequisite: Series to be taken in sequence; PAST 402.

**PAST 404 Biochemistry for Physician Assistants (3)**

Chemistry and metabolism of carbohydrates, lipids, nucleic acids, and proteins. Chemical basis of life processes. Lecture and laboratory demonstrations to support student competency.

**PAST 406 Clinical Laboratory (2)**

Provides the physician assistant student with an overview of clinical laboratory procedures and operations.

Emphasizes interpretation and clinical significance of commonly ordered laboratory tests. Observation and performance of laboratory testing routinely performed in primary-care offices and hospital laboratories. Lecture and laboratory. Laboratory exposure provided in a clinical laboratory setting.

**PAST 411 Pathology for Physician Assistants I (3)**

Fundamental mechanisms of disease, including cell injury, inflammation, repair, regeneration, and fibrosis; vascular, cardiac, respiratory, gastrointestinal, hepatobiliary, urinary, reproductive, endocrine, and integumentary pathologies. One hour per week participation in differential diagnosis seminar required.

**PAST 412 Pathology for Physician Assistants II (3)**

Fundamental mechanisms of disease, including the central and peripheral nervous systems; bones and joints; skeletal muscle; developmental, genetic, infectious, and parasitic pathologies; and neoplasia. Two autopsy observations with written report, and one hour per week participation in differential diagnosis seminar required.

**PAST 421 Pharmacology for Physician Assistants I (3)**

Part I of a two-part course that covers basic concepts of pharmaceuticals used in diagnosis, prevention, and treatment of disease. Systematic presentation of the pharmacology and therapeutic value of drugs used in medicine. Related topics—with special consideration of pediatric and geriatric pharmacology—include drug legislation, PDR, routes of administration, pharmacokinetics, pharmacodynamics, adverse effects, drug interactions, and drug toxicity. Overview of physician assistant's responsibilities in prescribing and/or dispensing pharmaceuticals.

**PAST 422 Pharmacology for Physician Assistants II (3)**

Part II of a two-part course that covers basic concepts of pharmaceuticals used in diagnosis, prevention, and treatment of disease. Systematic presentation of the pharmacology and therapeutic value of drugs used in medicine. Related topics—with special consideration of pediatric and geriatric pharmacology—includes drug legislation, PDR, routes of administration, pharmacokinetics, pharmacodynamics, adverse effects, drug interactions, drug toxicity. Overview of PAs responsibilities when prescribing and/or dispensing pharmaceuticals.

**PAST 501 Clinical Medicine for Physician Assistants I (5)**

Studies common medical and/or surgical disorders encountered in general adult medicine. Typical clinical presentation, etiology, pathophysiology, diagnostic work-up, EKG interpretation, and management of these disorders.

**PAST 502 Clinical Medicine for Physician Assistants II (5)**

Studies common medical and/or surgical disorders encountered in general adult medicine. Typical clinical presentation, etiology, pathophysiology, diagnostic work-up, and management of medical and/or surgical disorders.

**PAST 504 Primary Care Pediatrics (2)**

Introduces common medical and surgical disorders encountered in pediatric medicine. Emphasizes primary-care concepts in the care of children. Introduces rare disorders that the PA may encounter in primary care. Presentation of disease processes mirrors adult medicine by discussing the etiology, pathophysiology, clinical presentation, diagnostic work-up, and management.

**PAST 505 Women's Health Care (2)**

Common problems encountered in caring for women; management of these problems. Etiology, pathophysiology, clinical presentation, and diagnostic work-up.

**PAST 506 Clinical Skills for Physician Assistants (4)**

Introduces the basic skills and knowledge needed to evaluate and treat common illnesses and injuries. Safety, aseptic technique, BLS, ACLS, wound care, local anesthesia, suturing, casting, splinting, use of various tubes and drains, and emergency medicine; and surgery for physician assistants.

**PAST 507 Preventive Medicine Concepts (2)**

Selected topics dealing with aspects of disease prevention. Relevance of statistics, epidemiology, research designs, and clinical trials; as well as selected disease trends, lifestyle modification, the role of physical activity, nutrition and immunization, and public health approaches to communicable diseases, and genomics.

**PAST 509 Behavioral Science for Physician Assistants (3)**

Behavioral science counseling skills necessary to assist patients in dealing with illness and injury, in following prescribed treatment regimens, and in adopting attitudes and behaviors leading to improved health behaviors (including thinking, feeling, and acting).

**PAST 514 Physical Diagnosis I (3)**

Part I of a two-part sequence of lecture, demonstration, and practice in the art and science of obtaining the medical history and performing the physical examination.

**PAST 515 Physical Diagnosis II (3)**

Part II of a two-part sequence of lecture, demonstration, and practice in the art and science of obtaining the medical history and performing the physical examination.

Prerequisite: PAST 514.

**PAST 516 Physician Assistant Professional Issues (2)**

A historical perspective of the PA profession, as well as current trends and issues; the PA's role in health care delivery; political and legal factors that affect PA practice; intraprofessional factors and the PA's role in relation to physicians and other providers. Importance of professional responsibility and of biomedical ethics in relation to the PA's role as health care provider. Content relating to PA professional organizations, program accreditation, and graduate certification and recertification; employment considerations; and professional liability.

**PAST 517 Case Study Writing (2)**

Student selects a case study patient and prepares a case study for publication in journals appropriate to the physician assistant profession.

**PAST 521 Research I (3)**

Introduces the scientific method in health-science research. Focuses on the major steps of the research process: Problem identification, literature review, conceptual framework, identification of variables, statement of hypotheses, experimental design and analysis, and presentation of data. Includes critical evaluation of research literature.

**PAST 522 Research II (2)**

Student applies the research process to problems in related specific allied health fields and develops a research proposal. Pilot testing of procedures and data-collection forms.

Prerequisite: PAST 521.

**PAST 523 Research III (2)**

Student implements a research proposal in a practice setting. Computer data analysis and preparation of a research report both in written and oral formats. Student develops and creates a PowerPoint presentation, poster, and abstract for submission to a professional meeting.

Prerequisite: PAST 521, 522.

**PAST 524 Family Medicine I (4)**

A four-week rotation in a primary care clinic. Provides clinical experience with common medical problems and health care needs of all age groups. Forty hours per week.

**PAST 525 Family Medicine II (4)**

A four-week rotation in a primary care clinic that includes urgent care. Clinical experience with common medical problems and health care needs of all age groups. May require late evening and weekend hours. Forty hours per week.

**PAST 526 Internal Medicine I (Inpatient Medicine) (4)**

A four-week rotation as part of an internal medicine admitting team. Clinical experience with common medical problems, admissions, daily rounds, and patient management and discharge processes. On-call required (overnight). Sixty hours per week.

**PAST 527 Internal Medicine II (Outpatient Medicine) (4)**

A four-week rotation in outpatient medical clinics. Clinical experience with common adult medical problems, including management of chronic diseases. Forty hours per week.

**PAST 528 Pediatrics I (Inpatient Pediatrics) (4)**

A four-week rotation as part of a pediatrics admitting team. May include overnight in-hospital call, emergency room call, ward rounds, and outpatient clinic duties. Clinical experience with common childhood illnesses, admissions, discharge, daily progress notes, and patient-management processes. Sixty hours per week.

**PAST 529 Pediatrics II (Outpatient Pediatrics) (4)**

A four-week rotation in a pediatrics clinic. Clinical experience with common medical problems and health care needs of people from birth to 18 years. May require evening or weekend hours. Forty hours per week.

**PAST 531 Obstetrics and Gynecology (4)**

A four-week rotation through various aspects of an obstetrics and gynecology service. Clinical experience in women's health care—emphasizing primary care, including normal pregnancy and childbirth. May require in-hospital on-call (overnight) or late hours. Sixty hours per week.

**PAST 532 General Surgery (4)**

A four-week rotation on general surgery service. Clinical experience with common medical problems requiring surgical intervention, primarily in adults. Includes assignment to an admitting team, in-hospital call (overnight), or late hours. Includes assisting in the operating room and surgical clinic. Sixty hours per week.

**PAST 533 Emergency Medicine (4)**

A four-week rotation through a hospital emergency department, primarily in urgent care or assigned to minor trauma and illnesses. Clinical experience with common illnesses and injuries, suturing, and splinting. Requires late night and weekend duties. Sixty hours per week.

**PAST 534 Psychiatry/Behavioral Medicine (4)**

A four-week rotation through an inpatient and outpatient behavioral medicine service. Clinical experience with common mental health problems, including acute and chronic psychoses, substance abuse, and affective disorders. May require late night or on-call duties. Sixty hours.

**PAST 536 Elective I (2)**

A four-week elective rotation through a medical or surgical service of choice (as available). Hours/call may vary.

**PAST 537 Elective II (4)**

A four-week elective rotation through a medical or surgical service of choice (as available). Hours/call may vary.

**PATHOLOGY****PATH 514 Human Pathology: Review by Organ Systems (1 or 3)**

Systematically reviews diseases affecting each organ system. Covers etiology, pathogenesis, morphology, pathophysiology, and biologic behavior; as well as relevant laboratory medicine techniques. Correlates with concurrent courses in physiology, microbiology, and physical diagnosis.

Prerequisite: MDCJ 553, 554, 555, 556.

Recommended: Concurrent or previous medical microbiology.

**PATH 515 Human Pathology: Review by Organ Systems (4)**

Systematically reviews diseases affecting each organ system. Covers etiology, pathogenesis, morphology, pathophysiology, and biologic behavior; as well as relevant laboratory medicine techniques. Correlates with concurrent courses in physiology, microbiology, and physical diagnosis.

Prerequisite: MDCJ 553, 554, 555, 556.

Recommended: Concurrent or previous medical microbiology.

**PATH 516 Human Pathology: Review by Organ Systems (3)**

Systematically reviews diseases affecting each organ system. Covers etiology, pathogenesis, morphology, pathophysiology, and biologic behavior; as well as relevant laboratory medicine techniques. Correlates with concurrent courses in physiology, microbiology, and physical diagnosis.

Prerequisite: MDCJ 531, 532, 533.

Recommended: Concurrent or previous medical microbiology.

**PATH 599 Directed Study (120 to 720 hours)****PATH 891 Pathology Elective (1.5-18)****PHYSICAL EDUCATION ACTIVITIES****PEAC 110 Independent Activities (.5 or 1)**

Develops an appropriate activity program in conjunction with the staff at the activities center. Develops motor skills and physical stamina in a manner that will promote lifelong involvement in physical activity.

**PEDIATRIC DENTISTRY****PEDN 503 Pediatric Dental Seminar (2)**

Selected clinical topics in pediatric dentistry.

**PEDN 508 Pediatric Hospital Dentistry Seminar (2-4)**

Hospital protocol and the care of patients in a hospital environment.

**PEDN 512 Oral Sedation Seminar (2)**

Pharmacology, medical considerations, clinical applications, and protocols for oral sedation.

**PEDN 521 Principles of Medicine and Physical Diagnosis (2)**

Medical and physical diagnosis for the pediatric dental patient.

**PEDN 524 Introduction to Orthodontics (2)**

Diagnosis and treatment planning for clinical orthodontics.

**PEDN 524L Introduction to Orthodontics Laboratory (1 or 2)**

Fabrication of various orthodontic appliances.

**PEDN 546 General Anesthesia (160 hours)**

Experience in general anesthesia in a hospital setting.

**PEDN 601 Pediatric Dental Practice Management (2)**

Principles of establishing a pediatric dental practice. Information regarding establishment and operation of a pediatric dental practice.

**PEDN 604 Pediatric Dental Literature (2-12)**

Pediatric dental literature study, including literature found on the reading list of the American Board of Pediatric Dentistry. Repeated registration required to fulfill the total units.

**PEDN 625 Pediatric Dental Clinic (132 to 220 hours)**

Clinical pediatric dental experience in both the outpatient and inpatient settings for patients with a variety of clinical needs and problems.

**PEDN 654 Practice Teaching for Pediatric Dentistry (1-5)**

Student gains teaching pediatric dentistry in clinical and laboratory settings. Repeated registrations required to fulfill the total units.

**PEDN 680 Elective Study for Advanced Education Students of Pediatric Dentistry (1-10)**

Topics selected by students in the advanced education program in pediatric dentistry and by department faculty. Repeated registrations required to fulfill the total units.

**PEDN 697A Research (1)**

Student identifies a research project, prepares a proposal, and obtains approval for the protocol.

**PEDN 697B Research (1)**

Research, including data collection and evaluation.

**PEDN 698 Thesis (1-3)**

Required for M.S.-degree track.

**PEDN 753 Pediatric Dentistry I Lecture (2)**

Prevention of dental disease (oral hygiene, diet, fluoride, pit and fissure sealants). Behavior management of the child dental patient. Diagnosis, treatment planning, and operative dentistry for children. Pediatric pulp therapy, dental arch-length management, local anesthesia and sedation for children. Medical aspects of pediatric dentistry.

Corequisite: PEDN 753L.

**PEDN 753L Pediatric Dentistry I Laboratory (1)**

Corequisite: PEDN 753.

**PEDN 821 Pediatric Dentistry II (1)**

Traumatic injuries to the primary and young permanent teeth and oral soft tissues. Dentistry for the handicapped, the adolescent, the infant, and the very young child. Child abuse. Oral habits of children.

**PEDN 825 Pediatric Dentistry Clinic (.5-3.5)**

Dental care of children in their primary, mixed, and young permanent dentition. Etiology of disease, prevention of oral disease, growth and development analysis, treatment planning, restorative procedures, and arch-length control.

**PEDN 875 Pediatric Dentistry Clinic (.5-3)**

**PEDIATRIC MEDICINE****PEDS 599 Pediatrics Directed Study (1.5–18)****PEDS 701 Pediatrics Clerkship (1.5–12)**

An eight-week clerkship that addresses issues unique to childhood and adolescence by focusing on human development; and by emphasizing the impact of family, community and society on child health and well-being. Additionally focuses on the impact of disease and its treatment on the developing human; and emphasizes growth, development, principles of health supervision, and recognition of common health problems. Stresses the role of the pediatrician in prevention of disease and injury and importance of collaboration between the pediatrician, other health professionals, and the family.

**PEDS 791 Pediatrics Third-Year Elective (3)**

A two-week elective in the third year of medicine.

**PEDS 821 Pediatrics Subinternship (60 to 240 hours)**

**PEDS 822 Pediatrics Intensive Care (120 hours)**  
Builds upon and expands the base of core knowledge established during the third-year clerkship. Refines problem-solving skills, emphasizing the development of a rational treatment program for each patient. Teaches students to integrate into clinical medicine the principles of pathophysiology. Teaches students to relate to other members of the health care team in a cooperative and respectful manner. Develops students' ability to use the scientific literature in the clinical setting, with emphasis on individual learning

Prerequisite: PEDS 701.

**PEDS 891 Pediatrics Elective (60 to 780 hours)****PERIODONTICS / PERIODONTICS AND IMPLANT SURGERY****PERI 524 The Periodontium (2)**

Reviews literature concerning the anatomy (macro-, micro-, and ultrastructural) and the physiology of the periodontium.

**PERI 531 Periodontal Pathology (2)**

Reviews literature that forms the basis for current concepts of the etiology and pathogenesis of periodontal diseases. Repeated registrations required to fulfill the total units.

**PERI 546 General Anesthesia Clinic (2)**

Clinical rotation, including physical evaluation, airway management, management of medical emergencies in patients scheduled for anesthesia, and introduction to conscious sedation.

**PERI 601 Periodontal Therapy (2)**

Reviews literature that forms the basis for current concepts of the treatment of periodontal diseases. Repeated registrations required to fulfill the total units.

**PERI 604 Current Periodontal and Implant Literature (2)**

Reviews most recent issues of periodontal and implant scientific journals. Repeated registrations required to fulfill the total units.

**PERI 605 Implant Literature Review (2)**

Reviews literature providing the basis for implant surgery, as well as concepts for implant restoration. Repeated registrations required to fulfill the total units.

**PERI 611 Introduction to Periodontics (2)**

Overview of the clinical science of periodontics, including epidemiology, etiology, therapy, clinical methods, and record keeping.

**PERI 614 Implant Treatment Planning (2)**

Limited to residents enrolled in two disciplines (i.e., advanced education in periodontics and implant surgery, and advanced prosthodontics). Residents required to present cases that involve mutual interests. Repeated registrations required to fulfill the total units.

**PERI 625 Clinical Practice in Periodontics (100 to 200 hours)**

Clinical experience in the diagnosis and treatment of periodontal diseases. Repeated registrations required to fulfill the total units.

**PERI 626 Clinical Practice in Implant Surgery (2-4)**

Clinical experience in the diagnosis and treatment regarding implant surgery. Repeated registrations required to fulfill the total units.

**PERI 634 Clinical Conference (1 or 2)**

Case-management conference to assist the student in diagnosis, treatment planning, and the management of periodontal diseases and implant surgery. Repeated registrations required to fulfill the total units.

**PERI 654 Practice Teaching in Periodontics (1)**

Experience in teaching the predoctoral dentistry student.

**PERI 697A Research (1)**

Student identifies a research project, preparing a proposal, and obtaining approval for the protocol.

**PERI 697B Research (1)**

Research, including data collection and preparing a written report.

**PERI 698 Thesis (1)****PERI 705 Introduction to Periodontics (2)**

Reviews gross and microscopic anatomy of the periodontium in health and disease. Primary etiology of periodontal disease. Examines patient's clinical periodontal status and introduces the diagnostic and treatment-planning process.

**PERI 741 Essential Periodontal Therapy (2)**

Develops philosophy and skills in personal and patient plaque control. Develops skill and biological basis for periodontal instrumentation. Impact of these procedures on the bacterial microflora and periodontal tissues. Comprehensive treatment planning, prognostication, limitation and evaluation in short- and long-range periodontal treatment. Laboratory exercises and clinical training required.

Corequisite: PERI 741L.

**PERI 741L Essential Periodontal Therapy Laboratory (1)**

Technique laboratory to accompany the lecture.

**PERI 751 Planning and Evaluation in Periodontal Therapy (1)**

Comprehensive treatment planning. Diagnosis of endo-perio lesions. Prognostication, limitations, and evaluations of periodontal therapy on a short- and long-range basis, including rationale for maintenance therapy and adjunctive chemical antimicrobial therapy.

**PERI 765 Special Topics in Periodontal Therapy (2)**

Advanced cases; special problems related to periodontal therapy in interdisciplinary cases.

**PERI 805 Periodontal Surgical Therapy (1)**

Long-term comparison of various currently accepted periodontal surgical procedures, including rationales, techniques, postoperative care, and healing processes and outcomes. Laboratory exercises in application of surgical principles for access procedures. Modification of tissue morphology.

**PERI 875 Periodontics Clinic (1-7.5)****PUBLIC HEALTH CONJOINT****PHCJ 250 Fundamentals of Human Anatomy and Physiology (4)**

Integrated, fundamental study of anatomy and physiology of the human body from a systems perspective. Includes laboratory.

**PHCJ 401 Essentials of Public Health (4)**

Essential issues in public health, including history from ancient times to HMOs; definitions; organization and infrastructure; functions, practices, programs, and services. Contributions of important public health practitioners. Political, social, and economic considerations of public health problems.

**PHCJ 501 Introduction to On-line Learning (1)**

Orientation to on-line instruction programs. Includes introductions to Loma Linda University; the School of Public Health faculties, facilities and resources; use of library on-line services; Web-based instruction; Blackboard; course formatting; and fellow students.

**PHCJ 510 Native American Health Care and Wellness (3)**

Culture, history, and political and social dynamics affecting the health of Native Americans. Topics include: history of Native Americans, the Native American universe, history of Native American disease, current state of Native American health, merging traditional healing and Western medicine, improving Native American wellness, effects of federal Indian law, Indian Health Service and its predecessors.

**PHCJ 534 Research Methods (2 or 3)**

Philosophy of scientific research, sources of research invalidity, quantitative and qualitative literature-review techniques, setting research goals and objectives, quasi-experimental and experimental design, research ethics. Requires presentation and critique of published research and literature review for 3 units of credit.

Prerequisite: STAT 509.

**PHCJ 604 Research Seminar (2)**

Student develops and critiques research and dissertation proposals, with peer review of research protocols. Limited to doctoral degree students.

Prerequisite: SHCJ 534; STAT 515.

**PHCJ 605 Philosophy of Public Health (1)**

Selected topics addressing issues, concepts, and recent developments in public health.

**PHCJ 695 Community Practicum (1-3)**

Individual arrangements for students with health-professional backgrounds to participate in a guided, structured, practical experience in ongoing clinical lifestyle-modifying situations. Minimum of thirty hours required for each unit of credit. A maximum of 4 units applicable to a degree program.

**PHCJ 900 Continuing Registration (0)**

Provides degree-seeking graduate students registration on a continuing basis each quarter of the regular academic year in order to maintain active status in the School of Public Health. Designed for those who have received grades for all didactic course work but have not completed their programs. Required of all doctoral students who have exceeded the five-quarter limit on "in progress" grades for dissertations.

**PHILOSOPHY****PHIL 616 Seminar in the Philosophy of Science (3 or 4)**

Explores the meaning(s) of scientific facts, laws, and theories—with special attention to the development of scientific thought, the nature of scientific discovery, contrasting interpretations of scientific inquiry, and the ethical ramifications of scientific discovery. Additional project required for fourth unit.

**PHARMACOLOGY****PHRM 411 Pharmacology DH (1)**

Uses, actions, and potential toxic effects of medications most frequently used by dental patients.

**PHRM 501 Pharmacology and Therapeutics SD (4)**

Principles of drug action: drug receptors, absorption and fate of drugs, drug toxicity, and drug development. Systematically considers the pharmacology and clinical applications of the major drugs used by dental patients. Demonstrations illustrating the effects of drugs in animals and man.

**PHRM 503 Clinical Pharmacology in Dentistry (2)**

Use of medications in the treatment of dentally related diseases, and their potential interaction with total patient care.

**PHRM 511 Medical Pharmacology SM (5)**

Principles of drug action: drug receptors, absorption and fate of drugs, drug toxicity, and drug development. Systematically considers the pharmacology and therapeutic value of drugs used in medicine. Demonstration and laboratory exercises illustrating the effects of drugs in man or animals.

**PHRM 512 Medical Pharmacology SM (3)**

Principles of drug action: drug receptors, absorption and fate of drugs, drug toxicity, and drug development. Systematically considers the pharmacology and therapeutic value of drugs used in medicine. Demonstration and laboratory exercises illustrating the effects of drugs in man or animals.

**PHRM 534 Topics in Pharmacology for Dentistry (2)**

Lectures and discussions dealing with pharmacologic agents used in dentistry. Emphasizes current agents used in dental anesthesia, both local and general. Offered on demand.

**PHRM 535 Clinical Pharmacology (3)****PHRM 544 Topics in Advanced Pharmacology (3)**

Lectures and discussions dealing with current advanced concepts in pharmacology, such as structure-action relationships, mechanisms of action, and metabolism and detoxification of therapeutic agents. Offered on demand.

**PHRM 545 Laboratory in Advanced Pharmacology (1-2)**

Experimental studies illustrating the didactic material presented in PHRM 544. Offered on demand.

**PHRM 554 Neuropharmacology (4)**

Systematically discusses drugs that affect primarily the nervous system, with major emphasis on mechanism of action.

**PHRM 555 Laboratory in Neuropharmacology (1)**

Experimental studies illustrating the didactic material presented in PHRM 554.

**PHRM 564 Cardiovascular and Renal Pharmacology (3)**

Systematically discusses drugs that affect primarily the cardiovascular and renal systems, emphasizing mechanism of action. Offered on demand.

**PHRM 565 Laboratory in Cardiovascular and Renal Pharmacology (1)**

Experimental studies illustrating the didactic material presented in PHRM 564. Offered on demand.

**PHRM 584 Drug Metabolism and Biochemical Pharmacology (4)**

Discusses in detail the fate of drugs in the body, together with related aspects of biochemical actions of drugs.

**PHRM 585 Laboratory in Drug Metabolism and Biochemical Pharmacology (1)**

Experimental studies illustrating the didactic material presented in PHRM 584.

**PHRM 586 Toxicology (3)**

Discusses deleterious effects of drugs and common poisons. Measures that can be taken to combat poisoning. Offered on demand.

**PHRM 605 Integrative Biology Graduate Seminar (1)**

Seminar coordinated by the Departments of Anatomy and of Pharmacology and Physiology. Reports from current literature and presentation of student and faculty research on various aspects of regulatory and integrative biology as applied to cells, tissues, organs, and systems. Students and faculty participate in a discussion and critical evaluation of the presentation.

**PHRM 684 Special Problems in Pharmacology (2-6)**

Assignments in literature reviews and/or laboratory exercises.

**PHRM 697 Research (1-6)****PHRM 698 Thesis (1-6)****PHRM 699 Dissertation (1-6)****PHRM 891 Pharmacology Elective (120 to 720 hours)****PHYSIOLOGY****PHSL 501 Neurophysiology DN (3)**

Presents basic principles in neurophysiology to enhance understanding of normal and pathophysiologic function.

**PHSL 502 Basic Neurophysiology (3)**

Intensive four-week course that includes rudimentary neuroanatomy, electrophysiology of neurons, skeletal muscle, synaptic transmission, sensory systems, and motor control. Discusses higher functions, such as sleep and brain electrical activity.

**PHSL 504 Physiological Systems of the Human Body (5)**

Physiological bases of normal function. Lectures and laboratory demonstrations illustrating the physiological principles and systems in man.

**PHSL 505 Homeostatic Mechanisms of the Human Body (4)**

Physiological basis of homeostatic control mechanisms. Lectures and laboratory demonstrations illustrating how the various systems of the body are controlled.

**PHSL 511 Medical Physiology I (1 or 2)**

Presents normal functions of the various systems of the human body—providing a proper understanding of mechanisms of disease, with their concomitant pathophysiology. Lecture, audiovisual demonstrations, computer models, and limited animal studies provide knowledge of the physiological principles.

**PHSL 512 Medical Physiology II (4)**

Presents normal functions of the various systems of the human body—providing a proper understanding of mechanisms of disease, with their concomitant pathophysiology. Lecture, audiovisual demonstrations, computer models, and limited animal studies provide knowledge of the physiological principles.

**PHSL 513 Medical Physiology (2)**

Presents normal functions of the various systems of the human body—providing a proper understanding of mechanisms of disease, with their concomitant pathophysiology. Lecture, audiovisual demonstrations, computer models, and limited animal studies provide knowledge of the physiological principles.

**PHSL 515, 516, 517, 518 Medical Physiology (1, 1, 5, 1)**

Presents normal functions of the various systems of the human body—providing a proper understanding of mechanisms of disease, with their concomitant pathophysiology. Lecture, audiovisual demonstrations, computer models, and limited animal studies provide knowledge of the physiological principles.

**PHSL 521 Medical Physiology (1)**

Physiological basis of normal and selected pathological conditions, modern concepts of homeostasis, and negative-feedback control systems. Utilizes modern electronic instrumentation to study function in man or experimental animals in laboratory sessions.

Prerequisite: PHSL 537.

**PHSL 522 Medical Physiology (1)**

Physiological basis of normal and selected pathological conditions, modern concepts of homeostasis, and negative-feedback control systems. Utilizes modern electronic instrumentation to study function in man or experimental animals in laboratory sessions.

Prerequisite: PHSL 521.

**PHSL 523 Medical Physiology (5)**

Physiological basis of normal and selected pathological conditions, modern concepts of homeostasis, and negative-feedback control systems. Utilizes modern electronic instrumentation to study function in man or experimental animals in laboratory sessions.

Prerequisite: PHSL 522.

**PHSL 524 Medical Physiology (1)**

Physiological basis of normal and selected pathological conditions, modern concepts of homeostasis, and negative-feedback control systems. Utilizes modern electronic instrumentation to study function in man or experimental animals in laboratory sessions.

**PHSL 525 Current Concepts on Cellular and Molecular Neural-Endocrine Interactions (3)**

Studies the nervous and endocrine systems as they work together to maintain homeostasis under normal and pathological conditions. Introduces the nature of this interaction, emphasizing understanding of basic cellular and molecular events. Taught alternate years. Consent of instructors required.

Prerequisite: PHSL 521, 522, 523.

**PHSL 533 Physiology I (4)**

Studies basic human physiology at the cellular and systemic levels, and pathological conditions. Laboratory sessions utilize modern electronic instrumentation to study function in man or experimental animals. Designed for students in all applied and basic sciences except physiology.

**PHSL 534 Physiology II (3)**

Studies basic human physiology at the cellular and systemic levels, and pathological conditions. Laboratory sessions utilize modern electronic instrumentation to study function in man or experimental animals. Designed for students in all applied and basic sciences except physiology.

**PHSL 535 Comparative Physiology (3)**

Compares and contrasts the physiological mechanisms of the major animal groups, from protozoa to mammals, emphasizing analysis of their diverse adaptations. Offered alternate years.

Prerequisite: Zoology, physiology, or biochemistry.

**PHSL 537 Neuroscience (4)**

Integrated approach to the fundamentals of neuroanatomy and neurophysiology, with applications to clinical neurology.

**PHSL 538 Neuroscience (4)**

Integrated approach to the fundamentals of neuroanatomy and neurophysiology, with applications to clinical neurology.

Prerequisite or Concurrent: PHSL 537.

**PHSL 541 Cell and Molecular Biology (4)**

Life processes fundamental to animal, plant, and microorganism; a graduate-level introduction. Lecture 3 units, laboratory 1 unit each term. Offered alternate years.

Prerequisite: Organic chemistry and one of the following—biochemistry, molecular biology, or cell biology. Physics desirable.

**PHSL 542 Signal Transduction (3)**

Part of PHSL 503. Comprehensively described signal transduction pathways and other cellular regulatory mechanisms that form the basis of receptor-response phenomena.

Prerequisite: CMBL 501.

**PHSL 543 Cell-Cell Interaction (3)**

Discusses the role of cell-cell interactions and the mechanism for cellular specialization, emphasizing the immune system.

**PHSL 544 Cell and Molecular Neurobiology (3)**

Part of PHSL 503. A comprehensive, introductory, lecture-based course that introduces basic biomedical-science graduate students to the cellular and molecular concepts that underlie most forms of neurobiological phenomena. Selected topics to be studied include the molecular and cellular components of neuronal excitation and transmission, neuronal development, differentiation and aging, axonal injury and nerve regeneration, and specific cases of nervous-system pathology.

**PHSL 550 Properties of the Nervous System (3)**

Critically analyzes current neurophysiological data, attempting to characterize the vertebrate nervous system. Emphasizes selected topics covering neuronal topology, intracellular recordings, ultrastructure, evoked potentials, and neurotransmitter chemistry. Offered alternate years.

Prerequisite or Concurrent: PHSL 511 512; consent of instructor.

**PHSL 553 Introduction to Electronics and Computing as Applied to Biomedical Research (4)**

Introduces electronics and computers for recording and analyzing data in biomedical research. Analog and digital electronics covered at a modular level—with practical application of the instrumentation, and applications of computers to control and recording. Constructs and uses mathematical/computer models of biomedical systems and fitting of models to data. Laboratory activities in electronics and computer simulation.

Prerequisite: College-level physics; calculus helpful.

Prerequisite or Concurrent: PHSL 511, 512.

**PHSL 554 Computer Simulation of Biomedical Systems (3)**

How to construct and apply computer models of complex biomedical systems, with applications in areas such as biochemistry, physiology and pharmacology, toxicology, population dynamics, and epidemiology. Emphasizes model quality and compares model behavior with laboratory data. Laboratory activities with simulation software.

Prerequisite: Mathematics through at least algebra; calculus helpful; computer programming experience not required.

**PHSL 555 Biology of Cancer Lecture (3)**

Interdisciplinary approach to study of the causation, characterization, and prevention of cancer. Offered alternate years.

**PHSL 556 Biology of Cancer Laboratory (2)**

Introduces techniques essential to research investigations in cancer. Offered alternate years.

Prerequisite or Concurrent: PHSL 511, 512.

**PHSL 558 Physiology of Exercise and Inactivity (3)**

Effects of exercise and inactivity on the physiological systems of the body, including the skeletal, muscular, cardiovascular, respiratory, and others. Emphasizes the cellular and molecular levels. Studies not only immediate changes in the body necessary to meet the demands of exercise but also long-term adaptive changes. Offered alternate years.

Prerequisite: PHSL 511, 512 or 521, 522, 523.

Prerequisite or Concurrent: PHSL 511, 512.

**PHSL 560 Bone Physiology (3)**

Studies bone cells and bone as an organ. Lectures and discussions include functions of bone cells, effects of growth factors, hormones and physical forces on bone, growth and repair of bone, osteoporosis, and other clinical conditions involving bone. Reviews current literature.

**PHSL 576 Vascular Smooth Muscle (3)**

Studies the structure and function of vascular smooth muscle and the mechanism(s) controlling its function.

**PHSL 577 Cardiac Physiology (3)**

Didactic course that deals with the developmental, transitional, and adult anatomy of the heart; as well as its electrical, mechanical, and metabolic processes in health and disease. Offered alternate years.

Prerequisite: An advanced physiology course or consent of instructor.

Prerequisite or Concurrent: PHSL 511, 512.

**PHSL 578 Vascular Physiology (3)**

Studies the physical principles that govern flow of fluids (rheology), functional anatomy, and reflexes of the peripheral circulation. Also considers the role of the peripheral vasculature in the control of cardiac output and blood flow to special regions, such as the brain, heart, skeletal muscle, etc. Offered alternate years.

Prerequisite: An advanced physiology course or consent of the instructor.

Prerequisite or Concurrent: PHSL 511, 512.

**PHSL 584 Readings in Neurophysiology (2)**

Seminar tracing the development of twentieth-century ideas about the nervous system. Emphasizes the writings of three early neurobiologists (Sherrington, Pavlov, Herrick) in context with classical and current understanding of the nervous system.

Prerequisite: PHSL 537 and consent of instructor.

**PHSL 587 Physiology of Reproduction (2)**

Studies the development of the male and female reproductive systems, neural and hormonal control of reproductive function, fetal development, and parturition. Offered alternate years.

Prerequisite or Concurrent: PHSL 511, 512 or 521, 522.

**PHSL 595 Readings in Physiology (1-4)**

Assigned reading and conferences on special problems in physiology.

**PHSL 604 Current Topics in Perinatal Physiology (1)**

A weekly, one-hour seminar presented by outstanding visiting scientists and intramural faculty in various fields of physiology. Offers graduate students a varied series of lecture topics and a perspective on cutting-edge research ideas in an informal setting. Attendance and a report required. This written report, based on a topic presented during the course period and arranged with the course instructor, provides an opportunity for in-depth study in an area of interest for the student. A maximum limit of 2 credits/year, and a total of 4 credits for the period of the graduate program.

**PHSL 605 Integrative Biology Graduate Seminar (1)**

Coordinated by the Departments of Anatomy and of Pharmacology and Physiology. Reports from current literature and the presentation of student and faculty research on various aspects of regulatory and integrative biology as applied to cells, tissues, organs, and systems. Students and faculty participate in a discussion and critical evaluation of the presentation.

**PHSL 694 Special Problems in Physiology (2-4)****PHSL 697 Research (1-8)****PHSL 698 Thesis (1)****PHSL 699 Dissertation (2)****PHSL 741 Physiology of Bone (1)**

Nature of bone mineral and matrix; bone biomechanics and mineralization, bone growth, healing and remodeling, pathological bone resorption; bone calcium homeostasis; dynamics of bone adaptation.

**PHSL 891 Physiology Elective (120 to 720 hours)****PHYSICAL THERAPY****PHTH 401 Neurorehabilitation I (2)**

Systematic review of clinical disorders of the central and peripheral nervous systems, emphasizing sensorimotor sequelae of injury and disease.

**PHTH 411 Clinical Orthopaedics (2)**

Introduces evaluation and treatment of general orthopaedic conditions, including but not limited to congenital deformities, fractures, and trauma.

**PHTH 413 Clinical Neurology (2)**

Systematic review of clinical disorders of the central and peripheral nervous systems, emphasizing sensorimotor sequelae of injury and disease.

**PHTH 421 Orthopaedics I (3)**

Introduces upper-extremity joints and their dysfunctions. Joint evaluation and treatment, including mobilization techniques.

**PHTH 422 Orthopaedics II (3)**

Introduces lower-extremity joints and their dysfunctions. Joint evaluation and treatment, including mobilization techniques.

**PHTH 423 Orthopaedics III (3)**

Introduces spinal joints and their dysfunctions. Joint evaluation and treatment, including mobilization techniques.

**PHTH 431 Soft-Tissue Techniques (2)**

Evaluation and intervention procedures for myofascial or muscle flexibility deficits.

**PHTH 434 PT Communication and Documentation (2)**

Introduces principles and dynamics of professional communication. Emphasizes basic skills needed in a clinical setting, including but not limited to the following: evaluations, progress notes, discharge summary, workers compensation, prescriptions, patient interviews, letters of justification, electric formats, and legal considerations related to all aspects of the above.

**PHTH 435 Hydrotherapy and Massage (3)**

Fundamental principles, physiological effects, and techniques of hydrotherapy and massage used in preventive medicine and diagnostic techniques. Lecture, demonstration, and laboratory.

**PHTH 436 Kinesiology (3)**

Functional anatomy of the musculoskeletal system. Analyzes and applies the biomechanics of normal and pathological movement of the human body. Lecture and laboratory.

Prerequisite: AHCJ 412.

**PHTH 437 Therapeutic Procedures (3)**

Blood pressure determination and aseptic techniques. Principles and utilization of posture and body mechanics. Selection and use of wheelchairs, ambulation aids, and other equipment. Progressive planning toward complete activities of daily living.

**PHTH 438 Manual Muscle Testing (3)**

Methods of evaluating muscle strength and function by use of specific and gross manual muscle tests. Lecture, demonstration, and laboratory.

**PHTH 439 Human Life Sequence (3)**

Sequential human development from neonate through adolescence, as applied to normal and abnormal neurological development. Includes concepts of prenatal and postnatal care, delivery, and neonatal assessment. Incorporates the interrelationship of the physical, perceptual, and motor components in treatment of the neurologically disabled patient. Development of the human organism from young adult to death. Emphasizes the problem of aging.

**PHTH 465 Exercise Physiology (3)**

Principles and application of human response to exercise, including body composition. Tests and measurements. Techniques of physical fitness. Cardiorespiratory considerations. Exercise prescriptions.

**PHTH 466 Fundamentals of Physical Therapy and Research (5)**

Introduces the theory and management of orthopaedic and neurological disorders—including joint and nerve mobilization, constraint-induced movement therapy, and balance and vestibular rehabilitation. Applies the research process to a question related to these areas of study—including discussion of sampling, variables, research rationale, research design, proposal and informed consent, data collection and analysis, and written and oral research presentation. Includes critical evaluation of research literature.

**PHTH 467 Advanced Studies in Selected Physical Therapy Topics (3-6)**

Provides students in-depth opportunities to pursue various areas of physical therapy, including orthopaedics, neurology, sports medicine, and general medicine. Incorporates literature review and related research activities.

**PHTH 471 Physical Therapy Practicum I (1)**

A two-week, full-time (40 hours/week) clinical education assignment done in an affiliated clinic, with an emphasis in any of a variety of settings: acute care, outpatient care, neurorehabilitation, orthopaedics, geriatrics, pediatrics, sports medicine, and preventive care/wellness, etc. Full-time supervision by a licensed physical therapist required. Activities include direct patient care, team conferences, demonstrations, special assignments, and observation. The first of three practicums. Scheduled at the end of the first academic year.

Corequisite: PHTH 471V.

**PHTH 477 Locomotion Studies (3)**

Develops competencies in the identification and evaluation of normal and abnormal gait patterns, progressing to development of treatment programs. Includes current prosthetic and orthotic devices and their assistance with gait.

**PHTH 484 Therapeutic Exercise (4)**

Applies physical, mechanical, and soft-tissue biomechanical considerations in the formulation of exercise prescriptions. Considers the neurophysiological basis of motor control and motor-learning acquisition. Selects exercise modes for treatment of musculoskeletal and neurological disorders of the nonpathological individual.

**PHTH 495 Research I (3)**

Introduces the scientific methods in health-science research. Focuses on the major steps of the research process: problem identification, literature review, conceptual framework, identification of variables, statement of hypothesis, experimental design, and analysis and presentation of data. Includes critical evaluation of research literature.

**PHTH 496 Research II (2)**

Applies the research process to problems in related specific allied health fields. Develops a research proposal.

**PHTH 497 Advanced Clinical Experience (40 to 480 clock hours)**

Advanced clinical experience in selected areas of professional practice.

**PHTH 499 Physical Therapy Independent Study (1-3)**

Project or paper to be submitted on a topic of current interest in an area related to physical therapy. Regular meetings provide the student with guidance and evaluation. Elected on the basis of need or interest.

**PHTH 501 Neurology I (2)**

Basic physiological and neurophysiological mechanisms specific to therapeutic concepts. Clinical approach to pathology and trauma of the central and peripheral nervous systems. Stroke, spinal cord injury, and head injuries. Emphasizes clinical application.

**PHTH 502 Neurology II (3)**

Basic physiological and neurophysiological mechanisms specific to therapeutic concepts. Clinical approach to pathology and trauma of the central and peripheral nervous systems. Emphasizes proprioceptive neuromuscular facilitation.

**PHTH 503 Neurology III (3)**

Continues basic physiological and neurophysiological mechanisms specific to therapeutic concepts. Clinical approach to pathology and trauma of the central and peripheral nervous systems. Emphasizes comparing and contrasting facilitation techniques.

**PHTH 504 Pediatric Care (3)**

Discusses the etiology, associated problems, and physical therapy care of clients with cerebral palsy, spina bifida, and various orthopaedic disorders. Includes presentation and demonstration of adaptive equipment options. Laboratory demonstrations. Introduces the physical therapist's role in the NICU.

**PHTH 507 Lower-Quarter Biomechanical Relationships (3)**

Advanced examination procedures for performing a biomechanical assessment of the lower extremities. Emphasizes identifying causes of, compensations for, and complications of movement dysfunctions associated with lower-extremity musculoskeletal pain syndromes. Physical therapy management of gait abnormalities.

**PHTH 511 Clinical Orthopaedics (2)**

Systematic review of disease and injury affecting the musculoskeletal system (particularly the hands), resulting in physical disability. Conditions caused by congenital deformities, fractures, trauma, tumors, disease, and sports injuries. Radiologic terminology, properties, and imaging.

**PHTH 512 Clinical Psychiatry (2)**

Introduces mental and personality disorders. Reviews abnormal behaviors commonly found in a clinical setting.

**PHTH 515 Topics in Rehabilitation (1-6)**

Lecture and discussion of current topics relating to the practice of physical therapy. Content varies from quarter to quarter. (May be repeated for additional credit for a maximum 6 quarter units.)

**PHTH 516 Electrotherapy (3)**

Principles and techniques of electrotherapy procedures, including electrodiagnosis. Basic physical and physiological indications and contraindications. Lecture, demonstration, and laboratory.

**PHTH 521 Orthopaedics I (3)**

Basic theory of extremity mobilization. Each joint presented in relationship to articular and periarticular structures that determine joint function and dysfunction. Evaluation and mobilization techniques.

**PHTH 522 Orthopaedics II (3)**

Basic theory of spinal evaluation and treatment techniques. General principles of functional anatomy, tissue and joint biomechanics, pathology, and treatment. Medical exercise training.

**PHTH 523 Orthopaedics III (3)**

Basic theory of spinal evaluation and treatment techniques. General principles of functional anatomy, tissue and joint biomechanics, pathology, and treatment. Medical exercise training.

**PHTH 524 Hand Rehabilitation for the Physical Therapist (2)**

Functional anatomy and pathophysiology in the diagnosis and treatment of the forearm, wrist, and hand. Common problems. Integrates scientific knowledge base into treatment choice. Rational and general treatment concepts for, but not limited to, fractures, joint derangement, stiffness, flexor and extensor multiple-system trauma, arthritis, and vascular disorders. Common surgical procedures involving the forearm, wrist, and hand; as well as basic concepts and practical application of static and dynamic splinting.

**PHTH 525 General Medicine I (3)**

Medical and surgical disorders. Basic pathology and/or etiology and clinical manifestations. Medical treatment for conditions within selected specialties: cardiology, respiratory, burns, arthritis, oncology, hematology, immunology, and endocrinology.

**PHTH 526 General Medicine II (3)**

Medical and surgical disorders. Basic pathology and/or etiology and clinical manifestations. Medical treatment for conditions within selected specialties: cardiology, respiratory, burns, arthritis, oncology, hematology, immunology, and endocrinology.

**PHTH 529 Pathokinesiology of Gait (3)**

Advanced observational analysis of normal and abnormal human locomotion, with comparison of pathological differences.

**PHTH 531 Soft-Tissue Mobilization (3)**

Helps practicing physical therapy clinicians optimize skills and refine selection of the most effective soft-tissue mobilization techniques to maximize specific musculoskeletal functional outcomes. Students learn new techniques and refine and master previously learned techniques, through lecture, demonstration, practical examinations, and laboratory.

**PHTH 534 Soft-Tissue Techniques (2)**

Trends in soft-tissue manipulation. Lecture, demonstration, and laboratory.

**PHTH 535 Research and Statistics I (3)**

In-depth study of research designs: their advantages and disadvantages, including pretest/posttest designs, posttest-only control-group designs, time-series designs, factorial designs, randomized block and repeated-measures designs, and incomplete block designs. Introduces clinical trials, sequential research designs, and single-case experimental designs. Measures and analyzes validity and reliability. Survey-instruments(s) design. Power calculations for choosing appropriate sample sizes.

**PHTH 536 Research and Statistics II (3)**

Analyzes data using one-way ANOVA with multiple comparisons, factorial ANOVA designs, randomized complete and incomplete block designs, and repeated measures. Introduces multiple correlation and regression and model building using multiple regression techniques. Evaluates research literature that uses multivariate analysis for data analysis. Introduces nonparametric statistics. Interprets multivariate analysis computer output.

**PHTH 537 Research and Statistics III (3)**

Research-topic selection, literature review, proposal writing and approval. Research data collection after proposal approval. Limited to students who are in the doctoral program in physical therapy.

Prerequisite: PHTH 536 and consent of instructor.

**PHTH 538 Research and Statistics IV (3 or 6)**

Individual arrangements for doctoral students to work with the instructor on analysis and presentation of research data. Student prepares manuscript presenting results of doctoral research study.

Prerequisite: PHTH 537 and consent of instructor.

**PHTH 541 Advanced Clinical Practice I (3)**

Student demonstrates and practices advanced examination, assessment, and treatment of the lumbar spine, pelvic girdle, and lower extremities. Lecture and demonstration.

**PHTH 542 Advanced Clinical Practice II (3)**

Emphasizes skills utilized by clinical specialists in neurophysical therapy. Content based on the description of PHTH 541.

**PHTH 543 Advanced Clinical Practice III (3)**

Advanced clinical decision-making skills, with focus on patient classification, clinical-diagnosis practice parameters, and practice guidelines. Emphasizes development of clinical algorithms, clinical prognostic skills, and outcome measures.

**PHTH 544 Physical Therapy Business Development Concepts (1)**

Discussion and practice designed to enhance the knowledge of the practitioner who desires to own, manage, or direct a physical therapy practice or department. General trends, start-up considerations, HRM, finance, marketing research and development; learning to bill, collect, and interpret EOBs; coding and compliance issues (Medicare and state); and locating capital to finance the venture.

**PHTH 545 Orthopaedic Interventions: Mobilization of Peripheral Nerves and Diarthroidal Joints of the Extremities (3)**

Advanced study of the management of orthopaedic and neurological disorders of the extremities. Clinical course designed to strengthen student's knowledge and application of mobilization techniques to the joints and nerves of the periphery. Lecture, laboratory sessions, case studies, and cadaveric specimen-guided study (as specimens available).

**PHTH 546 Women's Health Issues I (3)**

Clinical aspects of women's health issues. How to develop a women's health program in the clinical setting. Introduces various pathologies and treatment strategies for specific diagnoses that could be encountered in the clinical setting. Women's health during adolescence, the reproductive years, and the geriatric years.

**PHTH 547 Women's Health Issues II (3)**

Advanced course further exploring women's health issues—including treatment strategies for women during various phases of their lives. Anatomy and physiology during adolescence, the reproductive years, and the geriatric years.

Prerequisite: PHTH 546.

**PHTH 548 Function-Based Rehabilitation (3)**

Manual therapy approach for the treatment of common musculoskeletal problems, integrating orthopaedic and neurological rehabilitation. Course based on a working knowledge of anatomy, muscle-balance theory, neurodevelopmental treatment (NDT), muscle-length testing, soft-tissue mobilization (STM), and proprioceptive neuromuscular facilitation (PNF) principles. Emphasizes use of clinical reasoning during patient evaluation and patient management.

**PHTH 551 Advanced Orthopaedic Procedures I (3)**

Student demonstrates and practices advanced examination and treatment of the lumbar spine, pelvic girdle, and lower extremities.

**PHTH 552 Advanced Orthopaedic Procedures II (3)**

Student demonstrates and practices advanced examination and treatment of the cervical spine, shoulder girdle, and upper extremities.

**PHTH 553 Advanced Orthopaedic Procedures III (3)**

Student demonstrates and practices advanced examination and treatment of the lumbar spine, thoracic spine, and rib cage.

**PHTH 554 Geriatrics (2)**

Reviews the normal physiologic and psychologic factors specific to the geriatric population—including aging of the musculoskeletal and sensory systems, diet and nutrition, the senior athlete, spiritual and psychosocial issues, and specific health topics—allowing the future clinician to assist patients with aging safely and gracefully.

**PHTH 561 Physical Therapy Administration (4)**

Principles of organization and administration in health care delivery. Multidisciplinary approach to patient management and patient-therapist relations. Administration of physical therapy services. Professionalism, medicolegal considerations, supervision and training of support personnel. Departmental design and budgetary considerations.

**PHTH 565 Sports Physical Therapy I (1)**

Advanced study of the neuromusculoskeletal system as it applies to the athletic population. Selected competencies of advanced clinical practice for the sports physical therapist, as outlined by the American Board of Physical Therapy Specialties in the Description of Advanced Clinical Practice in Sports Physical Therapy. Emphasizes the development and implementation of a sports-medicine program, preparticipation physical examination, medical emergencies in the sports-medicine setting, criteria for return to play, types and frequency of sport-specific injuries, pregame sideline/courtside set up, techniques of athletic-tape application to various body locations, and on-field examinations.

**PHTH 566 Sports Physical Therapy II (1)**

Advanced study of the neuromusculoskeletal system as it applies to the athletic population. Selected competencies of advanced clinical practice for the sports physical therapist, as outlined by the American Board of Physical Therapy Specialties in the Description of Advanced Clinical Practice in Sports Physical Therapy. Emphasizes recognition and intervention for emergency medical conditions, including abdominal trauma, cardiac pathology, and respiratory emergencies in the athletic/sports medicine arena; protective equipment utilized in athletics; environmental conditions of heat, cold, altitude, and playing surfaces; and criteria utilized for determination of return to play.

**PHTH 568 Advanced Diagnosis and Management: Patellofemoral (1)**

Advanced study of the patellofemoral joint as it applies to the general and athletic populations. Emphasizes examination, classification, diagnosis, and management of patellofemoral pain syndromes. Physical therapy intervention primarily focused on evidence-based treatment approaches, including: joint mobilization, passive range of motion, therapeutic exercise, and a variety of bracing and taping techniques. First course in a series of three courses dealing with the diagnosis and management of lower-limb disorders.

**PHTH 569 Advanced Diagnosis and Management of Foot and Ankle Disorders (1)**

Advanced study of diagnosis and management of foot and ankle disorders. Clinical course designed to strengthen knowledge and application of orthotic therapy. Effective protocols for managing and trouble shooting orthotic therapy patients.

**PHTH 572 Physical Therapy Practicum II (1.5)**

A three-week, full-time (40 hours/week) clinical-education assignment done in an affiliated clinic, with an emphasis in any of a variety of settings: acute care, outpatient care, neurorehabilitation, orthopaedics, geriatrics, pediatrics, sports medicine, and preventive care/wellness, etc. The second of three practicums required, scheduled at the end of the Autumn Quarter of the second academic year. Full-time supervision by a licensed physical therapist required. Activities include direct patient care, team conferences, demonstrations, special assignments, and observation.

**PHTH 573 Physical Therapy Practicum III (1.5)**

A three-week, full-time (40 hours/week) clinical-education assignment done in an affiliated clinic, with an emphasis in any of a variety of settings: acute care, outpatient care, neurorehabilitation, orthopaedics, geriatrics, pediatrics, sports medicine, and preventive care/wellness, etc. The third of three practicums required, scheduled at the beginning of the Summer Quarter of the third academic year. Full-time supervision by a licensed physical therapist required. Activities include direct patient care, team conferences, demonstrations, special assignments, and observation.

**PHTH 581 Research Applications I (2)**

A group research proposal developed with the help of a faculty adviser and mentor, including: obtaining approval from appropriate institution review boards, pilot testing the research protocol, implementing the research proposal in an appropriate research laboratory or practice setting.

**PHTH 582 Research Applications II (2)**

Student analyzes data with the help of a statistician. Presents research results in the form of a written research report, an oral presentation, and a poster appropriate for a professional meeting.

**PHTH 583 Physical Therapy Affiliation I (5)**

Nine-to-eleven-week clinical assignment to be completed in the Summer, Winter, and Spring Quarters during the third year in affiliated clinical settings. Emphasizes a variety of clinical settings: acute care, rehabilitation, orthopaedics, geriatrics, and pediatrics. Forty clock hours per week of supervised clinical experience, special assignments, in-services, lectures, demonstrations, and conferences.

**PHTH 584 Physical Therapy Affiliation II (5)**

Nine-to-eleven-week clinical assignment to be completed in the Summer, Winter, and Spring Quarters during the third year in affiliated clinical settings. Emphasizes a variety of clinical settings: acute care, rehabilitation, orthopaedics, geriatrics, and pediatrics. Forty clock hours per week of supervised clinical experience, special assignments, in-services, lectures, demonstrations, and conferences.

**PHTH 585 Physical Therapy Affiliation III (5)**

Nine-to-eleven-week clinical assignment to be completed in the Summer, Winter, and Spring Quarters during the third year in affiliated clinical settings. Emphasizes a variety of clinical settings: acute care, rehabilitation, orthopaedics, geriatrics, and pediatrics. Forty clock hours per week of supervised clinical experience, special assignments, in-services, lectures, demonstrations, and conferences.

**PHTH 586 Doctor of Physical Therapy Affiliation I (5)**

A full-time clinical assignment under the supervision of an APTA board-certified clinical specialist in a specialized area of clinical practice. Student receives an "IP" grade at the end of PHTH 586. A grade of "satisfactory" (S) granted after satisfactory completion of PHTH 587.

**PHTH 587 Doctor of Physical Therapy Affiliation II (5)**

A full-time clinical assignment under the supervision of an APTA board-certified clinical specialist in a specialized area of clinical practice. Student receives an "IP" grade at the end of PHTH 586. A "satisfactory" (S) grade granted after satisfactory completion of PHTH 587.

Prerequisite: PHTH 586.

**PHTH 591 Advanced Orthopaedic Studies (6)**

Specialty track that provides opportunity to pursue, in greater depth, various topics related to current trends in orthopaedic physical therapy and to develop advanced clinical skills, where appropriate.

**PHTH 592 Advanced Neurologic Studies (4)**

Specialty track that provides opportunity to pursue, in greater depth, various topics related to current trends in neurologic physical therapy and to develop advanced clinical skills, where appropriate.

**PHTH 594 Advanced General Medicine Studies (4)**

Specialty track that provides opportunity to pursue, in greater depth, various topics related to current trends in general medicine physical therapy and to develop advanced clinical skills, where appropriate.

**PHTH 595 Applied Research I (1)**

Research proposal pilot tested in a practice setting. Tests procedures and data forms.

**PHTH 596 Applied Research II (2)**

Implements a research proposal in a practice setting. Computer data analysis and preparation of a preliminary research report.

**PHTH 597 Applied Research III (1)**

Prepares and presents a research report both in written and oral formats. Graphics, tables, Power-Point presentations, poster, and abstract.

**PHTH 598 Advanced Specialty Tracks (3)**

Presents the newest clinical treatment applications over the spectrum of the patient population in the field of physical therapy. Includes ortho, neuro, and general medicine.

**PHTH 629 Lower-Quarter Biomechanical Relationships (3)**

Advanced examination procedures for performing a biomechanical assessment of the lower extremities. Emphasizes identifying the causes, compensations, and complications of movement dysfunctions associated with lower-extremity musculoskeletal-pain syndromes. Physical therapy management of gait abnormalities.

**PHYSICAL THERAPY****(PROGRESSION TO MASTER'S DEGREE)****PMPT 427 Human Life Sequence (2)**

Sequential development of the human organism from neonate through old age. Modern concepts of postnatal care through the normal process of aging. Evaluates developmental reflexes and gross motor function of the pediatric population, and balance of the geriatric population. Demonstrates treatment techniques as adapted to pediatric and geriatric patients. Discusses cultural awareness. Ethical and legislative issues as they relate to the human life sequence.

**PMPT 474 Physical Therapy Practicum (1.5)**

A three-week assignment in affiliated clinical settings. Forty clock hours per week of supervised clinical experience.

**PMPT 476 Therapeutic Exercise (3)**

Applies physical, mechanical, and soft-tissue biomechanical considerations in the formulation of exercise prescriptions. Considers the neurophysiological basis of motor control and motor-learning acquisition, and selection of exercise modes for treatment of musculoskeletal and neurological disorders and the nonpathological individual. Class modified for the progression-program PTA graduate, who already has some basic knowledge.

**PMPT 477 Locomotion Studies (3)**

Develops competencies in the identification and evaluation of normal and abnormal gait patterns, progressing to development of treatment programs. Includes current prosthetic and orthotic devices and their assistance with gait. Class modified for the progression MPT program.

**PMPT 524 Electrotherapy (2)**

Principles and techniques of electrotherapy procedures, including electrodiagnosis. Basic physical and physiological indications and contraindications. Lecture, demonstration, and laboratory. (Class modified for the progression in MPT program.)

**PMPT 534 Physical Therapy Communication and Documentation (2)**

Principles and dynamics of professional communication. Basic skills—including, but not limited to, the following: initial evaluations, progress notes, discharge summary, patient interviews, letters of justification, legal considerations, and computer documentation programs. (Class modified for the progression MPT program.)

**PMPT 535 Hydrotherapy and Massage (2)**

Fundamental principles, physiological effects, and techniques of hydrotherapy and massage used in preventive medicine and diagnostic techniques. Lecture, demonstration, and laboratory. (Class modified for the progression MPT program.)

**PMPT 583 Physical Therapy Affiliation I (4)**

Eight-week assignment in the Winter Quarter of the second year. Emphasizes a variety of clinical settings: acute care, rehabilitation, orthopaedics, geriatrics, and pediatrics. Forty clock hours per week of supervised clinical experience, special assignments, in-services, lectures, demonstrations, and conferences.

**PMPT 584 Physical Therapy Affiliation II (4)**

Eight-week assignment in the final quarter of the program. Emphasizes a variety of clinical settings: acute care, rehabilitation, orthopaedics, geriatrics, and pediatrics. Forty clock hours per week of supervised clinical experience, special assignments, in-services, lectures, demonstrations, and conferences.

Prerequisite: PMPT 583.

**PMPT 585 Physical Therapy Affiliation III (4)**

Eight-week assignment in the final quarter of the program. Emphasizes a variety of clinical settings: acute care, rehabilitation, orthopaedics, geriatrics, and pediatrics. Forty clock hours per week of supervised clinical experience, special assignments, in-services, lectures, demonstrations, and conferences.

Prerequisite: PMPT 584.

**PMPT 591 Advanced Orthopaedic Studies (5)**

Specialty tracks provide opportunity to pursue in greater depth various topics related to current trends in orthopaedic physical therapy. Develops advanced clinical skills, where appropriate.

**PMPT 592 Advanced Neurologic Studies (5)**

Specialty tracks provide opportunity to pursue in greater depth various topics related to current trends in neurologic physical therapy. Develops advanced clinical skills, where appropriate.

**PMPT 593 Advanced General Medicine Studies (3)**

Specialty tracks provide opportunity to pursue in greater depth various topics related to current trends in general medicine physical therapy. Develops advanced clinical skills, where appropriate.

**PROSTHODONTICS****PROS 500 Prosthodontic Literature Review (2)**

Discusses assigned topics from classic and current prosthodontic and course-related literature, led by students and moderated by faculty member in charge. Repeated registrations required to fulfill the total units.

**PROS 501 Removable Partial Prosthodontics Literature Review (2)**

Discusses assigned topics from classic removable partial denture literature, led by students and moderated by faculty member in charge.

**PROS 502 Complete Denture Prosthodontics Literature Review (2)**

Discusses assigned topics from classic complete-denture literature, led by students and moderated by faculty member in charge.

**PROS 505 Patient Presentation Seminar (Prosthodontics, Implant, Perio) (1)**

Presents patient treatment, and discusses alternate methods of rehabilitation and related literature. Repeated registrations required to fulfill the total units.

**PROS 510 Clinical Practice of Prosthodontics (44 to 400 hours)**

Advanced clinical practice in the treatment of individuals with fixed, removable, maxillofacial, and implant prostheses. Repeated registrations required to fulfill total clock hours.

**PROS 515 Practice Teaching in Prosthodontics (1-2)**

Teaching experience in the areas of fixed and removable prosthodontics. Repeated registrations required to fulfill total units.

**PROS 525 Dental Materials Science (2)**

Elements of materials science. Properties of structural solids, metals, ceramics, and polymers related to their structure using basic laws and principles from physics, chemistry, and engineering science.

**PROS 527 Clinical Application of Dental Materials (2)**

Discusses clinical application and manipulation of dental materials. Identifies and explains specific clinical problems and behavior based on the acquired knowledge of basic properties.

**PROS 534 Clinical Oral Pathology (.5)**

Emphasizes oral manifestations of disease. Diagnosis and treatment of various oral neoplasms.

**PROS 546 Occlusion and Morphology (2)**

Lecture, seminar, and laboratory course includes waxing techniques and axial and occlusal morphology of natural teeth. Concepts of occlusal function and dysfunction related to prosthodontic therapy.

**PROS 547 Occlusion: Principles and Instrumentation (2)**

Continues PROS 546, emphasizing occlusal equilibration, jaw movements, determinants of occlusion, and articulators commonly used.

**PROS 555 Removable Partial Prosthodontics (2)**

Lecture, seminar, and laboratory course covering principles, concepts, and techniques used to design and fabricate removable partial dentures.

**PROS 556 TMJ Function and Dysfunction (1)**

Provides residents with information about the function and dysfunction of the temporomandibular joint and associated structures. Prepares residents to obtain history, perform clinical examination, recognize disorders, and prescribe treatment.

**PROS 557 Advanced Removable Partial Prosthodontics (2)**

Advanced clinical and laboratory procedures, emphasizing intracoronal attachments, rotational path, and alternate removable partial-denture design.

**PROS 565 Complete Denture Prosthodontics (2)**

Clinical and laboratory procedures for the fabrication of complete dentures, including setting and balancing denture teeth.

**PROS 566 Advanced Complete Denture Prosthodontics (2)**

Lecture and clinical course, with seminar covering the treatment of immediate denture and overdenture, and treatment of difficult and unusual complete denture situations.

**PROS 575 Fixed Partial Prosthodontics (2)**

Tooth preparation for and fabrication of extracoronal restorations and fixed prostheses, including partial coverage gold crowns, complete coverage gold crowns, pinledge retainers, metal-ceramic crowns, metal-ceramic pontics, and sanitary pontics.

**PROS 576 Advanced Fixed Partial Prosthodontics I (MC Esthetics) (2)**

Clinical and laboratory procedures, emphasizing advanced metal-ceramic restorations.

Prerequisite: PROS 575.

**PROS 595 Maxillofacial Prosthetics (2)**

Design and fabrication of obturators for partial maxillectomy patients, both edentulous and dentulous. Introduces fabrication of extraoral prostheses.

**PROS 604 Literature Review in Implant Dentistry for Prosthodontists (2)**

Gives the postdoctoral student a deeper understanding of the research and literature currently available on the restoration of implants. Emphasizes biomechanics of implant restorations. Repeated registrations required to fulfill the total units.

**PROS 634 Diagnosis and Treatment Planning (2)**

Didactic and clinical aspects of diagnosis and treatment planning for patients with complex dental problems. Repeated registrations required to fulfill the total units.

**PROS 637 Geriatric Dentistry (1)**

Lectures selected to enhance the knowledge base in the expanding area of elder care. Problems of chronic diseases combined with multiple drug regimens that complicate care for this population.

**PROS 697A Research (1)**

Student identifies a research project, prepares a proposal, and obtains approval for the protocol.

**PROS 697B Research (1)**

Research, including data collection and evaluation.

**PROS 698 Thesis (2)****PREVENTIVE MEDICINE****PRVM 514 Clinical Preventive Medicine (4)**

A year-long course that teaches medical students the effective clinical preventive medicine approaches used in the practice of medicine today. Provides medical students with the useful framework for understanding epidemiology, public health, preventive concepts, disease screening, lifestyle modification, and risk-factor identification and reduction. Fosters basic understanding of prevention in the clinical context.

**PRVM 515 Clinical Preventive Medicine (3)**

A year-long course that teaches medical students the effective clinical preventive medicine approaches used in the practice of medicine today. Provides medical students with the useful framework for understanding epidemiology, public health, preventive concepts, disease screening, lifestyle modification, and risk-factor identification and reduction. Fosters basic understanding of prevention in the clinical context.

**PRVM 516 Clinical Preventive Medicine (3)**

A year-long course that teaches medical students the effective clinical preventive medicine approaches used in the practice of medicine today. Provides medical students with the useful framework for understanding epidemiology, public health, preventive concepts, disease screening, lifestyle modification, and risk-factor identification and reduction. Fosters basic understanding of prevention in the clinical context.

**PRVM 891 Preventive Medicine Elective (60 to 720 hours)****PSYCHOLOGY****PSYC 226 Life-Span Development (4)**

Life-span course emphasizing the physical, mental, emotional, social, and religious/moral development from conception through adulthood, aging, and death.

**PSYC 299 Directed Study (1-4)****PSYC 305 Psychological Foundations of Education (4)**

Explores educational psychology through application of development and learning theories to instruction, achievement motivation, self-esteem, classroom management, supportive and disruptive processes on school sites, campus standards, disciplinary practices, legal/ethical issues. Requires research on effective educational practices and related foundations. Additional research for graduate credit.

Prerequisite: General psychology.

**PSYC 404 Psychological Tests and Measurements (3)**

Develops competencies and understandings for selecting, administering, and interpreting the major types of standardized tests and inventories used in psychology and education. Presents theoretical principles and issues together with hands-on applications. Practicum required.

**PSYC 405 Psychology of Human Relations (2 or 3)**

Human relations for career and personal success. Topics include the effective use of human resources, communication, leadership skills, decision making, stress management, assertiveness training, managing conflicts, career development, and achieving balance.

**PSYC 414 Interviewing and Counseling (4)**

Procedures, methods, and problems of collecting personal data in a professional interview situation. Theories and techniques of academic, vocational, and therapeutic counseling in various settings designed to improve intra- and interpersonal behavioral patterns for more effective living. Considers clinical, educational, and crisis-intervention counseling application.

**PSYC 422 Intermediate Spanish for the Professions, Behavioral Sciences (3)**

Intermediate-level Spanish concentrating on the necessary skills applicable to communication in Spanish within the patient-practitioner context. Lectures and classroom activities, as well as laboratory exercises.

**PSYC 426 Research Analysis Applications of SPSS (1)**

Introduces the basics of statistical analysis using SPSS. Instruction focuses on general computer proficiency, including familiarization with the software package, methods of data entry, the use of common analysis methods, and the format and interpretation of SPSS output.

**PSYC 429 Practicum in Spanish for the Professions, Behavioral Sciences (4)**

Practicum in conversational Spanish within the patient-practitioner context. Supervised experiences in communication with Spanish-speaking patients in the various settings of the behavioral sciences professions. A one-to-four-week field trip to Mexico or Spain that includes patient-practitioner encounters in the context of the professions.

**PSYC 460 The Exceptional Individual (3)**

Studies the determinants, characteristics, problems, and adjustments of individuals who deviate markedly from the norm in their mental, physical, emotional, or social aptitudes, traits, and tendencies. Emphasizes education and career planning. Open to upper-division graduate and postgraduate students only.

**PSYC 479 Human Neuropsychology (4)**

Introduces brain-behavior relationships, including cerebral asymmetry, disconnection syndromes, disorders of memory and language, biological substrates of affective behavior, motor and perceptual dysfunction, and drug actions.

**PSYC 499 Directed Study (1-4)****PSYC 500 Basic Foundations in Statistical Methods for Psychology (3)**

Provides students with a basic foundation in statistical methods used in the psychological sciences. Includes understanding of both descriptive and inferential statistics. Emphasizes the conceptual understanding of the calculation of statistics and the application of statistical findings to theory and practice. Designed for graduate-level students who need a refresher in statistical methods before proceeding to the advanced graduate statistical courses. Also for students who get a grade below a B- and have to retake STAT 501 (basic statistical concepts and understanding should be reviewed before retaking STAT 501). Credit is not applicable towards the degree in psychology.

**PSYC 501 Advanced Statistics I (4)**

General introduction to statistical analysis—detailing the descriptive/inferential distinction; and covering sampling distributions (e.g., normal, binomial), hypothesis testing, and basic parametric and nonparametric techniques.

**PSYC 502 Advanced Statistics II (4)**

Thorough introduction to regression analysis and analysis of variance (ANOVA), with emphasis on hypothesis testing and the development of general models that partition overall variability. Topics covered include simple and multiple regression, one-way and factorial, repeated-measures ANOVA, and analysis of covariance. Evaluation of assumptions and nonparametric alternatives.

Prerequisite: PSYC 501 or consent of instructor.

**PSYC 503 Advanced Multivariate Statistics (4)**

Broad introduction that applies linear (matrix) algebra to maximum likelihood estimation generally, using several important multivariate statistical techniques, including but not limited to multivariate analysis of variance, multivariate regression, path analysis and structural equations causal modeling, log-linear models, and time-series analysis; evaluates alternatives to maximum likelihood estimation.

Prerequisite: PSYC 502 or consent of instructor.

**PSYC 504 Research Methods for Clinical Psychologists (4)**

Designed for students in the Psy.D. program. Examines research methods appropriate for application to clinical psychology—from the formulation of research problems to the design, execution, and report of findings. Includes experimental, quasi-experimental, case study, and programmatic evaluation designs.

**PSYC 505 Research Methods in Psychological Science (4)**

Comprehensive examination of research methods in psychology—from the formulation of research problems to the design, execution, and report of findings. Includes experimental and quasi-experimental designs, as well as field and case studies. The exploratory-confirmatory distinction in scientific epistemology, and its implications for research and theory. Reviews and critically analyzes research literature from various areas of contemporary psychological science.

Prerequisite: PSYC 502 or consent of instructor.

**PSYC 507 Research Methodologies for Clinical Interventions and Treatment-Program Evaluation (2)**

Gives special emphasis to research methodologies relevant to conducting research for clinical interventions. Includes methods and tools for doing treatment-program evaluation.

Prerequisite: PSYC 504.

**PSYC 511 Psychometric Foundations (3)**

Advanced orientation to psychological instruments; their theoretical derivation, construction, and use. Emphasizes reliability, validity, and factor structures.

Prerequisite: PSYC 501 or consent of instructor.

**PSYC 512 Assessment I (2)**

Instruction in administering, scoring, interpreting, and report writing relevant to various adult and child intelligence and achievement instruments, such as the WAISIII, WISC-III, WPPSI-R, KBIT, Stanford-Binet, WIAT, PIAT, KABC, WRAT-3, and the Woodcock-Johnson batteries. Consideration of the empirical reliability and validity data for each instrument.

Prerequisite: PSYC 511 or consent of instructor.

**PSYC 512L Assessment I, Practice Laboratory (1)**  
Supervised experiences in administering, scoring, interpreting, and report writing relevant to various adult and child intelligence and achievement instruments.

Concurrent: PSYC 512.

**PSYC 513 Assessment II (2)**

Instruction in administering, scoring, interpreting, and report writing relevant to various adult and child objective personality instruments—including the MMPI-2, MMPI-A, MACI, PIC, 16PF, CDI, BDI, and BAI. Consideration of the empirical reliability and validity data for each instrument.

Prerequisite: PSYC 512, 574; or consent of instructor.

Corequisite: PSYC 513L.

**PSYC 513L Assessment II, Practice Laboratory (1)**

Supervised experiences in administering, scoring, interpreting, and reporting relevant to various adult and child objective personality instruments.

Corequisite: PSYC 513.

**PSYC 514 Assessment III (2)**

Administering, scoring, interpreting, and report writing relevant to various adult and child projective personality instruments—including the Rorschach, TAT, CAT, and House-Tree-Person. Considers the empirical reliability and validity data for each instrument.

Prerequisite: PSYC 513, 574; or consent of instructor.

**PSYC 514L Assessment III, Practice Laboratory (1)**

Supervised experiences in administering, scoring, interpreting, and report writing relevant to various adult and child projective personality instruments.

Concurrent: PSYC 514.

**PSYC 515 Assessment IV: Battery Integration and Reports (2)**

Instruction in the integration of results of intellectual, achievement, objective personality, and projective personality assessment techniques; and the composition of full-battery reports.

Prerequisite: PSYC 514 or consent of instructor.

Corequisite: PSYC 515L.

**PSYC 515L Assessment IV, Practice Laboratory (1)**

Supervised experiences integrating the results of assessment batteries and composing full-battery reports.

Corequisite: PSYC 515.

**PSYC 524 History, Systems, and Philosophy of Psychology (4)**

Builds on the coverage of the history and systems of psychology provided in most undergraduate courses. Focuses on how different approaches to psychology (e.g., the schools of psychology) have defined the field, what topics and information they have considered as a part of psychology, and what mechanisms and criteria for advancing the field these approaches have considered acceptable. Examines current trends in light of their contributions to the development of psychology as a science and as a profession.

**PSYC 525 Introduction to Clinical Psychology (2)**

Introduces the development and current status of clinical psychology within the context of professional and basic psychology. Examines the practice of clinical psychology in light of the psychological principles and scientific methods on which it is based. Surveys methods and contemporary professional and ethical issues, providing the context within which the role of the doctoral level clinical psychologist is compared to that of other professionals and technicians. Examines commonalities and areas of collaboration, as well as differences.

**PSYC 526 Ethics and Legal Issues in Clinical Psychology (3)**

Overviews current ethical and legal standards for the conduct of psychology. Guidelines and standards drawn from APA Ethical Guidelines, Standards for Providers of Psychological Services, and Standards for Educational and Psychological Tests, as well as relevant California and civil licensing laws.

**PSYC 529 Teaching of Psychology Practicum (30 to 330 hours)**

Supervised teaching experience for students completing PSYC 523 or those with previous teaching experience.

**PSYC 534 Culture, Psychology, and Religion (3)**

Introduces the major contours of Western culture as they relate to various schools of psychological thought, and the influence of religious beliefs in their inception. Theological critique of various world views that have guided psychological schools of thought. Topics include liberalism and modernism, pietism and evangelicalism, the Enlightenment and Romantic movements.

**PSYC 535 Psychological Study of Religion (3)**

Surveys research areas, methods, and issues in the study of religion and spirituality from a psychological perspective. Emphasizes understanding of religious phenomena relative to the scientific study of human behavior and psychological functioning. Examines the philosophical foundations of research in psychology, sociology, and anthropology in order to provide an eclectic approach to research in this area. Topics include ethnographic approaches to religious experience, conversion, religiosity, faith and moral development, worship, rituals, and cross-cultural manifestations of religion.

**PSYC 536 Seminar in Psychology and Religion (2)**

Focuses on an aspect of integration of psychology and religion.

**PSYC 544 Foundations of Learning and Behavior (4)**

Surveys the major theories, methods, and applications in the psychology of learning. Includes classical, operant, and cognitive aspects, with emphasis on contemporary issues in research and applications as well as laboratory training with animals.

**PSYC 545 Cognitive Foundations (4)**

Reviews the major theories, methods, and findings in perception, cognition, and memory, including an introduction to contemporary cognitive science. Applications to the understanding of normal as well as abnormal behavior and psychological interventions.

**PSYC 551 Psychobiological Foundations (4)**

Basic course in psychobiology. Neuroanatomy, the physiology of the neuron, and neural communication. Includes consideration of structure and function of visual, auditory, and somesthetic sensation and perception. Concludes with coverage of the structure and function of motor systems. Considers visuospatial, visuoperceptual, and visuoconstructive disorders; and apraxia.

**PSYC 552 Brain and Behavior (4)**

Builds on the foundations of psychobiology to examine the neurophysiological bases of molar behaviors, including consideration of sleep and biological rhythms; language; learning and memory; motivated behaviors (e.g., aggression, hunger, thirst, sex); emotion; and psychological dysfunction (e.g., schizophrenia, anxiety disorders).

Prerequisite: PSYC 551 or consent of instructor.

**PSYC 554 Health Psychology (4)**

Overviews the field of clinical health psychology. The biopsychosocial model and the management of chronic illness used as a framework in which to address assessment and intervention principles, cultural influences, bioethics, and dying and death issues.

**PSYC 555 Psychopharmacology (2)**

Advanced coverage of neurotransmitter systems, with particular emphasis on the mechanism of action of various psychoactive substances.

Prerequisite: PSYC 551.

**PSYC 556 Biofeedback (2)**

Intensive learning experience in biofeedback concepts, terms, and techniques, including biofeedback applications for treating and diagnosing a wide range of psychophysiological disorders, such as headaches, temporomandibular disorder, Raynaud's disease, chronic lower-back pain, and irritable bowel syndrome. Training in diaphragmatic breathing and biofeedback-assisted relaxation strategies for teaching patient self-regulation of tension-related problems. Hands-on laboratory experience and training in thermal, electromyographic, and electrodermal activity of biofeedback.

Prerequisite: PSYC 581, 581L.

**PSYC 564 Foundations of Social and Cultural Psychology (4)**

Surveys research, theory, and applications of social psychology within the context of other areas of psychology and related disciplines. Emphasizes scientific study of how people think about, influence, and relate to each other—both at the interpersonal and intergroup levels—within the context of cultural, social, and related phenomena. Applications to areas of psychology, such as clinical, health, and organizational psychology; as well as to economics, politics, and social issues.

**PSYC 566 Cross-cultural Psychology (2)**

Examines cross-cultural variations in psychological processes and human behavior in light of the role of culture and implications for the universality of psychological principles. Examines cross-cultural research, theory, and interventions in terms of their implications for the understanding of cross-cultural variations and the universality of psychological knowledge; the implications for the study and practice of psychology in a multicultural society and interdependent world. Includes basic areas—such as personality, developmental, and social psychology—as well as clinical and other professional areas.

**PSYC 567 Ethnic Diversity and Community Issues (2)**

Surveys theories, research, and interventions dealing with culture and ethnicity in mental health and clinical practice. Focuses on working with ethnic minorities, while emphasizing the effects of culture, ethnicity, and socioeconomic factors in the behavior of all ethnic-minority as well as mainstream individuals and groups. The role of cultural and socioeconomic factors in psychological processes, psychopathology, psychological assessment, and intervention examined within the context of human diversity and community.

**PSYC 568 Sex Roles and Gender Issues (2)**

Seminar covering research literature on the differences between males and females, masculinity, femininity, and androgyny; and the roles and cultural expectations of the sexes. Examines the antecedents and consequences of sex-based prejudice and discrimination within the context of contemporary social issues and culture.

**PSYC 571 Adult Psychopathology (4)**

Advanced overview of the major theoretical and empirical approaches to the understanding and classification of adult psychopathology in light of contemporary psychological research and the context of culture. The DSM-IV provides the basic structure for analysis of the various major types of adult psychopathology, including schizophrenia and other psychotic disorders, mood disorders, anxiety disorders, dissociative disorders, personality disorders, adjustment disorders, and cognitive disorders.

**PSYC 572 Child Psychopathology (2)**

Advanced overview of the major theoretical and empirical approaches to the understanding and classification of child psychopathology in light of contemporary psychological research and the context of culture. The DSM-IV provides the basic structure for analysis of the major types of child psychopathology, including mental retardation, learning disorders, pervasive developmental disorders, conduct disorders, and eating disorders.

Prerequisite: PSYC 571 or consent of instructor.

**PSYC 574 Personality Theory and Research (4)**

Surveys the major theories and contemporary areas of development in the field of personality. Examines theories in light of contemporary research evidence in areas dealing with individual patterns of thinking, feeling, and acting; as well as developments in areas such as the biological, cultural, and social foundations of human behavior. Evaluates theories based on criteria such as stimulation of research and applications. Attempts to integrate knowledge from the various basic areas of scientific psychology—such as learning, motivation, and emotion—in order to advance the understanding of current issues and trends in personality theory, research, measurement, and applications.

**PSYC 575 Foundations of Human Development (4)**

Considers human development from conception through old age—including personality as well as social, cognitive, and physiological aspects of development. Emphasizes contemporary developments in research, theory, and applications.

**PSYC 576 Social Cognitive Development (3)**

Focuses on development of social relationships and cognitive processes across the life span. Reviews the major theories of social and cognitive development and the empirical examination of these theories. Gives attention to how individuals think about their social world, as well as how the social world and thought processes interact to influence behavior.

Prerequisite: PSYC 575.

**PSYC 577 Emotional Development (3)**

Examines theories and research related to attachment, relational development within families, and emotional self-regulation across the lifespan. Analyzes the foundation and applications regarding emotional process to further understand the connections with interpersonal functioning, adjustment, and personality within parental, marital, and broader social contexts.

Prerequisite: PSYC 575.

**PSYC 581 Psychological Treatment I: Behavioral and Cognitive Therapies (3)**

Basis for understanding behavior therapy, the concepts and techniques of classical conditioning and operant conditioning interventions, and the empirical data regarding the efficacy of this treatment orientation.

Prerequisite: PSYC 571 and consent of instructor.

**PSYC 581L Psychological Treatment I: Behavioral and Cognitive Therapies Practice (1)**

Supervised experience observing and/or engaging in behavior therapy in laboratory assignments.

Corequisite: PSYC 581.

**PSYC 582 Psychological Treatment II: Psychodynamic Therapy (2)**

Basis for understanding psychodynamic therapy (from psychoanalysis to object-relations therapy to short-term psychodynamic therapy), the concepts and techniques of various types of psychodynamic interventions, and the empirical data regarding the efficacy of this treatment orientation.

Prerequisite: PSYC 571 or consent of instructor.

**PSYC 582L Psychological Treatment II: Psychodynamic Therapy Practice (1)**

Supervised experience observing and/or engaging in psychodynamic therapy.

Corequisite: PSYC 582.

**PSYC 583 Psychological Treatment III: Humanistic/Phenomenological Approaches to Therapy (2)**

Overviews the various humanistic/phenomenological approaches to therapy, including client-centered and Gestalt therapies. Student develops an understanding of concepts and techniques of the various approaches, as well as the empirical data regarding the efficacy of these treatment orientations.

Prerequisite: PSYC 582 or consent of instructor.

**PSYC 583L Psychological Treatment III: Humanistic/Phenomenological Therapy Practice (1)**

Provides the student with supervised experience observing and/or engaging in humanistic/phenomenological therapy.

Corequisite: PSYC 583.

**PSYC 584 Psychological Treatment IV: Conjoint and Group Psychotherapies (2)**

Provides the student with understanding of conjoint and group psychotherapies. Presents the concepts and techniques of conjoint and group psychotherapies, as well as the empirical data regarding the efficacy of these interventions.

Prerequisite: PSYC 571 or consent of instructor.

**PSYC 584L Psychological Treatment IV: Group Psychotherapies Practice (1)**

Supervised experience observing and/or engaging in conjoint or group therapy.

Prerequisite: PSYC 571.

Corequisite: PSYC 584.

**PSYC 591 Colloquia (1)**

Students participate in a series of lectures presented by distinguished speakers in the various areas of scientific and professional psychology. Students prepare a report critiquing each of the presentations attended. Enrollment is for 1 unit each year for three years.

**PSYC 594 Readings in Psychology (1-4)****PSYC 595 Directed Research (1-8)**

Academic credit for research leading to the second-year project. A total of 12 units required.

**PSYC 596 Directed Study (1-4)**

Academic credit for specific research projects arranged between individual students and faculty members. May include readings, literature review, and/or laboratory research. Not to be used for the second-year project.

**PSYC 597 Supervised Research (1-4)**

Academic credit for research for those students who have not yet advanced to doctoral candidacy. Not to be used for the second-year-project.

**PSYC 598 Master's Thesis (1-4)**

Required course for all master's degree students in the experimental psychology program.

**PSYC 604 Advanced Topics in Multivariate Analyses (2)**

Advanced topics in statistical analysis and research methods in psychology.

Prerequisite: PSYC 503, 505.

**PSYC 614 Neuropsychological Assessment (2)**

Instruction in the administration, scoring, interpretation, and report write-up of various neuropsychological instruments and batteries, including the Halstead Reitan Neuropsychological Battery, the Luria Nebraska Neuropsychological Battery, and others. Considers the empirical reliability and validity of data for each instrument; supervised practice in their use and interpretation.

Prerequisite: PSYC 514 or consent of instructor.

**PSYC 615 Advanced Rorschach Assessment (2)**

Advanced issues in the interpretation and integration of Rorschach findings. Includes a review of Rorschach scoring and interpretation, with an emphasis on difficult scoring and interpretation issues including the use of Rorschach with children and adolescents. Includes experience with scoring and interpreting example cases.

Prerequisite: PSYC 515, 515L.

**PSYC 624 Techniques in Clinical Management (2)**

Seminar course designed to provide students who have had little or no clinical case-management experience with the basic information and skills needed to work effectively with psychological assessment and therapy clinics. Open only to those accepted into a clinical psychology doctoral program.

Prerequisite: PSYC 525.

**PSYC 646 The Nature of Emotion (3)**

Seminar course that considers the fundamental questions in the scientific investigation of the emotions—including the theories of emotional taxonomy, the expression of emotion in neurophysiological and muscular systems, facial expression and the universality of emotions, the cognitive foundations of emotional processing and expression, and emotional memory.

Prerequisite: PSYC 545, 551; or consent of instructor.

**PSYC 654 Behavioral Neurology (3)**

Seminar course that examines the intersection of the fields of neurology and neuropsychology. Includes general principles of neurology, neuropathology, and neurological examinations—with an emphasis on material useful for the neuropsychologist to function as a member of a clinical team.

**PSYC 655 Principles of Psychophysiology (3)**

Seminar course in basic methodological, inferential, and conceptual issues in psychophysiology. Beginning with principles of inference and psychophysiological constructs, the course considers each of the major physiological systems—including the electrodermal, skeletomotor, electrocortical, cardiovascular, pulmonary, and sexual response systems. Major papers, both current and historical, relevant to these systems and the major conceptual lines of research.

Prerequisite: PSYC 551 or consent of instructor.

**PSYC 656 Seminar in Cortical Functions: Frontal Cortex (2)**

Readings and discussions on the neuroanatomy and function of the frontal lobe cortex, the neurological and neuropsychological disorders, assessment strategies, and treatment strategies associated with frontal lobe damage.

Prerequisite: PSYC 552 or consent of instructor; and corequisite course(s), if any.

**PSYC 657 Seminar in Cortical Functions: Posterior Cortex (2)**

Readings and discussions on the neuroanatomy and function of the parietal, temporal, and occipital lobe cortices; the neurological and neuropsychological disorders; assessment strategies; and treatment strategies associated with damage to the posterior portions of the brain.

Prerequisite: PSYC 552 or consent of instructor.

**PSYC 658 Seminar in Subcortical Function (2)**

Readings and discussions on the neuroanatomy and function of the major subcortical structures—including the basal ganglia, limbic system, thalamus, cerebellum, and brainstem. Seminar covers the neurological and neuropsychological disorders, assessment strategies, and treatment strategies associated with damage to these subcortical structures.

Prerequisite: PSYC 552 or consent of instructor; corequisite course(s), if any.

**PSYC 659 Child Socialization Processes (3)**

Focuses on honing human relation/interaction skills necessary for intervention with children and families. Gives attention to developing a working knowledge of 2-to-5-year-old children's social, emotional, and cognitive development through course readings and through interactions with preschool age children within the laboratory component of the course.

**PSYC 674 Infant and Toddler Development (2)**

Focus on infant development from 0 through 36 months of age, examining milestones of cognitive, motor, and psychosocial development. Developmental scales and instruments that address these aspects of infant/toddler development examined within the context of assessment and intervention.

**PSYC 675 Cognitive Development (2)**

Current research and theory regarding cognitive development across the lifespan. Reading focuses on development in adolescence and in young, middle, and late adulthood. Specific topics to be covered include: intelligence, creativity, memory and autobiographical memory, consciousness, spatial cognition, imagery, social cognition, and moral reasoning. Explores changes in cognition over adulthood, with consideration of how these changes affect an individual's growth and development in other domains.

Prerequisite: PSYC 575 or consent of instructor.

**PSYC 679 Universal Psychiatric Care (1 or 2)**

Provides opportunity to participate in an international institute featuring world leaders in psychiatric care. Topics include: world diagnostic guidelines, psychotropic medications and issues in treating ethnic populations, spirituality and psychiatry, transpersonal psychiatry in theory and practice, multidisciplinary teams in the practice of mental health services, and problems of mental health in immigrant populations. Students registering for 1 unit participate in ten hours of lecture, including a pre- and postsession. Those taking 2 units also develop a major paper on one of the institute topics.

**PSYC 681 Clinical Supervision: Concepts, Principles, and Functions (2)**

Seminar course in the basic skills and corresponding knowledge of clinical psychology supervision. Different theoretical approaches to conceptualizing the clinical supervisor-supervisee dyad and the supervisory process. Principles, methods, and techniques of individual, group, and live supervision. Supervision interpersonal issues and dilemmas, multicultural context, ethical and legal considerations, and research issues and methods. Prepares the student to become a supervision trainee.

**PSYC 682 Psychotherapy Supervision Practicum (1 or 2)**

A supervised practice experience in psychotherapy supervision. Enhances the supervision trainee's awareness of what experiences and personal tendencies s/he brings to the process of supervising, how to increase his/her skills in managing the supervisory relationship to the benefit of the supervisee and the trainee's own professional development, and how to enrich his/her understanding of reciprocal meanings and concepts. Provides information that can be used by the student in making decisions about further training in psychotherapy supervision and possibly about pursuing a specialty in psychotherapy supervision.

Prerequisite: PSYC 681 or consent of instructor.

**PSYC 683 Management, Consultation, and Professional Practice (2)**

Seminar course in the management, consultation, and business skills needed by the clinical psychologist to fit into contemporary integrated health and mental health care delivery systems (i.e., a health-maintenance organization or an independent-practice association). Explores the wide range of roles psychologists are playing in developing, evaluating, and administering behavior health care services. Emphasizes examining how the psychologist's clinical and research skills can enhance his/her ability to adapt to a changing marketplace.

**PSYC 684 Human Sexual Behavior and Treatment (2)**

Human sexuality in contemporary society. Physiological, psychological, sociocultural, and developmental factors associated with human sexuality. Interventions for sexual dysfunctions and sexual well-being. Fulfills California state licensing requirements for psychologists.

**PSYC 685 Drug Addiction and Therapy (2)**

Overviews the definitions, incidence, detection, assessment, effects, and ethical/legal/therapeutic management of substance abuse. Fulfills California state licensing requirements for psychologists.

**PSYC 686 Child, Partner, and Elder Abuse (2)**

Overviews the definitions, incidence, detection, assessment, effects, and the ethical, legal, and therapeutic management of child, partner, and elder/dependent-adult abuse. Perpetrator and victim characteristics, including cultural and ethnic diversity factors. Controversies regarding assessment techniques, diagnoses, sequelae syndromes, interventions, and forensic issues. Fulfills California state licensing requirements for psychologists.

**PSYC 687 Cognitive Behavioral Treatment of Anxiety Disorders (2 or 3)**

Advanced course in the assessment of cognitive behavioral treatment of the DSM-IV anxiety disorders. Concurrent group-therapy experience observing/engaging in cognitive behavioral therapy with adult clients.

Prerequisite: PSYC 581 or consent of instructor.

**PSYC 688 Empirically Supported Treatments of Depression (2)**

Advanced course in the clinical assessment and treatment of DSM-IV unipolar depressive disorders. Three empirically validated treatments: cognitive therapy, behavioral therapy, and interpersonal psychotherapy of depression. Assesses treatment outcome.

Prerequisite: PSYC 581 or consent of instructor.

**PSYC 694 Seminar in Advanced Topics in Psychology (1-4)**

**PSYC 695 Issues in Clinical Psychology (1-4)**  
Seminar course that examines current issues of clinical knowledge and the application of that knowledge as required for the competent practice of clinical psychology.

**PSYC 696 Psy.D. Research (1-3)**

Develops the Psy.D. research proposal.

Prerequisite: PSYC 502, 504; and admission to Psy.D. degree program.

**PSYC 697 Doctoral Research (1-12)**

Academic credit for dissertation research. A total of 36 units required.

**PSYC 698 Doctoral Project (1-4)**

Course credit for work on doctoral project. (Students must enroll for at least 1 unit during each quarter from the acceptance of the proposal until the project is completed.)

Prerequisite: PSYC 505 and advancement to candidacy.

**PSYC 699 Doctoral Dissertation (1-4)**

Course credit for work on doctoral dissertation. (Students must enroll for at least 1 unit during each quarter from the acceptance of the proposal until the dissertation is completed.)

Prerequisite: Advancement to doctoral candidacy.

**PSYC 721 Practicum Preparation I (2)**

Required all Psy.D. and Ph.D. degree students. Helps students learn beginning assessment and counseling skills. Incorporates demonstrations to facilitate learning. Prepares graduate students for both internal and external practicum.

**PSYC 722 Practicum Preparation II (2)**

Required of all Psy.D. and Ph.D. degree students. Helps students add to and refine skills developed in PSYC 721. Prepares graduate students for both internal and external practicum.

Prerequisite: PSYC 721.

**PSYC 781 Internal Practicum (1)**

Required unit for Psy.D. degree students, elective clinical training experience for Ph.D. degree students. Second-year practicum provides students with clinical training before they enter the formal practicum sequence. May be repeated twice for a total of 3 units.

**PSYC 782 External Practicum I (3)**

Provides students with a pre-internship level of clinical psychology training that will be more intensive, extensive, and continuous than anything they have previously experienced in the academic/clinical aspects of the program. A highly integrated component in the student's entire sequence of training and education at Loma Linda University. Provides (a) access to greater numbers of practicing psychologists who can serve as valid role models; (b) further education and experience in the areas of psychological assessment, diagnostic conceptualizations, and scientifically based treatment regimens; and (c) additional training with regard to the ethical, legal, and professional standards of the profession of clinical psychology.

Prerequisite: Completion of two years of the clinical psychology program at Loma Linda University and good academic and professional standing in the program.

**PSYC 783 External Practicum II (3)****PSYC 784 External Practicum III (3)****PSYC 785 External Practicum IV (3)****PSYC 786 External Practicum V (3)****PSYC 795 Directed Clinical Experience (1)**

For students who have finished their external practicum and pre-internship but who still desire further clinical training before going on internship. Also open to those occasional students who are not a part of the doctoral degree program but who are seeking a particular clinical experience available through the department. Clinical experience individually designed according to the needs and desires of the student and under the direction of a member of the department's faculty. May be repeated to a maximum of 8 units.

**PSYC 798 Pre-Internship (1)**

Elective clinical experience for students who have successfully completed the practicum year. May be repeated to a maximum of 6 units.

**PSYC 799 Internship (.5 or 1)**

(Must be repeated to a total of 4 units.)

Prerequisite: Advancement to candidacy and completion of all academic course work.

Corequisite: PSYC 799L.

**PSYC 799L Internship (250 to 500 hours)**

Prerequisite: Advancement to candidacy and completion of all academic course work.

Corequisite: PSYC 799.

**PSYCHIATRY****PSYT 521, 522 Understanding Your Patient (2.1)**

A lecture covering subjects vital to providing compassionate, perceptive medical care. Topics include doctor-patient communication, ethnic and cultural issues, identifying abuse stages of life, dying and palliative care, sexuality, and understanding the determinants of personality.

**PSYT 514 Psychopathology (1 or 4)**

Intensive introduction to medical disorders and their treatment. Building on understanding of the neural substrates of normal behavior, emphasizes abnormal brain findings in the mental disorders, along with the social and psychological consequences of the disorders. Includes an introduction to psychotherapeutic approaches and psychiatric medications.

**PSYT 599 Psychiatry Directed Study (1.5–18)****PSYT 701 Psychiatry Clerkship (1.5-9)**

Third-year, six-week psychiatry clerkship includes five weeks divided between two psychiatry treatment sites, and one week at an addiction-treatment site. Clerkship experiences offer broad and varied training in the treatment of psychiatric problems of adults and children. Students participate in an interactive case-based seminar series.

**PSYT 791 Psychiatry Third-Year Elective (3)**

A two-week elective in the third year of medicine.

**PSYT 891 Psychiatry Elective (60 to 720 hours)**

Fourth-year medical students have the opportunity to take electives with psychiatry faculty in child and adult settings, as well as an intensive reading/discussion course in religion and psychiatry.

**PHYSICAL THERAPY ASSISTANT****PTAS 201 Anatomy (4)**

Anatomy of the human body, with emphasis on the neuromuscular and skeletal systems, including anatomical landmarks. Basic neuroanatomy of the central nervous system.

**PTAS 203 Applied Kinesiology (4)**

Introduces functional anatomy of the musculoskeletal system. Applies biomechanics of normal and abnormal movement in the human body. Introduces components of gait. Lecture and laboratory.

Prerequisite: PTAS 201.

**PTAS 205 Introduction to Physical Therapy (1)**

Physical therapy practice and the role of the physical therapist assistant in providing patient care. Quality assurance. Interpersonal skills. Introduces the multidisciplinary approach. Familiarizes the student with health care facilities and government agencies.

**PTAS 206 Documentation Skills (1)**

Introduces basic abbreviations, medical terminology, chart reading, and note writing.

**PTAS 212 Physical Therapy Procedures (3)**

Principles of basic skills in the physical therapy setting. Goniometry. Sensory- and gross-muscle testing. Mobility skills in bed and wheelchair and transfer training. Gait training and activities of daily living. Body mechanics, positioning, and vital signs. Architectural barriers identified. Teaching techniques for other health care providers, patients, and families. Wheelchair measurement and maintenance. Lecture and laboratory.

**PTAS 224 General Medicine (3)**

Introduces general-medicine conditions, including pathology and management of medical problems. Diseases of the body systems, including urinary, reproductive, digestive, circulatory, endocrine, and musculoskeletal. Theoretical principles and practical application of respiratory techniques, exercises, and postural drainage. CPR certification must be obtained before end of term.

**PTAS 225 Neurology (3)**

Introduces neurological conditions, including pathology and management of medical problems of stroke, head injury, Parkinson's disease, spinal cord and nerve injuries, and other conditions.

**PTAS 226 Orthopaedics I (3)**

Introduces common orthopaedic conditions, pathologies, and surgical procedures involving the peripheral joints. Introduces joint mobilization. Procedures and progression of therapeutic exercises for each specific joint covered as these exercises relate to tissue repair and healing response. Practical laboratory includes integration of treatment plans and progressions.

**PTAS 227 Therapeutic Exercise (2)**

Introduces therapeutic exercise theories and practical applications. Tissue response to range of motion, stretch, and resistive exercise. Laboratory covers practical applications of various types of exercise techniques and machines used in the clinics, and a systematic approach to therapeutic exercise progression.

**PTAS 231 Physical Therapy Modalities (3)**

Basic physical therapy modalities—including heat and cold application, hydrotherapy and massage, pool therapy, physiology and control of edema, stump wrapping, standard precautions, and chronic-pain management. Lecture and laboratory.

**PTAS 236 Applied Electrotherapy (3)**

Principles and techniques of electrotherapy procedures, including basic physiological effects. Indications and contraindications for specific electrotherapy modalities. Practical application and demonstration of modalities in a laboratory setting.

**PTAS 238 Wound Care (1)**

Normal structure and function of the skin. Pathology of the skin, including problem conditions, burns, and wounds. Lecture and laboratory to include wound identification, measuring, dressing, treatments, and debridement. Model wounds used for hands-on training.

**PTAS 241 Applied Pediatrics (2)**

Normal and abnormal development, from conception to adolescence. Emphasizes developmental sequence, testing, and treatment of neurological and orthopaedic disorders. Practical laboratory.

**PTAS 243 Applied Geriatrics (3)**

Introduces various aspects of geriatric care. Wellness care and adaptation to exercise modalities. Procedures pertaining to the geriatric patient. Diagnosis and aging changes that affect function in geriatric rehabilitation.

**PTAS 244 Introduction to Athletic Training for the Physical Therapist Assistant (1)**

Introductory study of the neuromusculoskeletal system as it applies to the athletic population. Student develops and implements a sports-medicine program and participates in physical examination. Medical emergencies in the sports-medicine setting, criteria for return to play, types and frequency of sport-specific injuries, pregame sidelines/court-side setup, techniques of applying athletic tape to various body locations, and on-field examinations.

**PTAS 251 Orthopaedics II (3)**

Introduces common orthopaedic conditions, pathologies, and surgical procedures of the spine. Treatments, procedures, and progression of therapeutic exercises of the spine as related to tissue repair and healing response. Practical laboratory includes integration of treatment plans and progressions.

**PTAS 252 Applied Neurology (3)**

Introduces techniques to facilitate neurodevelopmental treatment, proprioceptive neuromuscular facilitation, Brunnstrom, and principles of therapeutic exercise of the cardiac patient. Practical laboratory.

**PTAS 261 Physical Therapy Practice (1)**

Student observes evaluations, treatments, and various diagnoses; completes a resume and a state licensing application; and prepares and presents a case study and in-service. Billing procedures and third-party payors.

**PTAS 264 Applied Prosthetics and Orthotics (2)**

Introduces basic principles in the use of selected prosthetic and orthotic devices. Exposes student to various types of devices; discusses patient adjustment to devices.

Examines indications and contraindications for orthotic and prosthetic use with patients seen in physical therapy.

Prerequisite: PTAS 203.

**PTAS 265 Professional Seminar (1)**

Contemporary theories and practices of physical therapy.

Topics covered by faculty and guest lecturers include:

sports taping, ortho taping, soft tissue, geriatric experience through affective learning. Lecture and laboratory.

**PTAS 275 Psychosocial Aspects of Health (2)**

Psychological and sociological reactions to illness or disability. Includes trauma, surgery, and congenital and terminal illness. Individual and family considerations.

**PTAS 291 Physical Therapist Assistant Practicum (1)**

Two-week assignment to be completed during the Winter Quarter in an affiliated clinical setting. Emphasizes patient and staff working relationships. Awareness of patient disorders and limited application of physical therapy techniques. Forty clock hours per week of supervised clinical experience.

**PTAS 293 Physical Therapist Assistant Affiliation I (3)**

One six-week assignment to be completed during the Spring Quarter. Students exposed to a variety of clinical settings. Forty clock hours per week of supervised clinical experience. The combined total of twenty weeks—including PTAS 291, 293, 294, 295—of clinical experience prepares the student for entry-level performance.

**PTAS 294 Physical Therapist Assistant Affiliation II (3)**

One six-week assignment to be completed during the Summer Quarter. Students exposed to a variety of clinical settings. Forty clock hours per week of supervised clinical experience. The combined total of twenty weeks—including PTAS 291, 293, 294, 295—of clinical experience prepares the student for entry-level performance.

**PTAS 295 Physical Therapist Assistant Affiliation III (3)**

Second of two six-week assignments to be completed during the second Summer Quarter. Exposure to a variety of clinical settings. Forty clock hours per week of supervised clinical experience. The combined total of twenty weeks—including PTAS 291, 293, 294, 295—of clinical experience.

**PUBLIC ADMINISTRATION****PUAD 665 Information Technology and Decision Science (4)****PUAD 668 Philosophy and Theory of Public Interest (4)**

Examines principal themes and arguments in Western political philosophy in relation to their application in social policy and public administration. Special attention given to the political ideologies of classic individualistic liberalism and civic republicanism as primary sources for an American public philosophy.

**PUAD 675 Public Financial Management and Budgeting (3)**

Addresses the role, dynamics, politics, and processes involved in the public budgetary function; and associated budget-preparation methods. Introduces students to advanced techniques employed by financial analysts in the public sector, including forecasting techniques, performance-measurement construction, activity-based costing, and expenditure-analysis techniques. Examines types and structure of contemporary revenue sources. Reviews the fiscal interrelationships among federal, state, and local levels of government.

**PUAD 676 Cost-Benefit Analysis (2)**

Addresses evaluation of government programs using cost-benefit analysis. Examines how scarce or unemployed resources should be priced, the choice of proper time-discount rates, treatment of income-distribution issues, human investments, environment benefits, intergovernmental grants, and regulatory problems. Students examine case studies and complete an evaluation of a program using cost-benefit analysis.

**PUAD 677 Organizational Behavior (4)**

Introduces a wide variety of theories, models, strategies, and experiences in the aspect of management that focuses on understanding, predicting, and influencing human behavior in an organization. Develops skills with which thinking administrators can find their own solutions to problems in specific situations and can function effectively with their employees in the work environment.

Prerequisite: SOWK 672.

**PUAD 678 Public Administration Management (3)**

Reviews the theoretical roots and values of public administration and how these influence perspectives in contemporary public administration management. Emphasizes understanding of the nature of public accountability and the achievement of public goals. Integrates the various theoretical frameworks and analytical tools used to support executive decision making, contingency development, and the implementation of planned change. Reviews diffusion strategies, future forecasting, PERT, and other administrative tools.

**PUAD 688 Administrative Law (3)**

Administrative perspectives on legal principles of agency rule-making and adjudication; distinctions between informal and administrative actions; decision-making; judicial review; and public control of administrative decisions.

**RADIOLOGY****RADS 791 Radiology Third-Year Elective (3)**

A two-week elective in the third year of medicine.

**RADS 891 Radiology Elective (60 to 720 hours)****RADIATION MEDICINE****RDMN 891 Radiation Medicine Elective (60 to 720 hours)****READING****RDNG 077 Basic Reading Skills—Able I (2)**

For students with limited English language facility and fluency. Focuses on word-recognition skills using the Action Phonics method, and oral language communication exercises. Includes vocabulary development, strategies to enhance reading comprehension and study skills, and methods to increase reading rate. Explores a wholistic view of successful student life—including interpersonal relationships, cultural awareness and adaptation, and societal and emotional issues.

**RDNG 176 Study Skills for College Success (1)**

Develops cognitive organizational strategies while increasing the student's rate of reading. Demonstrates brain-compatible learning techniques based on current research. Highlights information-processing techniques to be used when reading textbooks. Develops previewing, skimming, and scanning techniques that enable the student to do quick reviews of course content. Includes efficient memory techniques, test-taking skills, anxiety-reduction strategies, and techniques for maintaining a positive family environment while in a heavy study program.

**RDNG 177 Reading Techniques—Able II (2)**

Advanced reading course to enhance success in academic programs. Causes and effects of academic stress; ways of handling stress. Memory techniques, test-taking strategies, skills for dynamic information processing, and more efficient reading comprehension.

**RDNG 277 Advanced Reading Techniques—Able III (2)**

Advanced reading course to increase student's rate of reading by developing cognitive organizational strategies such as: special techniques for processing information while reading textbooks; and previewing, skimming, and scanning techniques. Advanced skills for improving memory, taking tests, and reducing anxiety.

**RELIGION—ETHICS****PERSONAL, PROFESSIONAL, SOCIAL****RELE 455 Christian Understanding of Sexuality (2 or 3)**

Interpretations of human sexuality in ancient, medieval, and modern Christian thought, with emphasis on contemporary issues such as marriage, divorce, homosexuality, and artificial human procreation. Additional project required for third unit.

**RELE 456 Personal and Professional Ethics (2 or 3)**

The foundations, norms, and patterns of personal integrity and professional responsibility. Additional project required for third unit.

**RELE 457 Christian Ethics and Health Care (2 or 3)**

Ethical issues in modern medicine and related fields from the perspective of Christian thought and practice. Additional project required for third unit.

**RELE 499 Directed Study (1-3)**

Prerequisite: Consent of instructor.

**RELE 505 Clinical Ethics (3 or 4)**

Case-based analysis of bioethics, with emphasis on clinical applications. Conceptual and historical readings in bioethics. Additional project required for fourth unit.

**RELE 522 Bioethical Issues in Social Work (3 or 4)**

Theoretical and practical dilemmas in bioethics. Contributions of social workers to these issues. Additional project required for fourth unit.

**RELE 524 Christian Bioethics (3 or 4)**

Christian perspectives on ethical issues in health care. Additional project required for fourth unit.

**RELE 525 Ethics for Scientists (3 or 4)**

Ethical aspects of scientific research, with emphasis on Christian contributions. Additional project required for fourth unit.

**RELE 534 Ethical Issues in Public Health (3 or 4)**

Ethical issues encountered by public health administrators, educators, and investigators. Additional project required for fourth unit.

**RELE 547 Christian Business Ethics (3 or 4)**

Christian and other perspectives on ethical issues in business, and their pertinence to health care delivery and administration. Additional project required for fourth unit.

**RELE 548 Christian Social Ethics (3 or 4)**

Relationships between Christian beliefs and social theory and practice. Additional project required for fourth unit.

**RELE 554 Clinical Ethics Practicum I (4)**

Theories and applications of ethics in the clinical setting.

**RELE 555 Clinical Ethics Practicum II (4)**

Theories and applications of ethics in the clinical setting.  
Prerequisite: RELE 554.

**RELE 577 Theological Ethics (3 or 4)**

Ethical implications of the primary theological legacies of Western culture. Additional project required for fourth unit.

**RELE 588 Philosophical Ethics (3 or 4)**

Ethical themes and significant theorists in Western philosophy. Additional project required for fourth unit.

**RELE 589 Biblical Ethics (3 or 4)**

Exploration of the nature of biblical ethics and the contribution that the Bible makes to ethical reflection and action. Additional project required for fourth unit.

**RELE 624 Seminar in Christian Ethics (3 or 4)**

Advanced study of selected topics in Christian ethics.  
Prerequisite: Consent of instructor.

**RELE 699 Directed Study (1-6)**

Prerequisite: Consent of instructor.

**RELE 704 Medicine and Ethics (2)**

Introductory study of Christian medical ethics, emphasizing personal integrity of the physician, the process of moral decision making, and ethical problems facing contemporary medicine, such as abortion and euthanasia.

**RELE 705 Ethics in Pharmacy Practice (2)**

Ethical issues and principles in the contemporary practice of pharmacy. Christian resources and professional expectations for the ethical decisions of pharmacists.

**RELE 706 Advanced Pharmacy Ethics (2)**

Creates an atmosphere of in-depth analysis and discussion of ethics in pharmacy practice. Students bring their own cases to discuss in addition to course readings, guest lectures, and moral decision-making models.

**RELE 714 Advanced Medical Ethics (2)**

Advanced study of issues and cases in contemporary medical ethics.

**RELE 734 Christian Ethics for Dentists (2)**

Ethical issues in contemporary dentistry. Christian resources for ethical decision making.

**RELIGION—GENERAL****RELG 265 Special Topics in Religion (1)**

Lecture and discussion of a current topic in religion bearing on the theory or practice of one aspect of the discipline. Specific content varies from quarter to quarter. May be repeated for additional credit.

**RELG 504 Research Methods (2-4)**

Studies presuppositions and procedures for scholarship in religion and ethics, with an introduction to research in the natural and behavioral sciences. Practical themes include writing, library and Internet resources, and forms of scholarly papers and articles. Two units of credit may be given for research methods class taken in another discipline. Additional project required for fourth unit.

**RELG 674 Reading Tutorial (3 or 4)**

Reading course for graduate students in religious studies. Topics vary depending on student and instructor interests. Additional project required for fourth unit.

Prerequisite: Consent of instructor.

**RELG 695 Clinical Internship (400 hours)**

Supervised clinical internship. Minimum of one hour of individual supervision per week, and a final evaluation from the supervisor at the completion of 400 hours of clinical internship.

**RELG 696 Project (1-4)**

Prerequisite: Consent of instructor and of student's adviser.

**RELG 697 Independent Research (1-8)**

Prerequisite: Consent of instructor and of student's adviser.

**RELG 698 Thesis (1-4)**

Prerequisite: Consent of instructor and of student's adviser.

**RELIGION—RELATIONAL****APPLIED THEOLOGY, CLINICAL MINISTRY,  
PSYCHOLOGY OF RELIGION****RELR 404 Christian Service (1 or 2)**

Student participates in approved service-learning, with written reflection on the Christian reasons for service. Additional project required for second unit.

**RELR 408 Christian Perspectives on Marriage and  
the Family (2 or 3)**

From a Christian perspective, presents an overview of the family lifecycle. Additional project required for third unit.

**RELR 409 Christian Perspectives on Death and  
Dying (2 or 3)**

From a Christian perspective, considers the meaning of death, including: the process of dying, cultural issues regarding death and dying, grief and mourning, suicide, and other related issues. Additional project required for third unit.

**RELR 415 Christian Theology and Popular Culture  
(2 or 3)**

Examines concepts and practices in popular culture from a Christian perspective. Additional project required for third unit.

**RELR 427 Crisis Counseling (2 or 3)**

Crisis phenomena, current crisis theory, a Christian model of crisis care, and the dynamics and practices of crisis care. Additional project required for third unit.

**RELR 429 Cultural Issues in Religion (2 or 3)**

Studies similarities and differences between European-American culture and "minority" cultures in America, and the differences pertaining to the way religion is perceived and practiced. Additional project required for third unit.

**RELR 448 Church and Community Leadership  
(2 or 3)**

Theology and practice of lay church involvement and leadership by health care professionals. Additional project required for third unit.

**RELR 475 Art of Integrative Care (2 or 3)**

The integration of psychosocial and spiritual care in the clinical setting. Additional project required for third unit.

**RELR 499 Directed Study (1-3)**

Prerequisite: Consent of instructor.

**RELR 524 Clinical Pastoral Education (6-12)**

Twelve-week course that includes supervised experience with patients, lectures by hospital staff, hospital rounds with physicians, seminars, and conferences. Five eight-hour days per week. [Limited enrollment. Credit earned in this course is recognized by the Association for Clinical Pastoral Education, Incorporated.]

**RELR 525 Health Care and the Dynamics of  
Christian Leadership (3 or 4)**

Christian principles of leadership in the community and in the practice of health care. Additional project required for fourth unit.

**RELR 527 Crisis Counseling (3 or 4)**

Crisis phenomena, current crisis theory, a Christian model of crisis care, and the dynamics and practices of crisis care. Additional project required for fourth unit.

**RELR 528 Christian Citizenship and Leadership (3 or 4)**

Christian principles for fostering healthy communities, transforming the institutions of society, and providing public leadership. Additional project required for fourth unit.

**RELR 535 Spirituality and Mental Health (3 or 4)**

Explores the interrelationship between spirituality and mental health. Seeks to enhance understanding of the term “spirituality” in the context of religious traditions; considers the therapeutic effects both of spirituality and of religious traditions. Additional project required for fourth unit.

**RELR 536 Spirituality and Everyday Life (3 or 4)**

Explores the place of spirituality in everyday life through assimilation of information drawn from religious theorists, theology, spiritual and religious practices, and occupation.

**RELR 537 Issues in Pastoral Counseling (2)**

Explores issues in the practice of pastoral counseling, such as pastoral assessment, theological reflections, and spirituality.

**RELR 538 Methods in Pastoral Counseling (2)**

Explores pastoral counseling methods; the uniqueness, and contributions of those methods to the field of religion and mental health.

**RELR 564 Religion, Marriage, and the Family (3 or 4)**

The family in theological, historical, and ethical perspectives—with a Christian assessment of contemporary theories regarding the family. Additional project required for fourth unit.

**RELR 565 Introduction to Pastoral Theology and Methodology (3 or 4)**

Studies the biblical, theological, and historical foundations for the practice of ministry. Additional project required for fourth unit.

**RELR 567 Introduction to Pastoral Counseling (3 or 4)**

Provides overview of theology, history, theory, and practice of pastoral counseling. Additional project required for fourth unit.

**RELR 568 Care of the Dying and Bereaved (3 or 4)**

Studies the biblical, theological, cultural, religious, relational, and psychological aspects of dying and death. Additional project required for fourth unit.

**RELR 574 Introduction to Preaching (3 or 4)**

Explores the why, what, where, and how of Christian proclamation, with emphasis on the development of basic skills for the preparation and delivery of biblical messages in a variety of settings. Additional project required for fourth unit.

**RELR 575 Art of Integrative Care (3 or 4)**

The integration of psychosocial and spiritual care in the clinical setting. Additional project required for fourth unit.

**RELR 584 Culture, Psychology, and Religion (3 or 4)**

Introduces the major contours of Western culture as they relate to various schools of psychological thought and the influence of religious beliefs. Additional project required for fourth unit.

**RELR 585 Psychology of Religion (3 or 4)**

Psychological research of religion from an eclectic approach. Faith development, ethnographic varieties of religious experiences, narrative analysis, and cross-cultural religious experiences. Additional project required for fourth unit.

**RELR 586 Psychology of Moral and Faith Development (3 or 4)**

Studies logical, moral, and faith reasoning from a cognitive-developmental perspective. How cultural and religious norms affect moral thinking. Additional project required for fourth unit.

**RELR 694 Seminar in Clinical Ministry (3 or 4)**

Principles and practice of effective interaction with patients, parishioners, inmates, and other populations. Additional project required for fourth unit.

**RELR 699 Directed Study (1-6)**

Prerequisite: Consent of instructor.

**RELR 701 Orientation to Religion and Medicine (2)**

Examines the relationship between Scripture and the practice of medicine.

**RELR 709 Christian Perspectives on Death and Dying (2)**

From a Christian perspective, considers the meaning of death, including: the process of dying, cultural issues regarding death and dying, grief and mourning, suicide, and other related issues.

**RELR 715 Christian Dentist in Community (2)**

Studies Christian leadership in the local church, surrounding community, and the larger society, emphasizing the practical development of leadership skills.

**RELR 725 Wholeness for Physicians (2)**

Knowledge, values, attitudes, and skills contributing to the physician's goal of personal wholeness.

**RELR 749 Personal and Family Wholeness (2)**

Studies personal spiritual development as the center for individual and family life and professional practice, with special attention to balancing healthy family relationships and professional obligations.

**RELR 775 Art of Integrative Care (2)**

The integration of psychosocial and spiritual care in the clinical setting.

**RELIGION—THEOLOGICAL****BIBLICAL, HISTORICAL, MISSION****RELT 404 New Testament Writings (2 or 3)**

Interprets selected letters and passages of the New Testament, with a view to their theological and practical significance for today. Additional project required for third unit.

**RELT 406 Adventist Beliefs and Life (2 or 3)**

Fundamental tenets of Seventh-day Adventist faith and the lifestyle that such faith engenders. Additional project required for third unit.

**RELT 415 Philosophy of Religion (2 or 3)**

Philosophical study of religion, including the nature and function of religious language, evidence for the existence of God, the problem of evil, and religious diversity. Additional project required for third unit.

**RELT 416 God and Human Suffering (2 or 3)**

Suffering and evil in relation to the creative and redemptive purposes of God for this world. Additional project required for third unit.

**RELT 419 Gospel of John (2 or 3)**

Key passages and themes in John, with an exploration of its message for today. Additional project required for third unit.

**RELT 423 Loma Linda Perspectives (2 or 3)**

History and philosophy of Loma Linda University as a Christian health-sciences institution that fosters human wholeness. Additional project required for third unit.

**RELT 424 Biblical Prophets (2 or 3)**

Selected books, passages, and themes in the Old Testament prophets, with an exploration of their theological and practical significance for today. Additional project required for third unit.

**RELT 425 Contemporary Religious Issues (2 or 3)**

Analyzes prominent topics in religion discussed in contemporary journals. Additional project required for third unit.

**RELT 426 Jesus (2 or 3)**

Studies Jesus as healer and teacher, prophet and reformer, Son of God and Savior. Additional project required for third unit.

**RELT 428 Gospel of Mark (2 or 3)**

Key passages and themes in Mark, with an exploration of its message for today. Additional project required for third unit.

**RELT 429 Gospel of Luke (2 or 3)**

Key passages and themes in Luke, with an exploration of its message for today. Additional project required for third unit.

**RELT 436 Adventist Heritage and Health (2 or 3)**

Origin and development of Seventh-day Adventist interest in health, from the background of nineteenth-century medicine and health reform to the present. Additional project required for third unit.

**RELT 437 Current Issues in Adventism (2 or 3)**

Selected theological, ethical, and organizational questions of current interest in Adventism, with the goal of preparation for active involvement in the life of the Seventh-day Adventist Church. Recommended for students with a Seventh-day Adventist background. Additional project required for third unit.

**RELT 439 Gospel of Matthew (2 or 3)**

Key passages and themes in Matthew, with an exploration of its message for today. Additional project required for third unit.

**RELT 440 World Religions (2 or 3)**

Surveys the origins, beliefs, and contemporary practices of the world's major religious systems. Gives attention to the interaction between specific religions and their cultures; and to similarities, differences, and potential for understanding among the religions. Additional project required for third unit.

**RELT 444 Christian Mission (2 or 3)**

Applies biblical theology to defining the concerns, structures, and methods of Christian mission. Concept of the Church, the definition of missionary, and the priorities of mission. Additional project required for third unit.

**RELT 447 Cross-cultural Ministry (2 or 3)**

Studies the challenges of serving in cross-cultural situations from a Christian mission perspective, using the insights of missiology and cultural anthropology as they relate to personal and professional growth, social change, and effective intercultural communication and service. Additional project required for third unit.

**RELT 464 Paul's Message in Romans (2 or 3)**

Chapter-by-chapter interpretation of Paul's most influential letter, in which the good news of God's salvation is applied to the issues of Christian life and community. Additional project required for third unit.

**RELT 468 Daniel (2 or 3)**

Nature, purpose, and message of the apocalyptic book of Daniel. Additional project required for third unit.

**RELT 469 Revelation (2 or 3)**

Nature, purpose, and message of the apocalyptic book of Revelation. Additional project required for third unit.

**RELT 474 Love and Sex in the Bible (2 or 3)**

Studies Scripture on the reality, nature, and challenges of love, both divine and human; and of key biblical passages on the goodness, meaning, and distortions of human sexuality. Additional project required for third unit.

**RELT 475 Spirituality and the Contemporary Christian (2 or 3)**

Explores the meaning of spirituality in the light of Scripture and Christian thought, and studies practices and disciplines that form and mature an individual's spiritual life. Additional project required for third unit.

**RELT 476 The Bible and Ethics (2 or 3)**

Ways in which the Bible and ethics are related. Major ethical themes in biblical teaching. Additional project required for third unit.

**RELT 499 Directed Study (1-3)**

Prerequisite: Consent of instructor.

**RELT 526 Creation and Cosmology (3 or 4)**

Explores the similarities and contrasts between biblical and scientific views of the world, with special attention to biblical Creation accounts in their historical context. Additional project required for fourth unit.

**RELT 534 Anthropology of Mission (3 or 4)**

Studies Christian mission, applying the findings of anthropology as they relate to cultural change. Processes of religious development, means of diffusion, factors affecting religious acculturation, and analysis of programs intended to effect changes in religion. Additional project required for fourth unit.

**RELT 539 Christian Understanding of God and Humanity (3 or 4)**

Studies the nature and attributes of God, with special emphasis on God's relation to the world; and the essential dynamics of human existence in light of the central biblical motifs of creature, image of God, and sin. Additional project required for fourth unit.

**RELT 540 World Religions and Human Health (3 or 4)**

Studies the history, beliefs, and practices of major religions of the world, with an emphasis on theological and ethical issues in the practice of health care ministry. Additional project required for fourth unit.

**RELT 555 The Adventist Experience (3 or 4)**

Introduces the beliefs and values that shape the Seventh-day Adventist community. Additional project required for fourth unit.

**RELT 557 Theology of Human Suffering (3 or 4)**

Suffering and evil in relation to the creative and redemptive purposes of God for this world. Focus on formation of student's theology of human suffering. Additional project required for fourth unit.

**RELT 558 Old Testament Thought (3 or 4)**

Introduces the literature and key theological themes of the Old Testament. Additional project required for fourth unit.

**RELT 559 New Testament Thought (3 or 4)**

Introduces the literature and key theological themes of the New Testament. Additional project required for fourth unit.

**RELT 615 Seminar in Philosophy of Religion (3 or 4)**

Examines the concept of God, arguments for the existence of God, the relationship of faith and reason, and the nature of religious language. Additional project required for fourth unit.

**RELT 617 Seminar in Religion and the Sciences (3 or 4)**

Explores the interface between religion and the sciences—with attention to the religious origins of modern science, the similarities and contrasts between scientific and religious inquiry, and the particular challenges that the sciences pose for religious belief. Additional project required for fourth unit.

**RELT 699 Directed Study (1-6)**

Prerequisite: Consent of instructor.

**RELT 706 Adventist Beliefs and Life (2)**

Fundamental tenets of Seventh-day Adventist faith, and the lifestyle that such faith engenders.

**RELT 707 Medicine, Humanity, and God (2)**

Role of the practitioner of medicine as a co-worker with God in the healing of humankind.

**RELT 713 Christian Spirituality (2)**

Study of Scripture and Christian thought on how a person's spiritual life is formed and matured.

**RELT 714 Comparative Religious Experiences (2)**

Examines the religious experiences held by adherents of various Christian confessions.

**RELT 716 God and Human Suffering (2)**

Suffering and evil in relation to the creative and redemptive purposes of God for this world.

**RELT 717 Christian Beliefs and Life (2)**

Introduces basic Christian beliefs and life.

**RELT 718 Adventist Heritage and Health (2)**

Studies the fundamental beliefs and values that led Seventh-day Adventists to become involved in health care, with particular emphasis on the spiritual story and principles leading to the founding of Loma Linda University.

**RELT 726 Jesus (2)**

Studies Jesus as healer and teacher, prophet and reformer, Son of God and Savior.

**RELT 727 Love and Sex in the Bible (2)**

Studies Scripture on the reality, nature, and challenges of love, both divine and human; and of key biblical passages on the goodness, meaning, and distortions of human sexuality.

**RELT 764 Paul's Message in Romans (2)**

Chapter-by-chapter interpretation of Paul's most influential letter, in which the good news of God's salvation is applied to the issues of Christian life and community.

**REHABILITATION SCIENCE****RESC 515 Political and Professional Advocacy in Rehabilitation (3)**

Highlights distinctions between the processes and outcomes of legislation and regulation in the health care professions. Emphasizes negotiation strategies that enhance success in self-advocacy, and solutions to ensure agreement by all participants. Focuses on identifying and solving professional concerns.

**RESC 516 Practicum in Advocacy (1-3)**

Political and professional forums related to grassroots advocacy.

Prerequisite: SPOL 614; AHJ 515.

**RESC 519 Rehabilitation Theories and Applications in Health Care (3)**

History of and current trends in health care theory and applications, emphasizing successful approaches to integration of the rehabilitation professions.

**RESC 697 Research (1-12)**

Twenty units of doctoral research required.

**RESC 699 Dissertation (4)**

Student prepares and defends doctoral dissertation. Registration during quarter of doctoral defense.

**RESTORATIVE DENTISTRY****RESD 701 Restorative Dentistry I Lecture (2)**

Terminology, morphologic characteristics, and interrelationship of permanent teeth.

Corequisite: RESD 701L.

**RESD 701L Restorative Dentistry I Laboratory (2)**

Corequisite: RESD 701.

**RESD 702 Restorative Dentistry II (2)**

Introduces mandibular movement. Relationship to the anatomy of teeth. Studies source, use, and manipulation of dental materials; and their physical properties relative to dentistry.

Corequisite: RESD 702L.

**RESD 702L Restorative Dentistry II Laboratory (2)**

Corequisite: RESD 702.

**RESD 708 Restorative Dentistry III Lecture (2)**

Basic principles and techniques of cavity preparation and restoration of teeth with silver alloy and aesthetic restorative materials. Studies source, use, and manipulation of dental materials; and their physical properties relative to dentistry.

Corequisite: RESD 708L.

**RESD 708L Restorative Dentistry III Laboratory (2)**

Corequisite: RESD 708.

**RESD 709 Restorative Dentistry IV Lecture (2)**

Basic principles and techniques of cavity preparation and restoration of teeth with silver alloy and aesthetic restorative materials. Introduces basic casting principles and techniques. Studies the source, use, and manipulation of dental materials; and their physical properties relative to dentistry.

Corequisite: RESD 709L.

**RESD 709L Restorative Dentistry IV Laboratory (2)**

Corequisite: RESD 709.

**RESD 754 Orientation to Restorative Clinic Protocol and Procedures (1)****RESD 761 Removable Prosthodontics I (2)**

Helps the D2 student understand the relationship of removable prosthodontics to dentistry, basic clinical and laboratory procedures involved in the fabrication of a removable partial denture, and maxillary immediate complete dentures and interim removable partial dentures.

Corequisite: RESD 761L.

**RESD 761L Removable Prosthodontics I Laboratory (2)**

Corequisite: RESD 761.

**RESD 762 Removable Prosthodontics II (2)**

Familiarizes the student with basic laboratory phases of diagnosing, planning treatment, and treating an edentulous patient.

Corequisite: RESD 762L.

**RESD 762L Removable Prosthodontics II Laboratory (2)**

Corequisite: RESD 762.

**RESD 763 Removable Prosthodontics III (1)**

Biomechanics of removable partial dentures and their design and fabrication. Diagnosis and treatment plan for removable partial dentures. Clinical and laboratory procedures and sequencing of treatment for removable partial and complete dentures. Clinical and laboratory procedures associated with surveyed RPD abutment crowns seated to an existing RPD; RPD problems; troubleshooting and repair. Semiprecision attachments and single-CD treatment.

Corequisite: RESD 763L.

**RESD 763L Removable Prosthodontics III Laboratory (1)****RESD 771 Single-Casting Technique Lecture (2)**

Basic tooth preparation for single-cast restorations—including porcelain fused to metal, tissue management, impression techniques, and casting fabrication.

**RESD 771L Single-Casting Technique Laboratory (2)****RESD 772 Fixed Prosthodontics Lecture (2)**

Design and fabrication of porcelain-fused-to-metal restorations, including single units and fixed partial dentures.

**RESD 772L Fixed Prosthodontics Laboratory (2)****RESD 773 Fixed Prosthodontics II Lecture (1)**

Continues RESD 772.

**RESD 773L Fixed Prosthodontics II Laboratory (1)****RESD 801 Fixed Prosthodontics and Occlusion (1)**

Introduces additional techniques for fixed prosthodontics, treatment planning, and repair techniques for prosthetic failures.

**RESD 809 Prosthodontic Treatment Planning Seminar (1)**

Presents and discusses various prosthodontic cases, with treatment plans to cover immediate dentures, relines, removable partial denture design, combination fixed and removable, implant overdentures, and single crowns.

Prerequisite: RESD 761, 761L, 762, RESD.

**RESD 811 Dental Materials II (1)**

Selects and uses current dental materials. Required research project or written report.

**RESD 822 Operative Dentistry II Lecture (1)**

Indications, preparations, and placement of the direct gold aesthetic veneer, atypical cast gold, complex amalgam, and state board-type restorations.

**RESD 822L Operative Dentistry II Laboratory (1)****RESD 823 Operative Dentistry III Lecture (1)**

Principles of dental aesthetics, adhesion to tooth tissues, preparation and placement of tooth-colored restorations in anterior and posterior teeth.

**RESD 823L Operative Dentistry III Laboratory (1)****RESD 844 Restorative Study Club Seminar (.5)****RESD 854 Implant Dentistry (1)**

Scientific and technical foundation for implant surgery and expansion of basic implant procedures. Postplacement care, long-term maintenance, and clinical complications associated with dental implants.

**RESD 861 Senior Lecture in Removable Prosthodontics (2)**

Instruction and practice designed to prepare fourth-year dental students for state board denture examinations.

**RESD 875 Restorative Dentistry Clinic (4-37.5)****RESPIRATORY THERAPY****RSTH 301 Advanced Respiratory Therapy Science I (3)**

Comprehensive review of patient-care techniques. Presents and discusses clinical application of respiratory therapy devices in-depth, and their influences on patient care. Reports and discussions of current and advanced developments. Integrates experience with current concepts and develops logical courses for proper equipment and technique application for specific patient care. Co-listed with RSTH 441. (Not taught every year.)

Prerequisite: Junior standing or consent of the department chair.

**RSTH 302 Advanced Respiratory Therapy Science II (3)**

Comprehensively reviews patient-care techniques. Presents and discusses clinical application of respiratory therapy devices in-depth, and their influences on patient care. Reports and discussions of current and advanced developments. Integrates experience with current concepts and develops logical courses for proper equipment and technique application for specific patient care. Co-listed with RSTH 441. (Not taught every year.)

Prerequisite: Junior standing or consent of the department chair.

**RSTH 303 Advanced Respiratory Therapy Science III (2)**

Comprehensively reviews patient-care techniques. Presents and discusses clinical application of respiratory therapy devices in-depth, and their influences on patient care. Reports and discussions of current and advanced developments. Integrates experience with current concepts and develops logical courses for proper equipment and technique application for specific patient care. Co-listed with RSTH 441. (Not taught every year.)

Prerequisite: Junior standing or consent of the department chair.

**RSTH 304 Cardiopulmonary Anatomy and Physiology (4)**

Anatomic and physiologic components of the cardiovascular and respiratory systems investigated. Emphasizes histology, embryology, diffusion, gases transported in the blood, acid-base balance, lung volumes and capacities, mechanics of ventilation, ventilation perfusion relationships, regulation of respiration, cardiac cell-membrane action potentials, and excitation-contraction coupling.

**RSTH 311 Advanced Neonatal Respiratory Care (3)**

Neonatal and fetal physiology, diseases, and therapeutic interventions. Emphasizes neonatal respiratory care. Reviews current research related to high-frequency ventilation, extracorporeal membrane oxygenation, and surfactant therapy.

**RSTH 315 Pediatric Perinatal Respiratory Care (2)**

Pathophysiology of the newborn, prenatal risk factors, pediatric cardiopulmonary diseases, diagnostics, monitoring of clinical indices, and treatments used in perinatal/pediatric respiratory care. Advanced information on surfactant administration, high-frequency ventilation, and ECMO. (May be used toward post-professional B.S. degree in respiratory care in place of RSTH 422.)

**RSTH 323 Pulmonary Function Methodology (3)**

Evaluates pulmonary function in health and disease through spirometry, plethysmography, helium dilution, nitrogen washout, single-breath nitrogen, volume of isoflow, and diffusing capacity studies, including blood-gas instrumentation, quality control, quality assurance, and current ATS standards. Lecture and laboratory.

**RSTH 331 Pharmacology I (2)**

Surveys pharmacologic agents currently used in medicine—including their kinetics, dynamics, and therapeutics. Emphasizes drugs and their effects on the respiratory, cardiovascular, and autonomic nervous systems. Topics include the bronchodilators, anti-inflammatory agents, mucokinetic agents, cardiovascular agents, diuretics, antimicrobials, neuromuscular agents, and agents used to treat nicotine dependence.

**RSTH 332 Pharmacology II (2)**

Surveys pharmacologic agents currently used in medicine—including their kinetics, dynamics, and therapeutics. Emphasizes drugs and their effects on the respiratory, cardiovascular, and autonomic nervous systems. Topics include the bronchodilators, anti-inflammatory agents, mucokinetic agents, cardiovascular agents, diuretics, antimicrobials, neuromuscular agents, and agents used to treat nicotine dependence.

**RSTH 334 Patient Assessment (2)**

General introduction to the clinical setting. Assesses and evaluates patients with respiratory disease. Develops clinical practice habits and patient-care techniques. Student must obtain current cardiopulmonary resuscitation (CPR) certification from the American Heart Association before the end of the term.

Corequisite: RSTH 341.

**RSTH 341 Respiratory Therapy Science I (5)**

Basic principles of respiratory therapy, as related to gas physics; medical-gas storage and therapy; and administration of humidity, aerosol and airway-pressure therapies, artificial airways, and resuscitation devices. Emphasizes methods of administration of the therapy, with special attention placed on the equipment used, as well as applies this information to the clinical setting.

**RSTH 342 Respiratory Therapy Science II (5)**

Lecture and laboratory presentation of the principles of respiratory therapy related to lung-inflation therapy; use of artificial airways, and their care and complications. Introduces mechanical ventilatory support, including beginning ventilators, support systems, comparison of methods, and respiratory monitoring. Emphasizes application of this information to the clinical setting.

Prerequisite: RSTH 341.

**RSTH 343 Respiratory Therapy Science III (4)**

Lecture and laboratory presentation of the principles of respiratory therapy related to mechanical ventilatory support, including patient management and ventilatory support systems. Emphasizes methods of ventilatory support, with special attention to the mechanical ventilators commonly used in the students' clinical sites. Applies this information to the clinical setting.

Prerequisite: RSTH 341, 342.

**RSTH 354 Case Studies in Adult Respiratory Care (2)**

Adult critical-care concepts presented through a case-study approach. Respiratory care plan used to present diseases, treatment, and procedures relevant to respiratory care. Patient rounds further develop critical-thinking skills in a patient-care setting.

Prerequisite: RSTH 381.

**RSTH 366 Diagnostic Techniques (3)**

Continues the clinical use of diagnostic tests and procedures. Emphasizes evaluation of chest radiographs, electrocardiography, and monitoring hemodynamics. Lecture and laboratory.

Prerequisite: RSTH 304, 331.

**RSTH 381 Cardiopulmonary Diseases I (2)**

Comprehensively studies cardiopulmonary diseases and their adverse effects. Course content includes disease etiology, pathology, pathophysiology, clinical features, prognosis, treatment, and prevention.

Prerequisite: RSTH 304, 331, 341.

Corequisite: RSTH 323, 332, 342, 366.

**RSTH 382 Cardiopulmonary Diseases II (2)**

Comprehensively studies cardiopulmonary diseases and their adverse effects. Course content includes disease etiology, pathology, pathophysiology, clinical features, prognosis, treatment, and prevention.

Prerequisite: RSTH 304, 331, 341.

Corequisite: RSTH 323, 332, 342, 366.

**RSTH 391 Respiratory Care Practicum I (2)**

General introduction to the clinical setting; assessment of patients with respiratory disease. Develops work habits and patient-care techniques. Students must obtain current cardiopulmonary resuscitation (CPR) certification from the American Heart Association before the end of the quarter.

Prerequisite: RSTH 341.

Corequisite: RSTH 342.

**RSTH 392 Respiratory Care Practicum II (2)**

Applies specific therapeutic techniques, including oxygen and humidity therapy, aerosol therapy, airway management, lung-inflation techniques, and chest physiotherapy.

Prerequisite: RSTH 341, 391; AHA CPR certification.

Corequisite: RSTH 342, 381, 392L.

**RSTH 393 Respiratory Care Practicum III (4)**

Applies therapeutic techniques in continuous mechanical ventilation; special procedures, operation and postanesthesia room, and arterial blood-gas laboratory.

Prerequisite: RSTH 343, 381, 392.

Corequisite: RSTH 382, 404.

**RSTH 401 Cardiopulmonary Intensive Care (2-4)**

Management of the patient with cardiopulmonary failure. Theory and capabilities of various life-support and monitoring systems.

Prerequisite: Postprofessional student, senior standing, or consent of instructor.

**RSTH 404 Critical Care (4)**

Continues the theory, practice, and knowledge of mechanical ventilation—providing an integrated approach to respiratory care in the critical-care arena. A systems-based approach used to incorporate respiratory care concepts, such as planning and implementing of protocols, best-practice guidelines, etc. Presentations, projects, and critical evaluation used to increase critical-thinking skills and patient-care skills.

Prerequisite: RSTH 354.

**RSTH 411 Advanced Cardiac Life Support (2)**

Principles and techniques of advanced emergency cardiac care: review of basic CPR, endotracheal intubation, and the use of airway adjuncts. Monitoring and dysrhythmia recognition. Essential and useful drugs for cardiac life support. Intravenous techniques. Appropriate use of devices for elective cardioversion or defibrillation, stabilization, and transportation. Use of circulatory adjuncts. Acid-base balance, drug therapy, and therapeutic interventions.

**RSTH 421 Perinatal and Pediatric Respiratory Care (2)**

Fetal development and circulation. Prenatal risk factors. Newborn resuscitation; newborn and pediatric assessment. Etiology, pathophysiology, course, treatment, and outcome of respiratory diseases as they relate to problems in pediatrics and neonatology. Discusses ECMO, high-frequency ventilation, and nitric oxide.

Prerequisite: RSTH 304, 331.

**RSTH 422 Advanced Perinatal and Pediatric Respiratory Care (2)**

Pathophysiology of newborn and pediatric diseases likely to be encountered by the respiratory-care practitioner. Perinatal risk factors, resuscitation, and research on the transition to extrauterine life. Diagnostics, monitoring of clinical indices, and treatments used in perinatal/pediatric respiratory care. Advanced information on surfactant, high-frequency ventilation, and ECMO.

**RSTH 424 Exercise Physiology and Pulmonary Rehabilitation (3)**

Metabolism of carbohydrates, lipids, and proteins in energy production, oxygen consumption, carbon dioxide production, and respiratory quotient applied to measurable counterparts of oxygen uptake, carbon dioxide output, and respiratory exchange ratio at rest and during exercise. Metabolic studies, body-fat composition, exercise studies, and malnutrition in chronic obstructive pulmonary disease utilized as a foundation for evaluation and implementation of pulmonary rehabilitation program. Rehabilitation components include team assessment, patient training, exercise, psychosocial intervention, and follow-up.

**RSTH 431 Senior Project I (2)**

Students required to develop a proposal for a research paper/project. Under the direction of the program director, students assigned to a mentor who will assist them with developing their paper/project.

**RSTH 432 Senior Project II (2)**

Develops and expands research paper/project begun during previous quarter. Literature search, research question, and data-collection methods developed.

Prerequisite: RSTH 431.

**RSTH 433 Senior Project III (2)**

Data-collection completed, data analyzed, conclusions and findings written up for publication and for poster presentation.

Prerequisite: RSTH 431, 432.

**RSTH 434 Advanced Patient Assessment (2)**

Advanced skills in interviewing, physical examination, and interpretation of laboratory data. Lecture, reading material, and physical-examination procedures. Provides insight for better interview and examination of patients with cardiopulmonary disease. Increases understanding of the pathophysiology behind the symptoms.

Prerequisite: RSTH 334.

**RSTH 441 Respiratory Therapy Science IV (3)**

Presents and discusses the clinical application of respiratory therapy devices in-depth, and their influences on patient care. Reports and discussions of current and advanced developments. Emphasizes application of this information to the clinical setting. Co-listed with RSTH 301. (Not taught every year.)

Prerequisite: RSTH 341, 342, 343; or consent of instructor.

**RSTH 444 Case Studies in Neonatal/Pediatric Respiratory Care (2)**

Develops respiratory care-management skills in caring for the neonatal and pediatric patient through the presentation of student case studies. Clinical staff and faculty review current management of the newborn, infant, and child. Student presents patients and explains implications of care. Develops presentation skills.

Prerequisite: RSTH 421.

**RSTH 451 Respiratory Care Affiliation I (2)**

General care, basic critical care, and advanced critical care in the adult, pediatric, and neonatal setting as practiced at LLUMC. Open to students who are now, or have been recently, employed by LLUMC.

Prerequisite: CA RCP licensure.

**RSTH 452 Respiratory Care Affiliation II (2)**

Specialty clinical assignments selected from the following areas: adult critical care, cardiopulmonary specialties, pediatrics and neonates, polysomnography, rehabilitation and patient education, research, and special procedures. Limited to students in the postprofessional B.S. degree program in respiratory care.

Prerequisite: AHCJ 461; RSTH 315, 422.

**RSTH 453 Respiratory Care Affiliation III (2)**

Specialty clinical assignments selected from the following areas: adult critical care, cardiopulmonary specialties, pediatrics and neonates, polysomnography, rehabilitation and patient education, research, and special procedures. Limited to students in the post-professional B.S. degree program in respiratory care.

Prerequisite: AHCJ 461; RSTH 315, 452; CA RCP licensure.

**RSTH 454 Respiratory Care Affiliation IV (2)**

Specialty clinical assignments selected from the following areas: adult critical care, cardiopulmonary specialties, pediatrics and neonates, polysomnography, rehabilitation and patient education, research, and special procedures. Limited to students in the post-professional B.S. degree program in respiratory care.

Prerequisite: AHCJ 461; RSTH 315, 452; CA RCP licensure.

**RSTH 455 Respiratory Care Affiliation V (2)**

Specialty clinical assignments selected from the following areas: adult critical care, cardiopulmonary specialties, pediatrics and neonates, polysomnography, rehabilitation and patient education, research, and special procedures. Limited to students in the post-professional B.S. degree program in respiratory care.

Prerequisite: AHCJ 461; RSTH 315, 452.

**RSTH 457 Physical Diagnosis I (2)**

Systematic review of bedside assessment techniques utilized in the care of patients with respiratory disease. Student presentations and discussions of selected cases that involve diagnostic and therapeutic modalities of particular interest to respiratory therapists. (Three [3] units required for B.S. degree in respiratory therapy.)

**RSTH 458 Physical Diagnosis II (1)**

Continues discussion of clinical assessment techniques and interpretation of findings in patients with cardiopulmonary disease. Emphasizes use of laboratory tests, chest radiographs, arterial blood gases, and other tests used to evaluate the patient. Lecture, reading, and discussion of case studies.

**RSTH 462 Management Practicum II (2)**

Experience in management of respiratory or emergency medical-care management. Clinical application of the theoretical management skills developed during the didactic portions of the training.

**RSTH 463 Management Practicum III (2)**

Experience in management of respiratory or emergency medical-care management. Clinical application of the theoretical management skills developed during the didactic portions of the training.

**RSTH 464 Case Management in Respiratory Care (2)**

Utilizes a case-management approach to patient care in the management and evaluation of treatment and disease. Special emphasis on case management of the respiratory care patient includes discharge planning, utilization review, patient assessment, cost containment, patient education, and integration issues.

Prerequisite: RSTH 334, 424, 434.

**RSTH 466 Advanced Diagnostic Techniques (2)**

Advanced diagnostic theory and practice in the following areas: Holter monitoring, echocardiography, bronchoscopy, sleep studies, and other relevant respiratory care diagnostics.

**RSTH 471 Instructional Techniques I (2)**

Develops units of instruction, instructional objectives, and evaluation procedures. Students observe and participate in classroom management; and apply teaching principles through experience in various teaching activities, such as community preventive health care programs, in-service and continuing education, and college classroom and clinical teaching. Conferences and individual guidance. Must be taken in sequence with RSTH 472, 473.

**RSTH 472 Instructional Techniques II (2)**

Develops units of instruction, instructional objectives, and evaluation procedures. Observation and participation in classroom management. Applies teaching principles through experience in various teaching activities, such as community preventive health care programs, in-service and continuing education, and college classroom and clinical teaching. Conferences and individual guidance.

Prerequisite: RSTH 471.

**RSTH 473 Instructional Techniques III (2)**

Develops units of instruction, instructional objectives, and evaluation procedures. Students observe and participate in classroom management; and apply teaching principles through experience in various teaching activities, such as community preventive health care programs, in-service and continuing education, and college classroom and clinical teaching. Conferences and individual guidance.

Prerequisite: RSTH 472.

**RSTH 474 Cardiopulmonary Health Promotion and Disease Prevention (2)**

Selected topics dealing with aspects of disease prevention. Includes the relevance of statistics, epidemiology, research designs, and clinical trials; as well as selected disease trends, lifestyle modification, the role of physical activity, nutrition and immunization, and public health approaches to communicable diseases.

Prerequisite: RSTH 424.

**RSTH 481 Research in Cardiopulmonary Sciences (1)**

Applies the basic concepts of research specific to cardiopulmonary sciences. Student develops a basic research proposal. Strongly recommended that the student complete most of the required core courses before registering for this course.

Prerequisite: AHCJ 351.

Corequisite: AHCJ 461.

**RSTH 491 Education Practicum I (2)**

Provides experience in clinical education, evaluation, and scheduling. Familiarizes student with hospital affiliation agreements and accreditation issues.

Prerequisite: CA RCP licensure.

**RSTH 492 Education Practicum II (2)**

Provides experience in clinical education, evaluation, and scheduling. Familiarizes student with hospital affiliation agreements and accreditation issues.

Prerequisite: CA RCP licensure.

**RSTH 493 Education Practicum III (2)**

Provides experience in clinical education, evaluation, and scheduling. Familiarizes student with hospital affiliation agreements and accreditation issues.

Prerequisite: CA RCP licensure.

**RSTH 494 Respiratory Care Practicum IV (2)**

Students develop professional competence and maturity in the clinical setting. Comprehensive training in all aspects of respiratory care, including the pulmonary function laboratory and home care.

Prerequisite: RSTH 343, 382, 393, 404.

Corequisite: RSTH 494V.

**RSTH 495 Respiratory Care Practicum V (2)**

Specialty training in respiratory care practice. Students rotate to specialized areas of respiratory care, increasing their proficiency and understanding in the following areas: neonatal/pediatric critical care, adult critical care, cardiopulmonary diagnostics, hyperbaric medicine, sleep disorders medicine, cardiopulmonary rehabilitation, and extended care. In addition, students continue their professional development and competency in the general and critical care settings.

Prerequisite: RSTH 494, 404.

Corequisite: RSTH 495V.

**RSTH 496 Respiratory Care Practicum VI (3)**

Continues specialty training in respiratory care practice. Students rotate to specialized areas of respiratory care, increasing their proficiency and understanding in the following areas: neonatal/pediatric critical care, adult critical care, cardiopulmonary diagnostics, hyperbaric medicine, sleep disorders medicine, cardiopulmonary rehabilitation, and extended care. In addition, students continue their professional development and competency in the general and critical care settings.

Prerequisite: RSTH 495.

Corequisite: RSTH 496V.

**RSTH 499 Respiratory Therapy Independent Study (.5-2)**

Student submits project or paper on a topic of current interest in an area of respiratory therapy. Regular meetings provide student with guidance and evaluation. Elected on the basis of need or interest. The .5 unit of credit designed to offer directed experience in the prevention of AIDS and other communicable diseases in the clinical setting.

**RADIATION TECHNOLOGY****RTCH 385 Current Issues in Radiation Sciences I (2)**

A faculty-facilitated course that includes class discussion, small-group work, and presentation of student projects. Students choose the direction of their learning within the scope of the content by choosing the content of their group work and projects.

**RTCH 411 Student-Teaching Practicum I (2)**

Classroom teaching experience. Student prepares lecture outlines, objectives, and tests; and presents lectures and laboratory sessions. Practical application of teaching techniques.

**RTCH 412 Student-Teaching Practicum II (2)**

Classroom teaching experience. Student prepares lecture outlines, objectives, and tests; and presents lectures and laboratory sessions. Practical application of teaching techniques.

**RTCH 413 Radiologic Management Practicum I (2)**

Observation of and discussion with selected administrative personnel in a radiology service. Emphasizes practical application of management theory. Projects assigned.

**RTCH 414 Radiologic Management Practicum II (2)**

Observation of and discussion with selected administrative personnel in a radiology service. Emphasizes practical application of management theory. Projects assigned.

**RTCH 464 Moral Leadership (2)**

Methods of applying servant leadership to management and educational settings. Concepts of managing learners and professionals, assessing leadership style, the essence of leadership, leadership skill building, and conflict management discussed within a moral framework. Assigned readings, discussions, papers, and personal inventories utilized to aid in assessing the learner's leadership skills.

**RTCH 471 Applied Research Methods (1)**

Applies research methods to radiation sciences. Directed experience with a research project. Laboratory.

Prerequisite: AH CJ 351.

Prerequisite or Concurrent: AH CJ 461.

**RTCH 475 Curriculum Development in Health Sciences (2)**

Applies curriculum-development theories and approaches to the health-science arena. Seminar, course, or curriculum development. Designing assessment tools and procedures, designing a learning experience, selecting appropriate technology, developing a learner-centered handout/syllabus, and cultivating respect for diversity in learning.

**RTCH 485 Current Issues in Radiation Sciences II (2)**

A student-centered, faculty-facilitated course that is a continuation of RTCH 385. Class discussion, small-group work, and presentation of student projects/paper. New technology and its impact on the radiology department.

Prerequisite: RTCH 385.

**RTCH 494 Senior Project (2 or 3)**

Project associated with the development of radiologic procedures and techniques. Units chosen in consultation with adviser.

**RTCH 497 Advanced Clinical Experience (40 to 480 hours)**

Advanced clinical experience in selected areas of professional practice.

**RTCH 498 Professional Interactions (2)**

Covers survey of communication skills, including appropriate forms of written and verbal communication. Projects/activities—including problem solving; documentation; employee evaluations; and professional presentations. Running a meeting, including the creation of agendas and minutes.

**RTCH 499 Radiation Technology Independent Study (.5-2)**

Student submits a project or paper on a topic of current interest in an area related to radiation technology. Regular meetings provide the student with guidance and evaluation. Elected on the basis of need or interest. The .5 unit of credit designed to offer directed experience in the prevention of AIDS and other communicable diseases in the clinical setting.

**MEDICAL DOSIMETRY****RTMD 301 Treatment Planning I (3)**

Studies in-depth the planning of isodose distributions and dose calculations within different target volumes. Topics covered include IMRT, conformal therapy, and stereotactic radiosurgery.

**RTMD 302 Treatment Planning II (2)**

Develops the student's ability to construct treatment plans using 3D/IMRT planning techniques. Integrates theory with practice. Students required to complete a number of plans that utilize all the major treatment techniques, based on anatomical tumor sites. Lecture includes discussion and plans related to specific tumors, after which students are expected to produce similar plans, compile a notebook of plans and present plans to the class as a midterm and final examination.

**RTMD 305 Special Topics (2)**

Studies cutting-edge techniques in depth as they apply to therapy—including radiation oncology and the diagnostic modalities that support them. Topics include IMRT, TBI, USGI, IORT, MLC, dynamic wedging, virtual simulation (CT simulation), stereotactic radiosurgery, HDR, proton therapy, MRI, US, and NRM. Students make a weekly presentation from a peer-review journal or discuss a research paper on one of the studied topics. Class paper on a specific area of study due at the end of the quarter.

**RTMD 307 Principles of Brachytherapy (2)**

Includes a two-week rotation at Long Beach Memorial Hospital to observe brachytherapy. Principles of radiation protection as they relate to brachytherapy.

**RTMD 309 Radiation Therapy Core-Concept Review (1)**

Conducted in the seminar/review format. Students research and present information on weekly schedule of core topics and concepts relating to radiation therapy techniques, oncology, radiobiology, and patient care. Students complete assigned readings, and answer general review questions.

**RTMD 314 Quality Assurance with Laboratory (2)**

General overview of quality-assurance management within a radiation oncology department, with specific emphasis on continuous quality assurance (CQI). Examines the theoretical and practical application of quality-assurance techniques as they relate to treatment planning and other dosimetry functions.

**RTMD 355 Physical Principles of Radiation Therapy I (3)**

Nature and description of the structure of matter and energy. Radioactive decay schemes and interaction of photons and gamma radiation. Instrumentation involved in measurement of ionizing radiation, beam quality, and dose. Laboratory.

**RTMD 356 Physical Principles of Radiation Therapy II (3)**

Calibration techniques of photon, particulate, and electron beams. Percentage depth dose, tissue-air ratios, treatment planning, scatter functions, field flatness, and symmetry. Field shaping, arc therapy, and tissue inhomogeneities. Clinical dosimetric considerations. Laboratory.

**RTMD 365 Practicum (1)**

Practical application of the theoretical knowledge of dosimetry. Includes external beam-treatment planning, monitor-unit calculations, brachytherapy, and quality-assurance procedures as they pertain to dosimetry practice. Students integrated into the dosimetry and physics team, with opportunity to work with various kinds of treatments and treatment beams. Per week: 24 hours.

**RTMD 961 Practicum (9)**

Practical application of the theoretical knowledge of dosimetry. Includes external beam-treatment planning, monitor-unit calculations, brachytherapy, and quality-assurance procedures as they pertain to dosimetry practice. Students integrated into the dosimetry and physics team, with opportunity to work with various kinds of treatments and treatment beams. Per week: 24 hours.

**RTMD 962 Practicum (8)**

Practical application of the theoretical knowledge of dosimetry. Includes external beam-treatment planning, monitor-unit calculations, brachytherapy, and quality-assurance procedures as they pertain to dosimetry practice. Students integrated into the dosimetry and physics team, with opportunity to work with various kinds of treatments and treatment beams. Per week: 24 hours.

**RTMD 963 Practicum (8)**

Practical application of the theoretical knowledge of dosimetry. Includes external beam-treatment planning, monitor-unit calculations, brachytherapy, and quality-assurance procedures as they pertain to dosimetry practice. Students integrated into the dosimetry and physics team, with opportunity to work with various kinds of treatments and treatment beams. Per week: 24 hours.

**RTMD 964 Practicum (8)**

Practical application of the theoretical knowledge of dosimetry. Includes external beam-treatment planning, monitor-unit calculations, brachytherapy, and quality-assurance procedures as they pertain to dosimetry practice. Students integrated into the dosimetry and physics team, with opportunity to work with various kinds of treatments and treatment beams. Per week: 24 hours.

**RTMD 971 Practicum (10)**

Practical application of the theoretical knowledge of dosimetry. Includes external beam-treatment planning, monitor-unit calculations, brachytherapy, and quality-assurance procedures as they pertain to dosimetry practice. Students integrated into the dosimetry and physics team, with opportunity to work with various kinds of treatments and treatment beams. Per week: 30 hours.

**RTMD 972 Practicum (10)**

Practical application of the theoretical knowledge of dosimetry. Includes external beam-treatment planning, monitor-unit calculations, brachytherapy, and quality-assurance procedures as they pertain to dosimetry practice. Students integrated into the dosimetry and physics team, with opportunity to work with various kinds of treatments and treatment beams. Per week: 30 hours.

**RTMD 973 Practicum (10)**

Practical application of the theoretical knowledge of dosimetry. Includes external beam-treatment planning, monitor-unit calculations, brachytherapy, and quality-assurance procedures as they pertain to dosimetry practice. Students integrated into the dosimetry and physics team, with opportunity to work with various kinds of treatments and treatment beams. Per week: 30 hours.

**RTMD 974 Practicum (10)**

Practical application of the theoretical knowledge of dosimetry. Includes external beam-treatment planning, monitor-unit calculations, brachytherapy, and quality-assurance procedures as they pertain to dosimetry practice. Students integrated into the dosimetry and physics team, with opportunity to work with various kinds of treatments and treatment beams. Per week: 30 hours.

**MEDICAL RADIOGRAPHY****RTMR 202 Orientation Laboratory (1)**

Clinical orientation to the functions of radiologic technologies. Laboratory sessions conducted at affiliated clinical sites.

**RTMR 221 Radiologic Patient Care (2)**

Aspects of patient care in the radiology service. Emphasizes aseptic techniques. Physical and emotional care of the patient in relation to radiologic procedure. Contrast media and other drugs used in the practice of radiology.

**RTMR 253 Medical Radiography Procedures I (3)**

Applies anatomy and physiology to the radiographic situation. Proper patient positioning, equipment usage, and technical film-quality factors.

Corequisite: RTMR 253L.

**RTMR 253L Medical Radiography Procedures Laboratory I (1)**

Applies principles of patient positioning and radiographic exposure to the laboratory setting. Uses clinical patient simulations and radiographic phantoms to determine optimum techniques.

Corequisite: RTMR 253.

**RTMR 254 Medical Radiography Procedures II (3)**

Applies anatomy and physiology to the radiographic situation. Proper patient positioning, equipment usage, and technical film-quality factors.

Corequisite: RTMR 254L.

**RTMR 254L Medical Radiography Procedures Laboratory II (1)**

Applies principles of patient positioning and radiographic exposure to the laboratory setting. Uses clinical patient simulations and radiographic phantoms to determine optimum techniques.

**RTMR 255 Medical Radiography Procedures III (2)**

Applies anatomy and physiology to the radiographic situation. Proper patient positioning, equipment usage, and technical film-quality factors.

**RTMR 283 Radiologic Physics (3)**

Physics of radiation and radioisotopes. Theoretical basis for understanding the nature, production, and interaction of radiation with matter. Requirements of the state radiation-control law. Background for understanding radioactivity and its application in nuclear medicine and radiation therapy. Laboratory.

Prerequisite: Pass basic mathematics examination.

**RTMR 284 Radiation Protection and Biology (2)**

Fundamental concepts of radiation protection and biological effects of radiation on patients and occupationally exposed personnel. Applies radiation-safety laws.

**RTMR 285 Principles of Radiography I (3)**

Principles of producing the optimum radiograph. Physical factors involved in photographic processing techniques. Instructs in the use of accessory equipment to obtain the optimum radiograph under any situation. Laboratory.

**RTMR 286 Principles of Radiography II (4)**

Advanced instruction in the principles of radiographic theory and technique. Applies television, cineradiography, and other photographic equipment and principles to medical radiography.

**RTMR 287 Principles of Radiography III (2)**

Applies fluoroscopy to radiographic imaging. Introduces new digital imaging modalities and discusses their impact on diagnostic radiography. Reviews quality-assurance/quality-control practices in radiography.

**RTMR 301 Introduction to Radiographic Procedures I (1-3)**

Nature and description of radiologic procedures for the nonradiologic technologist. Principles and medical techniques applied to the radiographic setting. Surveys anatomy and instrumentation. Includes observation laboratory.

**RTMR 302 Introduction to Radiographic Procedures II (1-3)**

Nature and description of radiologic procedures for the nonradiologic technologist. Principles and medical techniques applied to the radiographic setting. Surveys anatomy and instrumentation. Includes observation laboratory.

**RTMR 314 Research/Writing for Radiologic Technologies (1)**

Designed to improve the student radiographer's research and writing skills. How to conduct a library search in person or over the computer. Errors in English, principles of comma usage, and thesis-statement writing discussed. In-class writing and writing assignments with stress on revision.

**RTMR 321 Radiographic Film Critique (1)**

Weekly conference for the critical evaluation of the fine points of the radiographic examination.

**RTMR 331 Special Technical Procedures (2)**

History, techniques, and purposes of selected advanced radiologic procedures.

**RTMR 334 CT and Cross-sectional Anatomy (2)**

Recognition of basic anatomical landmarks as visualized in axially created digital images.

**RTMR 342 Computer Applications in Radiology (1)**

Applies computer-generated images in medical radiography. Includes computed tomography, digital subtraction angiography, nuclear medicine, ultrasound, radiation therapy, and magnetic resonance imaging.

Prerequisite: RTMR 285, 286, 287.

**RTMR 345 Radiologic Pathology (2)**

Appearance of common pathologic processes, using radiologic imaging methods.

**RTMR 363 Comprehensive Review (1)**

Reviews major content areas emphasized on certification examinations. Student evaluation and performance analysis. Time provided to make class presentations, organize study materials, and take simulated registry examinations.

**RTMR 371 Medical Radiography Affiliation I (1)**

Fifteen months of clinical experience covering a wide variety of technical procedures. Transmission and prevention of AIDS and other communicable diseases, with specific application to medical radiography. Clock hours per quarter: Winter 192, Spring 416, Summer 520, Autumn 416, Winter 416.

**RTMR 372 Medical Radiography Affiliation II (2)**

Fifteen months of clinical experience covering a wide variety of technical procedures. Transmission and prevention of AIDS and other communicable diseases, with specific application to medical radiography. Clock hours per quarter: Winter 192, Spring 416, Summer 520, Autumn 416, Winter 416.

**RTMR 373 Medical Radiography Affiliation III (3)**

Fifteen months of clinical experience covering a wide variety of technical procedures. Transmission and prevention of AIDS and other communicable diseases, with specific application to medical radiography. Clock hours per quarter: Winter 192, Spring 416, Summer 520, Autumn 416, Winter 416.

**RTMR 374 Medical Radiography Affiliation IV (2)**

Fifteen months of clinical experience covering a wide variety of technical procedures. Transmission and prevention of AIDS and other communicable diseases, with specific application to medical radiography. Clock hours per quarter: Winter 192, Spring 416, Summer 520, Autumn 416, Winter 416.

**RTMR 375 Medical Radiography Affiliation V (2)**

Fifteen months of clinical experience covering a wide variety of technical procedures. Transmission and prevention of AIDS and other communicable diseases, with specific application to medical radiography. Clock hours per quarter: Winter 192, Spring 416, Summer 520, Autumn 416, Winter 416.

**RTMR 379 Special Project (1-3)**

Project to be submitted in the form of a paper or a visual aid representing a topic of current interest in an area related to radiation sciences. Regular meetings provide guidance to the student.

**RTMR 381 Topics in Medical Radiography I (1-3)**

Surveys selected topics in medical radiography. Procedure summaries, projects, literature reviews. May be taken concurrently with RTMR 371-375 Radiography Affiliation I, II, III, IV, V for credit toward the baccalaureate degree.

**RTMR 382 Topics in Medical Radiography II (1-3)**

Surveys selected topics in medical radiography. Procedure summaries, projects, literature reviews. May be taken concurrently with RTMR 371-375 Radiography Affiliation I, II, III, IV, V for credit toward the baccalaureate degree.

**RTMR 383 Topics in Medical Radiography III (1-3)**

Surveys selected topics in medical radiography. Procedure summaries, projects, literature reviews. May be taken concurrently with RTMR 371-375 Radiography Affiliation I, II, III, IV, V for credit toward the baccalaureate degree.

**RTMR 384 Topics in Medical Radiography IV (1-3)**

Surveys selected topics in medical radiography. Procedure summaries, projects, literature reviews. May be taken concurrently with RTMR 371-375 Radiography Affiliation I, II, III, IV, V for credit toward the baccalaureate degree.

**RTMR 385 Topics in Medical Radiography V (1-3)**

Surveys selected topics in medical radiography. Procedure summaries, projects, literature reviews. May be taken concurrently with RTMR 371-375 Radiography Affiliation I, II, III, IV, V for credit toward the baccalaureate degree.

**RTMR 401 Advanced Clinical Procedures I (1-3)**

Credit for full-term, postcertification clinical practice in a radiology service. Periodic evaluations by the clinical supervisor.

**RTMR 402 Advanced Clinical Procedures II (1-3)**

Credit for full-term, postcertification clinical practice in a radiology service. Periodic evaluations by the clinical supervisor.

**RTMR 403 Advanced Clinical Procedures III (1-3)**

Credit for full-term, postcertification clinical practice in a radiology service. Periodic evaluations by the clinical supervisor.

**RTMR 404 Advanced Clinical Procedures IV (1-3)**

Credit for full-term, postcertification clinical practice in a radiology service. Periodic evaluations by the clinical supervisor.

**RTMR 451 Management of a Radiologic Service (3)**

Techniques of organization, planning, and management, with specific applications to a hospital radiology service.

**RTMR 454 Quality Management in Radiation Sciences (2)**

In-depth look at continuous quality management of all aspects in a radiology department, from equipment to personnel.

**MEDICAL SONOGRAPHY****RTMS 339 Introduction to Echocardiography (4)**

Focuses on normal anatomy, scan techniques, cardiac measurement, and new dynamics. Case-study presentations.

**RTMS 344 Introduction to Medical Sonography (1 or 4)**

1 unit: Introduction to cardiac ultrasound. 4 units: Introduction to sonography, including ob-gyn, abdomen, vascular, neurosonography, cardiac, and pediatric. In both 1 and 4 units: terminology and scan techniques for all areas.

**RTMS 345 Ob-Gyn Sonography (4)**

Ob-Gyn scan techniques. Student case presentations and case studies.

**RTMS 346 Vascular Technology/Doppler/Scan Techniques (5)**

Covers vascular technology, Doppler, abdomen, small-parts, and cross-sectional anatomy. Continues case studies and case presentations.

**RTMS 347 Echocardiography, Adult, and Pediatric Specialties (4)**

Echocardiography, adult and pediatric. Further focuses on anatomy, pathology, hemodynamics, and Doppler. Includes case studies and presentations.

**RTMS 348 Abdomen/Neurosonography (4)**

Sonography of the abdomen and neonatal neurosonography specialties and scan techniques. Student case studies and case presentations.

**RTMS 361 Vascular Ultrasound Clinical****Affiliation (1)**

Clinical experience in vascular ultrasound (416 clock hours per quarter) covering a wide variety of technical procedures.

**RTMS 362 Vascular Ultrasound Clinical****Affiliation (1)**

Clinical experience in vascular ultrasound (416 clock hours per quarter) covering a wide variety of technical procedures.

**RTMS 363 Vascular Ultrasound Clinical****Affiliation (1)**

Clinical experience in vascular ultrasound (416 clock hours per quarter) covering a wide variety of technical procedures.

**RTMS 364 Vascular Ultrasound Clinical****Affiliation (1)**

Clinical experience in vascular ultrasound (416 clock hours per quarter) covering a wide variety of technical procedures.

**RTMS 371 Medical Sonography Clinical****Affiliation (1)**

Clinical experience in medical sonography (416 clock hours) covering a wide variety of technical procedures.

**RTMS 379 Ultrasound Physics and Instrumentation I (2)**

Studies the basic physical principles and instrumentation of ultrasound production and imaging. Selected case-study presentations, as assigned.

**RTMS 381 Topics in Medical Sonography I (1)**

Surveys selected topics in medical sonography. Procedure summaries, projects, literature reviews.

**RTMS 382 Topics in Medical Sonography II (1)**

Surveys selected topics in medical sonography. Procedure summaries, projects, literature reviews.

**RTMS 383 Topics in Medical Sonography III (2)**

Surveys selected topics in medical sonography. Procedure summaries, projects, literature reviews.

**RTMS 384 Topics in Medical Sonography IV (2)**

Surveys selected topics in medical sonography. Procedure summaries, projects, literature reviews.

**RTMS 385 Topics in Medical Sonography V (1 to 3)**

Selected projects that may be taken concurrently with RTMS 371-378 Medical Sonography for credit toward the B.S. degree.

**RTMS 386 Topics in Medical Sonography VI (1 to 3)**

Selected projects that may be taken concurrently with RTMS 371-378 Medical Sonography for credit toward the B.S. degree.

**RTMS 387 Ultrasound Physics and Instrumentation II (2)**

Study and review of the basic physical principles and instrumentation of ultrasound, with additional emphasis on Doppler and artifacts.

Prerequisite: RTMS 379.

**RTMS 401 Advanced Clinical Procedures I (1-3)**

Credit for full-time, postcertification clinical practice in a medical sonography service. Periodic evaluations by the clinical supervisor.

**RTMS 402 Advanced Clinical Procedures II (1-3)**

Credit for full-time, postcertification clinical practice in a medical sonography service. Periodic evaluations by the clinical supervisor.

**RTMS 403 Advanced Clinical Procedures III (1-3)**

Credit for full-time, postcertification clinical practice in a medical sonography service. Periodic evaluations by the clinical supervisor.

**RTMS 404 Advanced Clinical Procedures IV (1-3)**

Credit for full-time, postcertification clinical practice in a medical sonography service. Periodic evaluations by the clinical supervisor.

**RTMS 965 Cardiac Ultrasound Clinical****Affiliation (12)**

Clinical experience in cardiac ultrasound (384 clock hours per quarter) covering a wide variety of technical procedures.

**RTMS 966 Cardiac Ultrasound Clinical****Affiliation (11)**

Clinical experience in cardiac ultrasound (352 clock hours per quarter) covering a wide variety of technical procedures.

**RTMS 967 Cardiac Ultrasound Clinical****Affiliation (11)**

Clinical experience in cardiac ultrasound (352 clock hours per quarter) covering a wide variety of technical procedures.

**RTMS 968 Cardiac Ultrasound Clinical****Affiliation (12)**

Clinical experience in cardiac ultrasound (440 clock hours per quarter) covering a wide variety of technical procedures.

**RTMS 972 Medical Sonography Clinical****Affiliation (11)**

Clinical experience in medical sonography (384 clock hours) covering a wide variety of technical procedures.  
Prerequisite: RTMS 371.

**RTMS 973 Medical Sonography Clinical****Affiliation (11)**

Clinical experience in medical sonography (352 clock hours) covering a wide variety of technical procedures.  
Prerequisite: RTMS 372.

**RTMS 974 Medical Sonography Clinical****Affiliation (11)**

Clinical experience in medical sonography (352 clock hours) covering a wide variety of technical procedures.  
Prerequisite: RTMS 373.

**RTMS 975 Medical Sonography Clinical****Affiliation (12)**

Clinical experience in medical sonography (384 clock hours) covering a wide variety of technical procedures.  
Prerequisite: RTMS 374.

**RTMS 976 Medical Sonography Clinical****Affiliation (11)**

Clinical experience in medical sonography (352 clock hours) covering a wide variety of technical procedures.  
Prerequisite: RTMS 375.

**RTMS 977 Medical Sonography Clinical Affiliation (11)**

Clinical experience in medical sonography (352 clock hours) covering a wide variety of technical procedures.  
Prerequisite: RTMS 376.

**RTMS 978 Medical Sonography Clinical Affiliation (11)**

Clinical experience in medical sonography (352 clock hours) covering a wide variety of technical procedures.  
Prerequisite: RTMS 377.

**NUCLEAR MEDICINE****RTNM 351 Principles of Nuclear Medicine I (3)**

Radioactivity and its application in medicine. Atomic and nuclear structure, nuclear reactions, sources of radiation, modes of radioactive decay, dosage calculations, radiation hazards, biological effects, instrumentation, and basic measurements. Laboratory.

**RTNM 352 Principles of Nuclear Medicine II (3)**

Radioactivity and its application in medicine. Atomic and nuclear structure, nuclear reactions, sources of radiation, modes of radioactive decay, dosage calculations, radiation hazards, biological effects, instrumentation, and basic measurements. Laboratory.

**RTNM 353 Nuclear Medicine Procedures I (2)**

Clinical applications of the principles discussed in RTNM 351, 352. Transmission and prevention of AIDS and other communicable diseases, with specific application to nuclear medicine. Laboratory.

**RTNM 354 Nuclear Medicine Procedures II (2)**

Clinical applications of the principles discussed in RTNM 351, 352. Transmission and prevention of AIDS and other communicable diseases, with specific application to nuclear medicine. Laboratory.

**RTNM 971 Nuclear Medicine Affiliation I (11)**

Clinical experience of twelve months (352 clock hours per term) covering a wide variety of technical procedures.

**RTNM 972 Nuclear Medicine Affiliation II (11)**

Clinical experience of twelve months (352 clock hours per term) covering a wide variety of technical procedures.

**RTNM 973 Nuclear Medicine Affiliation III (11)**

Clinical experience of twelve months (352 clock hours per term) covering a wide variety of technical procedures.

**RTNM 974 Nuclear Medicine Affiliation IV (11)**

Clinical experience of twelve months (352 clock hours per term) covering a wide variety of technical procedures.

**RTNM 381 Topics in Nuclear Medicine I (1-3)**

Surveys selected topics in nuclear medicine. Procedure summaries, projects, literature reviews. May be taken concurrently with RTNM 371-374 for credit toward the baccalaureate degree.

**RTNM 382 Topics in Nuclear Medicine II (1-3)**

Surveys selected topics in nuclear medicine. Procedure summaries, projects, literature reviews. May be taken concurrently with RTNM 371-374 for credit toward the baccalaureate degree.

**RTNM 383 Topics in Nuclear Medicine III (1-3)**

Surveys selected topics in nuclear medicine. Procedure summaries, projects, literature reviews. May be taken concurrently with RTNM 371-374 for credit toward the baccalaureate degree.

**RTNM 384 Topics in Nuclear Medicine IV (1-3)**

Surveys selected topics in nuclear medicine. Procedure summaries, projects, literature reviews. May be taken concurrently with RTNM 371-374 for credit toward the baccalaureate degree.

**RTNM 401 Advanced Clinical Procedures I (3)**

Credit for full-time, postcertification clinical practice in a nuclear medicine service. Periodic evaluations by the clinical supervisor.

**RTNM 402 Advanced Clinical Procedures II (3)**

Credit for full-time, postcertification clinical practice in a nuclear medicine service. Periodic evaluations by the clinical supervisor.

**RTNM 403 Advanced Clinical Procedures III (3)**

Credit for full-time, postcertification clinical practice in a nuclear medicine service. Periodic evaluations by the clinical supervisor.

**RTNM 404 Advanced Clinical Procedures IV (3)**

Credit for full-time, postcertification clinical practice in a nuclear medicine service. Periodic evaluations by the clinical supervisor.

**RADIATION ASSISTANT****RTRA 331 Pharmacology I (2)**

Surveys pharmacological agents currently used in medicine, including their kinetics, dynamics, and therapeutics. Places special emphasis on pharmaceuticals commonly used by and given to radiology patients, including contrast media, antineoplastic agents, and radioactive isotopes.

**RTRA 332 Pharmacology II (2)**

Surveys pharmacological agents currently used in medicine, including their kinetics, dynamics, and therapeutics. Places special emphasis on pharmaceuticals commonly used by and given to radiology patients, including contrast media, antineoplastic agents, and radioactive isotopes.

**RTRA 344 Medical Anatomy and Physiology (2)**

Covers the structures and function of human biology. Assists with developing skills of interpreting laboratory data and increasing the understanding of the pathophysiology behind patient care.

**RTRA 346 Clinical Management and Education (2)**

Focuses on analyzing and interpreting physiological data to assist in patient assessment and management. Utilizes critical thinking, action plans, and protocols. Includes relationship-centered patient care, effective communication, and patient education. Introduces clinical pathways, multidisciplinary clinical practice, and a focus on quality and coordination of care.

**RTRA 351 Patient Assessment I (2)**

Assists with skills in interviewing, physical examination, and interpreting laboratory data. Increases understanding of the pathophysiology behind patient care. Emphasizes analysis and interpretation of physiological data to assist in patient assessment and management.

**RTRA 352 Patient Assessment II (2)**

Assists with developing skills in interviewing, physical examination, and interpreting laboratory data. Increases understanding of the pathophysiology behind patient care. Emphasizes analysis and interpretation of physiological data to assist in patient assessment and management.

**RTRA 371 Clinical Internship (1)**

During the mentored clinical experience students complete a wide variety of competencies and will be able to generate a report stating initial observations of diagnostic images on neonatal, pediatric, adult and geriatric populations. Students utilize clinical contracts and a clinical portfolio. A minimum of 120 clock hours required.

**RTRA 372 Clinical Internship (1)**

During the mentored clinical experience students complete a wide variety of competencies and will be able to generate a report stating initial observations of diagnostic images on neonatal, pediatric, adult, and geriatric populations. Students utilize clinical contracts and a clinical portfolio. A minimum of 220 clock hours required.

**RTRA 373 Clinical Internship (2)**

During the mentored clinical experience students complete a wide variety of competencies and will be able to generate a report stating initial observations of diagnostic images on neonatal, pediatric, adult and geriatric populations. Students utilize clinical contracts and a clinical portfolio. A minimum of 312 clock hours required.

**RTRA 384 Radiobiology and Health Physics (3)**

Reviews the effects of ionizing and nonionizing radiation and fundamental concepts of radiation protection. Promotes the conscientious operation of radiologic and fluoroscopic devices. Provides a complement to guided practice in operating the fluoroscopic device during clinical mentoring. Procedures and techniques to optimize image quality while reducing radiation exposure to patients, operator, and ancillary personnel.

**RTRA 385 Radiology Procedures and Image Evaluation I (3)**

Provides a framework for various imaging procedures and the role of the radiologist assistant in the radiology department. Provides the framework for systematic observation of static, digital, X-sectional, and dynamic diagnostic images for the purpose of evaluating the presence of abnormalities, anomalies, and pathological conditions.

**RTRA 386 Radiology Procedures and Image Evaluation II (4)**

Provides a framework for various imaging procedures and the role of the radiologist assistant in the radiology department. Provides the framework for systematic observation of static, digital, X-sectional, and dynamic diagnostic images for the purpose of evaluating the presence of abnormalities, anomalies, and pathological conditions.

**RTRA 387 Radiology Procedures and Image Evaluation III (4)**

Provides a framework for various imaging procedures and the role of the radiologist assistant in the radiology department. Provides the framework for systematic observation of static, digital, X-sectional, and dynamic diagnostic images for the purpose of evaluating the presence of abnormalities, anomalies, and pathological conditions.

**RTRA 388 Radiology Procedures and Image Evaluation IV (3)**

Provides a framework for various imaging procedures and the role of the radiologist assistant in the radiology department. Provides the framework for systematic observation of static, digital, X-sectional, and dynamic diagnostic images for the purpose of evaluating the presence of abnormalities, anomalies and pathological conditions.

**RTRA 471 Clinical Internship (2)**

Clinical internship (minimum of 312 clock hours). During the mentored clinical experience students complete a wide variety of competencies and will be able to generate a report stating initial observations of diagnostic images on neonatal, pediatric, adult and geriatric populations. Students utilize clinical contracts and a clinical portfolio.

**RTRA 472 Clinical Internship (2)**

Clinical internship (minimum of 312 clock hours). During the mentored clinical experience students complete a wide variety of competencies and will be able to generate a report stating initial observations of diagnostic images on neonatal, pediatric, adult and geriatric populations. Students utilize clinical contracts and a clinical portfolio.

**RTRA 473 Clinical Internship (2)**

Clinical internship (minimum of 312 clock hours). During the mentored clinical experience students complete a wide variety of competencies and will be able to generate a report stating initial observations of diagnostic images on neonatal, pediatric, adult and geriatric populations. Students utilize clinical contracts and a clinical portfolio.

**RTRA 474 Clinical Internship (2)**

Clinical internship (minimum of 312 clock hours). During the mentored clinical experience students complete a wide variety of competencies and will be able to generate a report stating initial observations of diagnostic images on neonatal, pediatric, adult and geriatric populations. Students utilize clinical contracts and a clinical portfolio.

**RTRA 484 Radiologist Assistant Research Project (2)**

Student completes a faculty-facilitated research project related to radiation sciences. Radiation sciences faculty must approve all projects.

**RTRA 488 Comprehensive Review (1)**

Review of the major content areas covered in the radiologist assistant program. Student evaluation and performance analysis accomplished.

**SPECIAL IMAGING****RTSI 361 MRI Physics I (2)**

Two-part course deals with basic principles, physics, imaging parameters, biological effects, management, and patient protocol of magnetic resonance imaging (MRI).

**RTSI 362 MRI Physics II (3)**

Basic principles, physics, imaging parameters, biological effects, management, and patient protocol of magnetic resonance imaging (MRI).

Prerequisite: RTSI 361.

**RTSI 364 Patient Care in Special Imaging (2)**

Overview of patient care in MRI and CT imaging. General aspects of patient care, pharmacology and drug administration, radiation safety. Examines some areas of radiology management. Prepares students for the additional areas required in the National Registry for the specialty areas of CT and MRI.

**RTSI 367 Cross-sectional Radiographic Anatomy (3)**

Overview of gross anatomy. Identifies normal anatomy in two-dimensional as well as three-dimensional planes. Relation of the structural as well as the physiological functions of the different body systems.

**RTSI 369 CT Physics (3)**

Basic principles, physics, imaging parameters, radiological effects, management, and patient protocol of computed tomography (CT).

**RTSI 971 Special Imaging (CT/MRI) Affiliation I (11)**

Nine months of clinical experience (three quarter terms of 384 clock hours per term) that provides a wide variety of experiences in computerized tomography (CT) and magnetic resonance imaging (MRI).

**RTSI 972 Special Imaging (CT/MRI) Affiliation II (11)**

Nine months of clinical experience (three quarter terms of 352 clock hours per term) that provides a wide variety of experiences in computerized tomography (CT) and magnetic resonance imaging (MRI).

**RTSI 973 Special Imaging (CT/MRI) Affiliation III (11)**

Nine months of clinical experience (three quarter terms of 352 clock hours per term) that provides a wide variety of experiences in computerized tomography (CT) and magnetic resonance imaging (MRI).

Corequisite: RTSI 373V.

**RTSI 381 Topics in Special Imaging I (1-3)**

Surveys selected topics in special imaging. Procedure summaries, projects, literature reviews. May be taken concurrently with RTSI 371-373 for credit toward the baccalaureate degree.

**RTSI 382 Topics in Special Imaging II (1-3)**

Surveys selected topics in special imaging. Procedure summaries, projects, literature reviews. May be taken concurrently with RTSI 371-373 for credit toward the baccalaureate degree.

**RTSI 383 Topics in Special Imaging III (1-3)**

Surveys selected topics in special imaging. Procedure summaries, projects, literature reviews. May be taken concurrently with RTSI 371-373 for credit toward the baccalaureate degree.

**RTSI 389 Special Project (1)**

Student submits project in the form of a paper or a visual aid representing a topic of current interest in an area related to radiation sciences. Regular meetings provide guidance to the student.

**RTSI 391 CVI Internship I (3)**

Advanced clinical training for qualified CRT, ARRT-certified individuals with current CPR and fluoroscopy permit. Three quarters (nine months) of clinical time in the areas of cardiovascular/general angiography and interventional radiography. Full-time clinical-learning experience involving forty hours per week.

**RTSI 392 CVI Internship II (3)**

Advanced clinical training for qualified CRT, ARRT-certified individuals, with current CPR and fluoroscopy permit. Three quarters (nine months) of clinical time in the areas of cardiovascular/general angiography and interventional radiography. Full-time clinical-learning experience involving forty hours per week.

**RTSI 393 CVI Internship III (3)**

Advanced clinical training for qualified CRT, ARRT-certified individuals, with current CPR and fluoroscopy permit. Three quarters (nine months) of clinical time in the areas of cardiovascular/general angiography and interventional radiography. Full-time clinical-learning experience involving forty hours per week.

**RTSI 401 Advanced Clinical Procedures I (3)**

Credit for full-time, postcertification clinical practice in a radiology service. Periodic evaluations by the clinical supervisor.

**RTSI 402 Advanced Clinical Procedures II (3)**

Credit for full-time, postcertification clinical practice in a radiology service. Periodic evaluations by the clinical supervisor.

**RTSI 403 Advanced Clinical Procedures III (3)**

Credit for full-time, postcertification clinical practice in a radiology service. Periodic evaluations by the clinical supervisor.

**RTSI 404 Advanced Clinical Procedures IV (3)**

Credit for full-time, postcertification clinical practice in a radiology service. Periodic evaluations by the clinical supervisor.

**RADIATION THERAPY****RTTH 332 Radiation Biology (1)**

The effects of radiation on living systems.

**RTTH 342 Patient-Care Practices in Radiation Therapy (2)**

Aspects of radiation therapy patient care. Emphasizes equipment, treatment, and psychological support of the patient. Transmission and prevention of AIDS and other communicable diseases, with specific application to radiation therapy.

**RTTH 344 Radiation Therapy Procedures (2)**

Study and/or practical applications of patient support and immobilization devices. Principles of choosing patient-treatment modalities. Methods of tumor localization. Purposes and utilization of beam direction and modification equipment.

**RTTH 345 Quality Assurance in Radiation Therapy (1)**

General aspects of continuous quality improvement (CQI) and specific aspects of quality management as they relate to the Department of Radiation Therapy. Examines the comprehensive nature of a quality-management program, and quantification of the radiation therapist's role on the CQI team.

**RTTH 348 Radiation Therapy Review (1)**

Comprehensively reviews radiation physics, protection, and dosimetry. Applies radioactive materials. Radiobiology. Technical aspects of radiation oncology.

**RTTH 353 Psycho-Oncology (2)**

Examines potential psychological effects of malignant disease on the patient and family. The patient's emotional responses to the initial diagnosis, and methods of coping and adapting to the disease and its treatment. Role of the radiation therapist as a member of the patient's emotional-support team.

**RTTH 355 Physical Principles of Radiation Therapy I (3)**

Nature and description of the structure of matter and energy. Radioactive decay schemes and interaction of photons and gamma radiation. Instrumentation involved in measurement of ionizing radiation, beam quality, and dose. Laboratory.

**RTTH 356 Physical Principles of Radiation Therapy II (3)**

Calibration techniques of photon, particulate, and electron beams. Percentage depth dose, tissue-air ratios, treatment planning, scatter functions, field flatness, and symmetry. Field shaping, arc therapy, and tissue inhomogeneities. Clinical dosimetric considerations. Laboratory.

**RTTH 357 Applied Dosimetry (2)**

Brachytherapy sources, isotope calibration, protection, and implantation techniques. Teletherapy equipment and protection. Quality assurance for external and brachytherapy procedures. Laboratory.

**RTTH 358 Advanced Dosimetry (3)**

Develops student's ability to construct treatment plans using the 3-D planning system. Integrates theory with practice. Student completes a number of plans that utilize all major treatment techniques.

Prerequisite: RTTH 357 or equivalent.

**RTTH 364 Radiation Oncology I (3)**

A two-term course covering pathology, etiology, epidemiology, histopathology, metastasis, staging, and treatment of major types of malignant neoplasms. Includes technique/simulation laboratory.

**RTTH 365 Radiation Oncology II (3)**

A two-term course covering pathology, etiology, epidemiology, histopathology, metastasis, staging, and treatment of major types of malignant neoplasms. Includes technique/simulation laboratory.

**RTTH 372 Radiation Therapy Affiliation II (1)**

Twelve months of clinical experience (520 clock hours per term) covering a wide variety of technical procedures.

**RTTH 381 Topics in Radiation Therapy I (1-3)**

Surveys selected topics in radiation therapy. Procedure summaries, projects, literature reviews. May be taken concurrently with RTTH 371-374 for credit toward the baccalaureate degree.

**RTTH 382 Topics in Radiation Therapy II (1-3)**

Surveys selected topics in radiation therapy. Procedure summaries, projects, literature reviews. May be taken concurrently with RTTH 371-374 for credit toward the baccalaureate degree.

**RTTH 383 Topics in Radiation Therapy III (1-3)**

Surveys selected topics in radiation therapy. Procedure summaries, projects, literature reviews. May be taken concurrently with RTTH 371-374 for credit toward the baccalaureate degree.

**RTTH 384 Topics in Radiation Therapy IV (1-3)**

Surveys selected topics in radiation therapy. Procedure summaries, projects, literature reviews. May be taken concurrently with RTTH 371-374 for credit toward the baccalaureate degree.

**RTTH 401 Advanced Clinical Procedures I (3)**

Credit for full-time, postcertification clinical practice in a radiation therapy service. Periodic evaluations by the clinical supervisor.

**RTTH 402 Advanced Clinical Procedures II (3)**

Credit for full-time, postcertification clinical practice in a radiation therapy service. Periodic evaluations by the clinical supervisor.

**RTTH 403 Advanced Clinical Procedures III (3)**

Credit for full-time, postcertification clinical practice in a radiation therapy service. Periodic evaluations by the clinical supervisor.

**RTTH 404 Advanced Clinical Procedures IV (3)**

Credit for full-time, postcertification clinical practice in a radiation therapy service. Periodic evaluations by the clinical supervisor.

**RTTH 971 Radiation Therapy Affiliation I (8)**

Twelve months of clinical experience (288 clock hours per term) covering a wide variety of technical procedures. Twelve months of clinical experience (520 clock hours per term) covering a wide variety of technical procedures.

**RTTH 973 Radiation Therapy Affiliation III (8)**

Twelve months of clinical experience (264 clock hours per term) covering a wide variety of technical procedures.

**RTTH 974 Radiation Therapy Affiliation IV (8)**

Twelve months of clinical experience (264 clock hours per term) covering a wide variety of technical procedures.

**PHARMACY PRACTICE  
DRUG INFORMATION****RXDI 664 Drug Information and Literature****Evaluation (3)**

Introduces drug-information resources. Trains students to retrieve and critically evaluate literature related to providing pharmaceutical care to patients. Introduces multiple forms of drug literature including primary, secondary, tertiary, and Internet resources. Trains students to document drug-information requests and report adverse drug reactions. Discusses issues related to herbal medicine and alternative therapeutic options. Uses knowledge obtained through classroom course assignments, students examine published information to answer common drug-information questions.

**PHARMACY PRACTICE  
EXPERIENTIAL EDUCATION****RXEE 561 Pharmaceutical Care I (2)**

The first in a sequence of three courses that uses early practice experiences to expose students to career opportunities and issues currently shaping the profession. Introduces foundational concepts and attitudes—balanced with real-world observation—necessary to understand the practice of pharmaceutical care, the essence of being a professional, and the challenges of applying these ideals. Instills a sense of professionalism, promotes positive practice philosophies, develops relationships with practitioners, evaluates potential career paths, and fosters appreciation for the lifelong-learning nature of pharmacy. Substantial organized, early practice experiences reinforce knowledge and skills taught in didactic course work and encourage reflection. Oral and written communication practice through presentations and class discussions. Students required to learn the top 200 drugs by brand and generic names, therapeutic and drug classifications, and manufacturer.

**RXEE 562 Pharmaceutical Care II (3)**

The second in a sequence of three courses that uses early practice experiences to expose students to career opportunities and issues currently shaping the profession. Introduces foundational concepts and attitudes—balanced with real-world observation—necessary to understand the practice of pharmaceutical care, the essence of being a professional, and the challenges of applying these ideals. Instills a sense of professionalism, promotes positive practice philosophies, develops relationships with practitioners, evaluates potential career paths, and fosters appreciation for the lifelong-learning nature of pharmacy. Substantial organized, early practice experiences reinforce knowledge and skills taught in didactic course work and encourage reflection. Oral and written communication practice through presentations and class discussions. Students required to learn the top 200 drugs by brand and generic names, therapeutic and drug classifications, and manufacturer.

**RXEE 563 Pharmaceutical Care III (3)**

The third in a sequence of three courses that uses early practice experiences to expose students to career opportunities and issues currently shaping the profession. Introduces foundational concepts and attitudes—balanced with real-world observation—necessary to understand the practice of pharmaceutical care, the essence of being a professional, and the challenges of applying these ideals. Instills a sense of professionalism, promotes positive practice philosophies, develops relationships with practitioners, evaluates potential career paths, and fosters appreciation for the lifelong-learning nature of pharmacy. Substantial organized, early practice experiences reinforce knowledge and skills taught in didactic course work and encourage reflection. Oral and written communication practice through presentations and class discussions. Students required to learn the top 200 drugs by brand and generic names, therapeutic and drug classifications, and manufacturer.

Prerequisite: RXEE 562.

## PHARMACY PRACTICE PHARMACEUTICAL CARE

**RXPC 561 Pharmaceutical Care I (2)**

The first in a sequence of three courses that uses early practice experiences to expose students to career opportunities and issues currently shaping the profession. Introduces foundational concepts and attitudes—balanced with real-world observation—necessary to understand the practice of pharmaceutical care, the essence of being a professional, and the challenges of applying these ideals. Instills a sense of professionalism, promotes positive practice philosophies, develops relationships with practitioners, to evaluate potential career paths, and fosters appreciation for the lifelong-learning nature of pharmacy. Substantial organized, early practice experiences reinforce knowledge and skills taught in didactic course work and encourage reflection. Oral and written communication practice through presentations and class discussions. Students required to learn the top 200 drugs by brand and generic names, therapeutic and drug classifications, and manufacturer.

**RXPC 661 Pharmaceutical Care IV (1)**

The fourth in a sequence of nine courses. Assists students with the development of drug knowledge and skills required in the contemporary practice of pharmacy. Introduces students to the thought processes involved in drug-therapy assessment. Ongoing development of student-generated drug-information cards.

Prerequisite: Successful completion of all PY1 and PY2 courses; AQ standing.

**RXPC 662 Pharmaceutical Care V (1)**

The second in a series of three courses that broadens students' understanding of the practice of pharmaceutical care, the nature of professionalism, and the challenges inherent to applying these principles in the real world. Encourages reflection on personal and professional goals, reinforces knowledge and skills taught in didactic course work, and strengthens the appreciation for life-long learning. Oral and written communication practice through class presentations and discussions.

Prerequisite: RXPC 661.

Corequisite: RXTN 762.

**RXPC 663 Pharmaceutical Care VI (1)**

The third in a series of three courses that broadens students' understanding of the practice of pharmaceutical care, the nature of professionalism, and the challenges inherent to applying these principles in the real world. Encourages reflection on personal and professional goals, reinforces knowledge and skills taught in didactic course work, and strengthens the appreciation for life-long learning. Oral and written communication practice through class presentations and discussions.

**RXPC 665 Physical Assessment (2)**

Develops knowledge in physical assessment, data collection, interpretation, and evaluation of the patient's physical state. Covers additional techniques of patient interviewing, charting, medication profiling, and advisement. Develops objective, structured clinical examination (OSCE) skills in students; and uses these skills as evaluation benchmarks.

**RXPC 710 Dietary Supplements (3)**

Introduces students to the use of dietary manipulations—including herbals and other supplements—in patient health. Includes legal, biochemical, and formulation issues; benefits and risks of specific agents; and interactions with pharmaceutical treatment.

Prerequisite: PY3, AQ standing.

**RXPC 756 Women's Health (3)**

Develops a deeper understanding of issues related specifically to women's health. Reviews anatomy, physiology, pharmacology, pharmacokinetics, pharmacotherapy, and clinical-trial evidence, as they relate to women's health. Enables students to integrate their knowledge of these disciplines in the context of formulating individualized pharmacotherapeutic plans.

**RXPC 761 Pharmaceutical Care Laboratory I (4)**

The first of three quarters of laboratory course work that familiarizes students with and educates them about major issues in contemporary pharmacy practice. Teaches the important roles of the pharmacist in drug-therapy management—including evaluating patient-medication profiles, monitoring patient outcomes, patient counseling, and disease-state management. Stresses the application of appropriate communication and computer skills in conjunction with these activities. Emphasizes the role of the pharmacist as a health educator. Student gains experience in other practical situations—such as drug-administration techniques, devices, and compounding techniques.

**RXPC 762 Pharmaceutical Care Laboratory II (4)**

The second of three quarters of laboratory course work that familiarizes students with and educates them about major issues in contemporary pharmacy practice. Teaches the important roles of the pharmacist in drug-therapy management—including evaluating patient medication profiles, monitoring patient outcomes, patient counseling, and disease-state management. Stresses the application of appropriate communication and computer skills in conjunction with these activities. Emphasizes the role of the pharmacist as a health educator. Student gains experience in other practical situations—such as drug-administration techniques, devices, and compounding techniques.

Prerequisite: RXPC 761.

Corequisite: RXPS 715, 777, 778.

**RXPC 763 Pharmaceutical Care Laboratory III (4)**

The third of three quarters of laboratory course work that familiarizes students with and educates them about major issues in contemporary pharmacy practice. Teaches the important roles of the pharmacist in drug-therapy management—including evaluating patient medication profiles, monitoring patient outcomes, patient counseling, and disease-state management. Stresses the application of appropriate communication and computer skills in conjunction with these activities. Student gains experience in other practical situations—such as drug-administration techniques, devices, and compounding techniques.

Prerequisite: RXPC 762; PY3, SQ standing.

**PHARMACEUTICAL SCIENCES****RXPS 511 Pharmaceutics I (3)**

The first in a series of three courses that presents the physicochemical and biological factors affecting the stability, kinetics, bioavailability, and bioequivalence of drugs in dosage forms. Applies this knowledge to dosage-form design, formulation, and drug-delivery systems. Focuses on the theory, technology, formulation, evaluation, and dispensing of solid, semisolid, and liquid dosage forms. Laboratory sessions involve students in the preparation and evaluation of dosage forms.

**RXPS 512 Pharmaceutics II (4)**

A survey of conventional dosage forms, including oral, topical, and parenteral medications, with emphasis on formulation, preparation, and effectiveness. Continues RXPS 511.

**RXPS 513 Pharmaceutics III (3)**

Studies the mathematical, physicochemical, and biological principles concerned with the formulation, preparation, and effectiveness of pharmaceutical dosage forms. Continues RXPS 512.

Prerequisite: RXPS 512.

**RXPS 515 Pharmaceutics Laboratory I (.5)**

Laboratory designed for the student to apply pharmaceutical principles and to develop proficiency when compounding selected formulations and employing aseptic techniques.

Prerequisite: RXPS 510.

Corequisite: RXPS 512.

**RXPS 516 Pharmaceutics Laboratory II (.5)**

Continues RXPS 515.

Prerequisite: RXPS 510, 515.

Corequisite: RXPS 513.

**RXPS 521 Anatomy and Physiology I (3)**

The first in a sequence of three courses that provides students of pharmacy with the necessary core knowledge of anatomy and physiology to understand normal body function and to analyze and interpret immediate and long-term compensatory responses to common disease states of excitable cells and all organ systems. Discusses basic and applied terminology, as well as the basic morphology of systems. Teaches concepts that explore the relationship between anatomy and function of the systems, and that integrate physiology and pathophysiology. Introduces a comprehensive medical terminology vocabulary.

**RXPS 522 Anatomy and Physiology II (3)**

The second in a sequence of three courses that provides students of pharmacy with the necessary core knowledge of anatomy and physiology to understand normal body function and to analyze and interpret immediate and long-term compensatory responses to common disease states of excitable cells and all organ systems. Discusses basic and applied terminology, as well as the basic morphology of systems. Teaches concepts that explore the relationship between anatomy and function of the systems, and that integrate physiology and pathophysiology. Introduces a comprehensive medical terminology vocabulary.

**RXPS 523 Anatomy and Physiology III (3)**

The third in a sequence of three courses that provides students of pharmacy with the necessary core knowledge of anatomy and physiology to understand normal body function and to analyze and interpret immediate and long-term compensatory responses to common disease states of excitable cells and all organ systems. Discusses basic and applied terminology, as well as the basic morphology of systems. Teaches concepts that explore the relationship between anatomy and function of the systems, and that integrate physiology and pathophysiology. Introduces a comprehensive medical terminology vocabulary.

Prerequisite: RXPS 522.

**RXPS 530 Molecular Biology (3)**

Provides the foundation for the study of molecular biology and genomics. The comprehensive sequence (along with RXPS 581, 582) establishes the biochemical basis for cell structure and emphasizes an integrated approach to understanding cellular metabolism; provides a biochemical, genetic, and molecular basis for understanding disease and drug functioning; and examines the mechanisms for genetic information flow in prokaryotic and eukaryotic cells. Places emphasis on chemical signaling, cell-cycle regulation, principles of gene expression, and basic genetics.

Prerequisite: PY1, SQ standing.

**RXPS 571 Immunology (3)**

The first in a two-course sequence that provides an overview of the host-parasite interaction in infectious diseases. Integrates the basic concepts of the immune response to infectious agents, and the role of immune response in disease; as well as the principles of medical microbiology. Covers basic knowledge of microbial taxonomy, growth, metabolism, reproduction, and genetic variation in sufficient detail for students to understand interactions between host and pathogenic microorganisms in infectious diseases. Emphasizes the rational management, prevention, and control of infectious diseases. Discusses immunologic diseases (e.g., AIDS, SLE, RA) and their therapeutic management. Covers diagnostic procedures.

**RXPS 581 Biochemistry I (3)**

The first in a two-part series that addresses the structure-function relationships of major biomolecules; enzymes in biochemistry; human-energy metabolism; and major pathways for human protein, carbohydrate, and lipid metabolism. Discusses important organic functional groups, nomenclature and physical properties, characteristic reactions, stereochemistry, and acid-base properties that are important considerations for drug action. Emphasizes principles of biochemistry as they relate to pH and buffers; hemostasis; enzyme functions; regulation of intermediary metabolism; chemical signaling; and interconversions in the living system, including the role of vitamins, hormones, and enzyme inhibitors. Discusses biotechnological advances, when appropriate.

**RXPS 582 Biochemistry II (3)**

The second in a two-part series that addresses the structure-function relationships of major biomolecules; enzymes in biochemistry; human-energy metabolism; and major pathways for human protein, carbohydrate, and lipid metabolism. Discusses important organic functional groups, nomenclature and physical properties, characteristic reactions, stereochemistry, and acid-base properties that are important considerations for drug action. Emphasizes principles of biochemistry as they relate to pH and buffers; hemostasis; enzyme functions; regulation of intermediary metabolism; chemical signaling; and interconversions in the living system, including the role of vitamins, hormones, and enzyme inhibitors. Discusses biotechnological advances, when appropriate.

**RXPS 610 Basic Pharmacokinetics (4)**

Teaches the basic principles of absorption, distribution, metabolism, and elimination of drugs from the body. Focuses on physical, physiological, and biochemical factors that impact these processes.

Prerequisite: Successful completion of all PY1- and PY2-level courses; AQ standing.

**RXPS 611 Medicinal Chemistry I (3)**

The first in a three-course sequence that focuses on the chemistry of natural and synthetic drug entities—their physiochemical properties, methods of synthesis, sources, derivatives, modes of biotransformation, and structure-activity relationships. Links the chemical structure of drugs to their pharmacological/pharmacokinetic/toxicity profiles.

Prerequisite: Successful completion of all PY1- and PY2-level courses; AQ standing.

**RXPS 612 Medicinal Chemistry II (2)**

The second in a three-course sequence that focuses on the chemistry of natural and synthetic drug entities—their physiochemical properties, methods of synthesis, sources, derivatives, modes of biotransformation, and structure-activity relationships. Links the chemical structure of drugs to their pharmacological/pharmacokinetic/toxicity profiles.

Prerequisite: RXPS 611.

**RXPS 613 Medicinal Chemistry III (2)**

Principles governing radiation production and safety relative to radiographic anatomy/dental materials. Fundamentals of intraoral and extraoral techniques, dark-room procedures, and mounting of radiographs. Practical application of techniques.

Prerequisite: RXPS 612.

Corequisite: RXTH 683.

**RXPS 620 Microbiology (3)**

Provides an overview of the host-parasite interaction in infectious diseases. Builds on the concepts developed in immunology, as well as the principles of medicinal microbiology. Covers basic knowledge of microbial taxonomy, growth, metabolism, reproduction, and genetic variation in sufficient detail for the student to understand interactions between the host and pathogenic microorganisms in infectious diseases. Emphasizes rational management, prevention, and control of infectious diseases. Covers diagnostic procedures.

Prerequisite: PY2 standing.

**RXPS 714 Medicinal Chemistry IV (3)**

The fourth in a six-course sequence. Focuses over a two-year period on the chemistry of natural and synthetic drug entities—their physiochemical properties, methods of synthesis, sources, derivatives, modes of biotransformation, and structure-activity relationships. Links the chemical structure of drugs to their pharmacological/pharmacokinetic/toxicity profiles.

**RXPS 715 Medicinal Chemistry V (2)**

Focuses on enzyme and nucleic acid targets for drugs that are involved with various aspects of chemotherapy; antimicrobial, antiviral, antifungal, antiparasitic, and cancer chemotherapy. Emphasizes mechanism of action and aspects of toxicity of these agents.

Prerequisite: RXPS 714; PY3, WQ standing.

**RXPS 716 Medicinal Chemistry VI (2)**

Completes the consideration of drugs acting on enzyme targets involved with chemotherapy. Considers other drug categories, including drugs interacting with the immune system, both immunostimulants and immunosuppressants; as well as miscellaneous targets involved with diseases, such as osteoarthritis, erectile dysfunction, osteoporosis, and allergic conditions.

Prerequisite: RXPS 715; PY3, SQ standing.

**RXPS 717 Introduction to Traditional Chinese Medicine (3)**

Introduces traditional Chinese medicine—a term used to describe a predominantly preventive system of health care that goes beyond specific medical practices to an integration of wellness with all other aspects of life. Familiarizes the student with this alternative worldview, which may in many ways serve as a model for current, counseling-intensive pharmacy practice.

Prerequisite: PY3 standing.

**PHARMACY PRACTICE  
CONJOINT****RXRX 501 School of Pharmacy Forum (0)**

Offered each quarter throughout the four-year program. Weekly meetings to provide opportunity for presentations and discussions on current topics affecting pharmacy, health care, and students' career paths. Serves as a forum for students to network and be informed of activities and developments within the School of Pharmacy and Loma Linda University. Exposes students to leaders within the profession, reputable practitioners from various settings, top researchers, and other renowned individuals who discuss important issues, career opportunities, latest research results, and the practice of pharmacy.

**RXXR 506 Introduction to Pharmacy Leadership (1)**

Offers academic credit for activities related to leadership development associated with the California Pharmacy Student Leadership Program. Strengthens leadership behavior. Students invited to take part in this program must register for this course and complete it as a condition of their participation. May be repeated once for a maximum of 2 credits.

Prerequisite: Permission of the Office of Student Affairs; PY1, SQ standing.

**RXXR 507 Professional Development (0)**

Emphasizes the vital role of pharmacy's professional organizations by providing a vehicle within the School of Pharmacy's formal curriculum for student participation. Develops students' leadership abilities and cultivates their input on issues affecting the profession. Offered each quarter throughout the four-year program.

Prerequisite: PY1 standing.

**RXXR 601 School of Pharmacy Forum (0)**

Weekly meetings provide opportunity for presentations and discussions on topics currently affecting pharmacy, health care, and students' career paths. Serves as a forum for students to network and be informed of activities and developments within the School of Pharmacy and Loma Linda University. Exposes students to leaders within the profession, reputable practitioners from various settings, top researchers, and other renowned individuals who will discuss important issues, career opportunities, latest research results, and the practice of pharmacy. Offered each quarter throughout the four-year program.

Prerequisite: PY2, AQ standing.

**RXXR 604 Professional Development (0)**

Emphasizes the vital role of pharmacy's professional organizations by providing a vehicle within the School of Pharmacy's formal curriculum for student participation. Develops students' leadership abilities and cultivates their input on issues affecting the profession. Offered each quarter throughout the four-year program.

Prerequisite: PY2 standing.

**RXXR 701 School of Pharmacy Forum (0)**

Required weekly meetings provide opportunity for presentations and discussions on current topics affecting pharmacy, health care, and students' career paths. Serves as a forum for students to network and be informed of activities and developments within the School of Pharmacy and Loma Linda University. Exposes students to leaders within the profession, reputable practitioners from various settings, top researchers, and other renowned individuals who will discuss important issues, career opportunities, latest research results, and the practice of pharmacy. Repeated through the third professional year. Offered each quarter throughout the four-year program.

**RXXR 704 Professional Development (0)**

Emphasizes the vital role of pharmacy's professional organizations by providing a vehicle within the School of Pharmacy's formal curriculum for student participation. Augments the development of students' leadership abilities and cultivates their input on issues affecting the profession. Permits project leaders and committee chairs a set time to meet and to provide an opportunity for all classes to network with each other. Repeated through the third professional year.

**PHARMACY PRACTICE****SOCIAL AND ADMINISTRATIVE SCIENCES****RXSA 540 Introduction to Health Care (2)**

Covers the structure, organization, delivery, regulation, and financing of the American health care system—which presents both problems and opportunities to practitioners, patients, and society. Discusses pharmacy's role and responsibilities in the health care system, and its interaction with other health occupations. Compares international structures, which will be a key component to students' understanding of the U.S. system. Through an active learning process, students follow and interpret issues that are currently shaping pharmaceutical and medical care; and discover the impact these events will have in shaping their future practice.

**RXSA 544 Communications and Writing Skills (3)**

Highlights the importance of communicating and oral and written communications in the professional setting.

Covers techniques such as empathy, nonverbal communications, and listening. Emphasizes providing useful information to patients, caregivers, and fellow health professionals. Students gain experience with oral and written presentations—including the preparation of reports, abstracts, and scientific manuscripts.

**RXSA 545 Public Health and Lifestyles (3)**

Introduces the first-year pharmacy student to fundamental principles of public health and public health practice, as well as how pharmacy practice interfaces with public health delivery in a variety of settings. Student identifies and evaluates public health education and health promotion programs, as well as identifies where the pharmacist plays a significant role in ensuring the conditions in which all peoples can be healthy. Introduces the student to the fundamentals of public health principles and practice, while examining how the pharmacist is an integral player to public health-systems delivery and practice.

**RXSA 546 The Pharmacy/Public Health Interface (2)**

Exposes students to the basic principles of public health and the public health-delivery system throughout the world. Students learn about the pharmacist's role as a public health professional. How the pharmacist—as the most accessible, approachable, and accepted health professional—can improve the public's health. Students design, implement, and evaluate a public health campaign applicable to one being offered in a pharmacy-practice setting. Reinforces learning as students search for knowledge about health care systems and contemporary health problems, prepare balanced and informative approaches to critically evaluate current trends in health care, enrich their writing, and develop inductive and deductive critical-thinking methods that will be of value in any work setting.

**RXSA 547 Pharmacy Law (3)**

Reviews basic principles of pharmacy law as they relate to the practice under federal, state, and local regulations. Reviews special problems involving the control of narcotics, poisons, and other controlled substances. Discusses laws relative to business activities and professional ethics as related to the law.

Prerequisite: RXSA 545.

**RXSA 640 Epidemiology and Biostatistics (3)**

Introduces epidemiology, basic statistical concepts, analytical methods, and medical literature-evaluation techniques. Exposes students to biostatistical concepts through clinical application of statistics, using SPSS7 or other currently available statistical packages.

Prerequisite: Successful completion of all P1-level courses; PY2, AQ standing.

**RXSA 641 Pharmacy Management I (2)**

The first in a two-course sequence that covers the functions of a manager (planning, organization, staffing, directing, and controlling) and administration principles for the solution of pharmacy and health care problems. Introduces basic management principles and methods along with the economic aspects of practice. Familiarizes and provides the student with basic tools to develop and deliver patient-centered pharmaceutical-care services.

**RXSA 642 Pharmacy Management II (2)**

The second in a two-course sequence that covers the financial, social, entrepreneurial, and economic aspects of practice. Familiarizes the student with and provides the basic tools needed to develop and deliver patient-centered pharmaceutical-care services.

Prerequisite: PY2, WQ standing.

**RXSA 644 Lifestyles and Health (2)**

Emphasizes the importance of lifestyle modification as one of the most important therapeutic interventions involved in the treatment of many chronic diseases. Presents the concepts of personal lifestyle choices and the corresponding consequences. Teaches techniques that encourages patients to make healthier choices and personal changes that integrate the physical, mental, social, and spiritual dimensions of health.

Prerequisite: RXSA 544.

**RXSA 645 Pharmacoeconomics (3)**

Presents fundamental concepts of health-outcomes research and pharmacoeconomic analysis, and provides a basic framework to optimize health care-resource allocation. Discusses principles used to measure and analyze costs and outcomes, and techniques used to evaluate them across drug treatments. Includes various interactive group assignments to illustrate the methodologies discussed in lecture. Reviews current practice guidelines for pharmacoeconomic evaluation and describes real-world contexts in which pharmacoeconomic research is conducted.

Prerequisite: PY2, WQ standing.

**RXSA 646 Principles of Management (3)**

Introduces pharmacy students to the five core managerial sciences, i.e., human resource management, operations management, marketing, accounting, and finance. Particularly emphasizes human resource management and operations management skills. Lectures incorporate real-life management cases for discussion, followed by lecture on the principles of management topics.

**RXSA740 Pharmacoeconomics (3)**

Presents fundamental concepts of health outcomes research and pharmacoeconomic analysis, and provides a basic framework to optimize health care-resource allocation. Discusses principles used to measure and analyze costs and outcomes, and techniques used to evaluate them across drug treatments. Includes various interactive group assignments to illustrate the methodologies discussed in lecture. Reviews current practice guidelines for pharmacoeconomic evaluation and describes real-world contexts in which pharmacoeconomic research is conducted.

**RXSA 742 Pharmacy Management II (2)**

The second of a two-course sequence that covers the financial, social, entrepreneurial, and economic aspects of practice. Familiarizes and provides the student with the basic tools to develop and deliver patient-centered pharmaceutical-care services.

**RXSA 747 Social, Administrative, and Behavioral Sciences Advanced Seminar (3)**

Offers opportunity to research a health care administrative principle, concept, and/or trend currently impacting the profession of pharmacy. Exploratory aspects of the course require students to perform and complete a project related to a social, administrative, and behavioral sciences principle, concept, or trend that currently impacts the profession of pharmacy. Analytical aspects of the course require students to participate in weekly briefings that discuss traditional and controversial pharmacy-administration issues.

**RXSA 748 Advanced Topics in Pharmacy Law (3)**

An elective course that examines specific pharmacy-law topics in depth, using legal case studies and probing class discussions. Explores pharmacists' liability issues, the drug-approval process, pharmacists' moral/ethical obligations, antitrust, drug importation, and scope of practice.

Prerequisite: PY3, AQ standing; and permission of instructor.

**RXSA 749 Cases in the Pharmaceutical Industry (3)**

Studies and discusses the pharmaceutical industry in four major areas of business—fundamentals of marketing, corporate finance, management, and leadership. Analyzes the industry's decision-making process for each industry. Provides students with substantial knowledge in business and management topics comparable in depth and breadth to M.B.A. courses in business schools. Teaches the inner workings of the industry with which students will be involved during their careers.

**RXSA 751 Social-Behavioral Pharmacy I (3)**

The first course of a two-course sequence that examines and focuses on models and theories of behavior change. Particular focus on primary models of behavior change relative to public health, health education, preventive health, health promotion, and pharmacological practice. From a combination of pharmacological and public health practice, student gains a broad understanding of the various models and theories that may enhance understanding of how health-behavior change models and theories can be applied to assessing a patient's level of behavior change. Students use knowledge to meet the individual needs of the patient.

**PHARMACY PRACTICE THERAPEUTICS****RXTH 670 IPDM I: Introduction to Pharmacology and Therapeutics (3)**

Part of a twelve-course sequence taught over two years. Focuses on pathophysiology and management of disease states, pharmacology of the drug classes indicated, and the clinical pharmacokinetics that govern drug administration. Develops an understanding of the basic pharmacologic concepts of therapeutics, receptor theory, drug metabolism, and drug interactions. Covers tools to effectively assess therapy, including interpretation of laboratory values and construction of SOAP notes.

Prerequisite: Successful completion of all PY1- and PY2-level courses; AQ standing.

Corequisite: RXPS 611, 671.

**RXTH 671 IPDM II: Electrolytes, Fluids, and Nutritional Balance (3)**

Part of a twelve-course sequence. Covers the pathophysiology, management, and drug therapy of conditions related to electrolyte and fluid disturbances; as well as dietary requirements and sources of electrolytes. Addresses pathophysiology, management, and drug therapy of anemias. Enables students to manage electrolyte and fluid disorders and anemias, establish and employ rational treatment, and provide parameters to monitor progress of the regimens.

Prerequisite: Successful completion of all PY1- and PY2-level courses; AQ standing.

Corequisite: RXPS 611, 670.

**RXTH 674 IPDM IV: Renal and Respiratory Diseases (3)**

Part of a twelve-course sequence. Includes pathophysiology, pharmacology, pharmacokinetics, pharmacotherapy, and clinical-trial evidence as related to renal and respiratory diseases. Enables students to integrate their knowledge of these disciplines to manage renal and respiratory diseases by establishing and employing rational treatment and providing parameters to monitor progress of the regimens.

Prerequisite: RXTH 670, 671.

Corequisite: RXPS 612; RXTH 672, 673, 675.

**RXTH 683 IPDM III: Endocrine/GI Diseases (4)**

Part of a twelve-course sequence. Introduces students to the pharmacology, pharmacokinetics, and pharmacodynamics of agents used in the treatment of endocrine and GI dysfunction; as well as management (evaluation, treatment, monitoring, and follow-up) of patients with endocrine and GI dysfunctions. Students integrate knowledge, attitudes, and skills in a variety of ways to accomplish course outcomes. Includes pathophysiology, pharmacology, pharmacokinetics, pharmacotherapy, and clinical-trial evidence as they relate to endocrine and GI drugs. Enables students to integrate their knowledge of the disciplines studied in the context of formulating an individualized pharmacotherapeutic plan for a given patient.

Prerequisite: Completion of all PY1 and PY2, AQ courses.

Corequisite: RXPS 612; RXTH 674, 691.

**RXTH 684 IPDM V: Cardiovascular (6)**

Part of a twelve-course sequence. Introduces students to the pharmacology, pharmacokinetics, and pharmacodynamics of cardiovascular agents; as well as management (evaluation, treatment, monitoring, and follow-up) of patients with common cardiovascular disorders. Students integrate knowledge, attitudes, and skills in a variety of ways to accomplish course outcomes. Includes anatomy, physiology, pharmacology, pharmacokinetics, pharmacotherapy, and clinical-trial evidence as they relate to cardiology. Enables students to integrate their knowledge of the disciplines studied in the context of formulating an individualized pharmacotherapeutic plan for a given patient.

Prerequisite: PY2, SQ standing.

Corequisite: RXPS 613; RXTH 692, 774.

**RXTH 691 Combined Recitation I: Renal/Respiratory/GI/ Endocrine (1)**

A case-based discussion section that allows students to integrate the knowledge presented in RXPS 612 and in RXTH 674 and RXTH 683 by evaluation of pertinent case studies. Student devises a rational therapeutic plan and determines appropriate monitoring parameters for safety and efficacy. Identifies and addresses patient-education issues surrounding disease and drug therapy.

Prerequisite: Completion of all PY1 and AQ, PY2 courses.

Corequisite: RXPS 612; RXTH 674, 683.

**RXTH 692 Combined Recitation II (1)**

A case-based discussion section designed to allow students to integrate the knowledge presented in RXTH 684 and 774, and in RXPS 613 by evaluation of pertinent case studies. Student devises a rational therapeutic plan and determines appropriate monitoring parameters for safety and efficacy. Identifies and addresses patient-education issues surrounding disease and drug therapy.

Prerequisite: PY2, SQ standing.

Corequisite: RXPS 613; RXTH 684, 774.

**RXTH 771 IPDM VII: Neurological Diseases (3)**

Part of an eleven-course sequence. Introduces students to the pharmacology, pharmacokinetics, and pharmacodynamics of agents to treat neurological diseases; as well as management (evaluation, treatment, monitoring and follow-up) of patients with neurological diseases. Students integrate knowledge, attitudes, and skills in a variety of ways to accomplish course outcomes. Includes anatomy, physiology, pharmacology, pharmacokinetics, pharmacotherapy, and clinical-trial evidence as they relate to agents that treat neurological diseases. Enables students to integrate their knowledge of the disciplines studied in the context of formulating individualized pharmacotherapeutic plans.

Corequisite: RXPC 761; RXPS 714; RXTH 772.

**RXTH 772 IPDM VIII: Infectious Diseases II (4)**

Part of an eleven-course sequence. Introduces students to the pharmacology, pharmacokinetics, and pharmacodynamics of anti-infectives; as well as management (evaluation, treatment, monitoring and follow-up) of patients with neurological diseases. Students integrate knowledge, attitudes, and skills in a variety of ways to accomplish course outcomes. Includes anatomy, physiology, pharmacology, pharmacokinetics, pharmacotherapy, and clinical-trial evidence as they relate to anti-infectives. Enables students to integrate their knowledge of the disciplines studied in the context of formulating individualized pharmacotherapeutic plans.

Corequisite: RXPC 761; RXPS 714, 771.

**RXTH 774 IPDM X: Miscellaneous Conditions (3)**

Part of a twelve-course sequence. Introduces students to the pharmacology, pharmacokinetics and pharmacodynamics of agents used in the treatment of various conditions—including arthritis, gout, glaucoma, dermal conditions, incontinence, SLE, MS, BPH, and others; as well as management (evaluation, treatment, monitoring and follow-up) of patients with these conditions. Students integrate knowledge, attitudes, and skills in a variety of ways to accomplish the course outcomes. Includes pathophysiology, pharmacology, pharmacokinetics, pharmacotherapy, and clinical-trial evidence as they relate to the drugs used for the conditions indicated. Enables students to integrate their knowledge of the disciplines studied in the context of formulating an individualized pharmacotherapeutic plan for a given patient.

Prerequisite: PY3, SQ standing.

Corequisite: RXPS 716; RXTH 775, 795.

**RXTH 775 IPDM XI: Oncology/Transplant (2)**

Part of a twelve-course sequence. Introduces students to the pharmacology, pharmacokinetics, and pharmacodynamics of oncology agents and agents used in the treatment of transplant recipients; as well as management (evaluation, treatment, monitoring, and follow-up) of patients with these conditions. Students integrate knowledge, attitudes, and skills in a variety of ways to accomplish course outcomes. Includes pathophysiology, pharmacology, pharmacokinetics, pharmacotherapy, and clinical-trial evidence as they relate to the drugs used to treat the conditions indicated. Enables students to integrate their knowledge of the disciplines studied in the context of formulating an individualized pharmacotherapeutic plan for a given patient.

Prerequisite: PY3, SQ standing.

Corequisite: RXPS 716; RXTH 775, 795.

**RXTH 777 IPDM XI: GI Diseases (2)**

Part of a twelve-course sequence. Introduces students to the pharmacology, pharmacokinetics, and pharmacodynamics of agents used in the treatment of GI dysfunction; as well as management (evaluation, treatment, monitoring, and follow-up) of patients with GI dysfunctions. Students integrate knowledge, attitudes, and skills in a variety of ways to accomplish course outcomes. Includes pathophysiology, pharmacology, pharmacokinetics, pharmacotherapy, and clinical-trial evidence as they relate to GI drugs. Enables students to integrate their knowledge of the disciplines studied in the context of formulating an individualized pharmacotherapeutic plan for a given patient.

Prerequisite: Completion of all PY1, PY2 and PY3, AQ courses.

Corequisite: RXPS 715; RXTH 778, 794.

**RXTH 778 IPDM XII: Miscellaneous Conditions (3)**

Part of a twelve-course sequence. Introduces students to the pharmacology, pharmacokinetics, and pharmacodynamics of agents used in the treatment of various conditions, including arthritis, gout, glaucoma, dermal conditions, incontinence, SLE, MS, BPH, and others; as well as management (evaluation, treatment, monitoring, and follow-up) of patients with these conditions. Students integrate knowledge, attitudes, and skills in a variety of ways to accomplish course outcomes. Includes pathophysiology, pharmacology, pharmacokinetics, pharmacotherapy, and clinical-trial evidence as they relate to the drugs used to treat the conditions indicated. Enables students to integrate their knowledge of the disciplines studied in the context of formulating an individualized pharmacotherapeutic plan for a given patient.

Prerequisite: Completion of all PY1, PY2 and PY3, AQ courses.

Corequisite: RXPS 715; RXTH 777, 794.

**RXTH 779 IPDM XIII: Oncology/Transplant (2)**

Part of a twelve-course sequence. Introduces students to the pharmacology, pharmacokinetics, and pharmacodynamics of oncology agents and agents used in the treatment of transplant recipients; as well as management (evaluation, treatment, monitoring, and follow-up) of oncology patients and transplant recipients. Students integrate knowledge, attitudes, and skills in a variety of ways to accomplish course outcomes. Includes pathophysiology, pharmacology, pharmacokinetics, pharmacotherapy and clinical-trial evidence as they relate to the drugs used for oncology patients and transplant recipients. Enables students to integrate their knowledge of the disciplines studied in the context of formulating an individualized pharmacotherapeutic plan for a given patient.

Prerequisite: PY3, SQ standing.

Corequisite: RXPS 716; RXTH 774, 795.

**RXTH 780 IPDM XIV: Psychiatry and Substance Abuse (4)**

Part of a twelve-course sequence. Introduces students to the pharmacology, pharmacokinetics, and pharmacodynamics of agents used in the treatment of psychiatric disease and addictions; as well as management (evaluation, treatment, monitoring and follow-up) of patients with these conditions. Students integrate knowledge, attitudes, and skills in a variety of ways to accomplish course outcomes. Includes pathophysiology, pharmacology, pharmacokinetics, pharmacotherapy, and clinical-trial evidence as they relate to the drugs used to treat these various conditions. Enables students to integrate their knowledge of the disciplines studied in the context of formulating an individualized pharmacotherapeutic plan for a given patient.

Prerequisite: PY3, SQ standing.

Corequisite: RXPS 716; RXTH 775, 795.

**RXTH 784 Special Topics in Pharmacy Practice (3)**

Discusses the top 200 drugs as they are currently recognized. Emphasizes therapeutic uses, drug interactions, and side effects. Provides practical tips by practitioners for patient counseling.

**RXTH 794 Combined Recitation IV:****GI/Miscellaneous Conditions (1)**

A case-based discussion section that allows students to integrate the knowledge presented in RXPS 715 and in RXTH 777 and 778 by evaluation of pertinent case studies. Student devises a rational therapeutic plan and determines appropriate monitoring parameters for safety and efficacy. Identifies and addresses patient-education issues surrounding disease and drug therapy.

Prerequisite: Successful completion of all PY1 and PY2 courses.

Corequisite: RXPS 715; RXTH 777, 778.

**RXTH 795 Combined Recitation V (1)**

A case-based discussion section that allows students to integrate the knowledge presented in RXTH 773 and 775 and in RXPS 716 by evaluation of pertinent case studies. Student devises a rational therapeutic plan and determines appropriate monitoring parameters for safety and efficacy. Identifies and addresses patient-education issues surrounding disease and drug therapy.

Prerequisite: PY3, SQ standing.

Corequisite: RXPS 716; RXTH 773, 775.

**ADVANCED RESTORATIVE DENTISTRY****SDCJ 744A Clinical Training in Advanced Restorative Dentistry (400 hours)**

A six-month, full-time certificate program that is predominantly clinical in nature. Provides mission support among Seventh-day Adventist foreign dentists, and provides training for other foreign dentists who reside outside the United States and will return to their own dental clinics/countries after completion of the program. Allows qualified dentists from other countries to study and treat patients at Loma Linda University School of Dentistry. Program generates no academic credit and cannot apply toward any other program in the School of Dentistry.

**SDCJ 744B Clinical Training in Advanced Restorative Dentistry (400 hours)**

A six-month, full-time certificate program that is predominantly clinical in nature. Provides mission support among Seventh-day Adventist foreign dentists, and provides training for other foreign dentists who reside outside the United States and will return to their own dental clinics/countries after completion of the program. Allows qualified dentists from other countries to study and treat patients at Loma Linda University School of Dentistry. Program generates no academic credit and cannot apply toward any other program in the School of Dentistry.

**SCHOOL OF DENTISTRY  
CLINICAL****SDCL 801 Clinical Patient Care (2)**

Focuses on the delivery of patient care consistent with the highest standards, which bridges all clinical disciplines and provides a structured setting in which faculty interact to formulate a diagnosis, develop treatment plans, deliver treatment, and maintain patient health. Integrates social, ethical, and humanitarian components through instruction and in-group seminars, and during the delivery of patient care. Emphasizes the comprehensive patient-care system, which focuses on patient care, education, environment, and assessment.

Prerequisite: DNES 774, 775; ODRP 725, 726; RESD 754.

**SDCL 802 Clinical Patient Care (2)**

Focuses on the delivery of patient care consistent with the highest standards, which bridges all clinical disciplines and provides a structured setting in which faculty interact to formulate a diagnosis, develop treatment plans, deliver treatment, and maintain patient health. Integrates social, ethical, and humanitarian components through instruction and in-group seminars, and during the delivery of patient care. Emphasizes the comprehensive patient-care system, which focuses on patient care, education, environment, and assessment.

Prerequisite: DNES 774, 775; ODRP 725, 726; RESD 754.

**SDCL 803 Clinical Patient Care (2)**

Focuses on the delivery of patient care consistent with the highest standards, which bridges all clinical disciplines and provides a structured setting in which faculty interact to formulate a diagnosis, develop treatment plans, deliver treatment, and maintain patient health. Integrates social, ethical, and humanitarian components through instruction and in-group seminars, and during the delivery of patient care. Emphasizes the comprehensive patient-care system, which focuses on patient care, education, environment, and assessment.

Prerequisite: DNES 774, 775; ODRP 725, 726; RESD 754.

**SDCL 804 Clinical Patient Care (2)**

Continues SDCL 802, 803.

Prerequisite: DNES 774, 775; ODRP 725, 726; RESD 754.

**SDCL 805 Clinical Patient Care (2)**

Focuses on the delivery of patient care consistent with the highest standards, which bridges all clinical disciplines and provides a structured setting in which faculty interact to formulate a diagnosis, develop treatment plans, deliver treatment, and maintain patient health. Integrates social, ethical, and humanitarian components through instruction and in-group seminars, and during the delivery of patient care. Emphasizes the comprehensive patient-care system, which focuses on patient care, education, environment, and assessment.

Prerequisite: DNES 774, 775; ODRP 725, 726; RESD 754.

**SDCL 806 Clinical Patient Care (2)**

Focuses on the delivery of patient care consistent with the highest standards, which bridges all clinical disciplines and provides a structured setting in which faculty interact to formulate a diagnosis, develop treatment plans, deliver treatment, and maintain patient health. Integrates social, ethical, and humanitarian components through instruction and in-group seminars, and during the delivery of patient care. Emphasizes the comprehensive patient-care system, which focuses on patient care, education, environment, and assessment.

Prerequisite: DNES 774, 775; ODRP 725, 726; RESD 754.

**SDCL 807 Clinical Patient Care (2)**

Focuses on the delivery of patient care consistent with the highest standards, which bridges all clinical disciplines and provides a structured setting in which faculty interact to formulate a diagnosis, develop treatment plans, deliver treatment, and maintain patient health. Integrates social, ethical, and humanitarian components through instruction and in-group seminars, and during the delivery of patient care. Emphasizes the comprehensive patient-care system, which focuses on patient care, education, environment, and assessment.

Prerequisite: DNES 774, 775; ODRP 725, 726; RESD 754.

**SDCL 808 Clinical Patient Care (2)**

Continues SDCL 805, 806, 807.

Prerequisite: DNES 774, 775; ODRP 725, 726; RESD 754.

**SDCL 899 Clinic—Continuing Registration for Extended Professional (4-8)**

Continues registration that allows an extended professional to satisfy clinic requirements for degree completion.

**SPEECH-LANGUAGE PATHOLOGY****SLPA 218 Transcription Phonetics (3)**

Development of transcription skills using the International Phonetic Alphabet. Course may not be taught every year.

**SLPA 224 Language Disorders in Children (4)**

Study of language disorders in children. Describes disorders in infancy through adolescence. Discusses treatment strategies. Course may not be taught every year.

**SLPA 234 Speech Disorders in Children (4)**  
Study of articulation, phonological, and fluency disorders in children. Discusses treatment strategies. Course may not be taught every year.

**SLPA 235 Speech Disorders in Adults (4)**  
Basic anatomy and physiology of the head and neck. Studies motor speech disorders and voice and swallowing disorders in adults. Discusses treatment strategies. Course may not be taught every year.

**SLPA 244 Language Disorders in Adults (3)**  
Foundational neuroanatomy. Studies acquired language disorders—including aphasia, right-hemisphere disorders, and traumatic brain injury. Discusses treatment strategies. Course may not be taught every year.

**SLPA 267 Fieldwork (2)**  
Guided observation of clinical management of individuals with communication disorders. Supervised clinical experience in assisting the speech-language pathologist in a school and hospital setting. Course may not be taught every year.

Prerequisite: SLPA 224, 234.

**SLPA 275 Assistive Technology (2)**  
Introduces the development and use of assistive technology for individuals in need of augmentative or alternative means of communication. Course may not be taught every year.

**SLPA 277 Bicultural and Bilingual Issues in Communication Disorders (2)**  
Clinical competencies and cultural sensitivity needed in interactions with bicultural and bilingual clients. Discusses the impact of such knowledge on assessment and intervention. Course may not be taught every year.

**SLPA 285 Speech-Language Pathology Assistant Methods and Procedures (3)**  
Addresses technical assistant-level skills, clerical skills, maintenance of environment, preparation of materials, record keeping and documentation, behavior management, discrete trial training, screening, and skills necessary for understanding and implementing treatment plans. Course may not be taught every year.

**SLPA 286 Workplace Issues and Ethics (2)**  
Interpersonal skills, workplace conduct, ethical conduct, scope of practice, national and state regulations. Emphasizes dependence versus independence issues, and supervisor-supervisee relationships. Students demonstrate progression towards teamwork; support of diversity; and appreciation of human worth, wholeness, and commitment to lifelong learning. Course may not be taught every year.

## SOCIOLOGY

**SOCI 104 Introduction to Sociology (4)**  
Introduces the scientific study of human society and behavior in social settings. Course topics include: sociological theory and research, culture and social structure, socialization, groups and organizations, social problems, social institutions, and social change. Assists the student in achieving a greater understanding of self and society, and preparing for successful personal and professional life.

## SOCI 477 Intervention Strategies for At-Risk Youth (4)

Psychological and spiritual intervention strategies for working with at-risk youth, taught within the framework of nature retreats known as Operation Jessica. Students learn mentoring, spiritual nurturing, and psychoeducational group leadership skills. Modalities include spiritual transformation activities, group interactions, nature exploration, low and high ropes challenge experiences, drama, music, and art. Theory-based topics covered: dangerous coping methods, spiritual deficiencies, and dysfunctional family systems of at-risk youth. Focuses on understanding gang culture, addictive processes, family and community violence, and spiritual recovery strategies.

## SOCI 577 Intervention Strategies for At-Risk Youth (4)

Psychological and spiritual intervention strategies for working with at-risk youth, taught within the framework of nature retreats known as Operation Jessica. Students learn mentoring, spiritual nurturing, and psychoeducational group leadership skills. Modalities include spiritual transformation activities, group interactions, nature exploration, low and high ropes challenge experiences, drama, music, and art. Theory-based topics covered: dangerous coping methods, spiritual deficiencies, and dysfunctional family systems of at-risk youth. Focuses on understanding gang culture, addictive processes, family and community violence, and spiritual recovery strategies.

## SOCI 585 Sociology of Communities (4)

Examines classical and contemporary theories of community. Provides a theoretical foundation for applied social science professional programs that require an understanding of the community in contemporary society.

## SOCIAL WORK

### SOWK 414 Interviewing and Counseling (4)

Provides students with orientation to the procedures, methods, and problems associated with a clinical interview. Focuses on developing basic interviewing skills used in the collection of personal data, including the use of various verbal and nonverbal forms of expression, active listening, and appreciation of client diversity. Gives attention to the student's development of self-awareness and continuous integration of professional values and ethical conduct in practice.

### SOWK 477 Universal Psychiatric Care (1 or 2)

Provides an opportunity to participate in an international institute featuring world leaders in psychiatric care. Topics include: world diagnostic guidelines, psychotropic medications and issues in treating ethnic populations, spirituality and psychiatry, transpersonal psychiatry in theory and practice, multidisciplinary teams in the practice of mental health services, and problems of mental health in immigrant populations. Students registering for 1 unit participate in ten hours of lecture, including a pre- and postsession. Those taking 2 units also develop a major paper on one of the institute topics.

**SOWK 494 Conflict Resolution and Dispute Mediation (2)**

Provides cross-disciplinary knowledge and skills needed in conflict resolution and dispute mediation. Course content meets the state of California requirements for mediators and other facilitators. Individuals completing the course are eligible to complete supervised mediation practice with the Riverside County Department of Community Action and receive a mediation certificate from the state of California.

**SOWK 500 Colloquium (0)**

Seminar of selected topics on contemporary social work issues and social issues affecting the delivery of social work services. Attendance verified as per methods outlined in *M.S.W. Program Handbook*.

**SOWK 511 Human Behavior and Cross-cultural Environment I (3)**

First of a three-part sequence that provides the basis for understanding human development and life transitions throughout the life span within an ecological perspective. Orients the student to the generalistic, social work approach to understanding human behavior in a cross-cultural context. Focuses on normal behavior from birth through adolescence.

Prerequisite: Program prerequisites in human growth and development, human biology concepts, and cross-cultural issues.

**SOWK 512 Human Behavior and Cross-cultural Environment II (3)**

Second course in a three-part sequence. Explores the dynamic of human behavior from young adulthood to senescence, as affected by and expressed in a cross-cultural context. Provides a foundation of knowledge on which to build social work-practice skills.

Prerequisite: Program prerequisites in human growth and development, human biology concepts, and cross-cultural issues.

**SOWK 515 Social Policy I (3)**

Orientation to the beliefs, values, and historical foundations of the social work profession. Cultural perspectives and contradictions as these have influenced the development of contemporary social policies and services.

**SOWK 517 Foundation Practice I: Individuals (3)**

First of the practice sequences. Provides the foundation for generic social work practice as it emphasizes an ecological systems approach within a cross-cultural context. Provides knowledge of social work principles, ethics, and values that assure a professional approach to individual client needs, arising from an assessment of personal and social issues and problems. Taken prerequisite to or concurrent with social work practicum.

**SOWK 518 Foundation Practice II: Social Groups (3)**

Second course in the practice sequence. Introduces the student to group-work methods. Emphasizes differentiation among the types of individuals, situations, and presenting problems best served by group interviews.

Prerequisite: SOWK 517 and program prerequisite in interviewing and counseling.

**SOWK 519 Foundation Practice III: Organizations and Communities (3)**

Third course in the practice sequence. Incorporates generic concepts of the generalists' approach in organizational and community settings. Provides knowledge and understanding concerning group formation and empowerment. Assists the student in understanding him-/herself as a member of, and an active participant in, community organizations and institutions.

Prerequisite: SOWK 517, 518.

**SOWK 520 Foundation Practice IV: Families (3)**

Fourth course in the practice sequence. Introduces family interventions. Examines views and issues regarding contemporary family structure and function, and focuses on concepts and techniques used to promote change in family functioning. Course meets state requirement for content in family violence.

Prerequisite: SOWK 517, 518, 519; program prerequisite in interviewing and counseling.

**SOWK 547 Research Methods I (3)**

Reviews the quantitative and qualitative methodological techniques used in designing and analyzing social work research and practice. Emphasizes preparing students for practice evaluation.

**SOWK 549 Research Methods II (3)**

Provides students with a didactic laboratory exploration of computer-based statistical analysis. Includes review of statistical techniques such as correlation, chi-square, analysis of variance, and multiple regression. Emphasizes using and interpreting statistics most common to research designs employed in social work research and practice evaluation.

Prerequisite: SOWK 547; introductory computing and statistics.

**SOWK 578 Field Orientation (1)**

Provides students with the policies and procedures for completing the program's practicum requirements. Begins the process of examining social work values and ethics as students are introduced to the NASW Code of Ethics and fundamental principles of professional behavior prior to beginning their field practicum.

Prerequisite: Program prerequisite in interviewing and counseling.

**SOWK 595 Professional Development (2-4)**

Tutorial course work aimed at ameliorating difficulties associated with meeting the professional performance competencies of the M.S.W. degree program (see *M.S.W. Student Handbook*). Students enrolled in the course as a result of a corrective action plan developed with the Department of Social Work's Academic Standards Committee.

**SOWK 599 Directed Study (1-4)**

Limited to matriculating master's of social work students who wish to pursue independent investigations in social work practice or policy under the direction of a department faculty member.

**SOWK 600 Advanced Colloquium (0)**

Advanced seminars on contemporary topics in social work affecting the delivery of services. Second-year students select colloquia to attend related to their designated concentration. Attendance verified as per methods outlined in *M.S.W. Program Handbook*.

**SOWK 613 Human Behavior in a Cross-cultural Environment III (3)**

Third course in a three-part sequence. Presents more complex definitions of dysfunction. Encourages appreciation for sensitivity to the associated needs and issues of affected populations. Facilitates increased application and respect for social work values, policies, and ethics.

Prerequisite: SOWK 511, 512; and qualifying review; or permission of Academic Standards Committee.

**SOWK 614 Human Behavior in a Cross-cultural Environment III Tutorial (1-3)**

Intensive tutorial experience that facilitates further integration of the diagnostic content and analytical skills addressed in SOWK 613.

Prerequisite: SOWK 513.

**SOWK 615 Social Policy II (3)**

Examines the structure and processes of social programs, and reviews methodologies for the analysis and development of social policies as applied to social welfare programs. Addresses the professional values and ethics of social change through political and social actions.

Prerequisite: SOWK 515.

**SOWK 648 Dual Diagnosis (2)**

Examines the structure and processes of social programs, and reviews methodologies for the analysis and development of social policies as applied to social welfare programs. Addresses the professional values and ethics of social change through political and social action.

**SOWK 649 Social Work and Health Care (2)**

Considers the physiological, psychological, and social components of various illnesses/conditions encountered in health care settings. Themes include: the effect of these components on social functioning or rehabilitative and habilitative processes; the common psychological reactions of people to medical treatment; the medical team's respective roles and value orientation, and the impact of these on the patient and his/her family; and issues of loss and death. Gives special attention to interventions specific to health care settings versus those of traditional agencies, and to methods appropriate to interdisciplinary practice.

**SOWK 650 Children and Adolescents in Trauma (2)**

Provides students with a comprehensive understanding of assessing, intervening with, and treating children and adolescents experiencing trauma. Examines traumatic events associated with sexual abuse, life-threatening conditions, and severe familial disruption. Examines the processes of assessing and diagnosing the source and severity of commonly associated behaviors, conduct, and mood disorders. Explores applicable intervention and treatment strategies.

**SOWK 651 Health Care Interventions with High-Risk Families and Communities (2)**

Special health care needs of high-risk populations (including the poor, ethnic and racial minorities, recent immigrants, and children in high-risk environments). Primary causes of poor health among these groups, and development of realistic goals and strategies for responding to health care systems. Reviews social work's role in the development of interdisciplinary community health care systems services.

**SOWK 652 Social Problems within Racial and Ethnic Minority Populations (2)**

Overviews the most significant social problems affecting racial and ethnic minority populations. Focuses initially on examining the interactive nature of environmental stresses and successful functioning. Further emphasizes the unique practice role of social work in structuring interventions and culturally appropriate treatment approaches.

**SOWK 653 Interventions with Special-Needs Children (2)**

Focuses on practice with children and families in relationship to environmental stability. Examines how the physical and mental health of children are directly associated with family and environmental permanency. Emphasizes development of parental and social support capacities, as well as the requisite professional knowledge and skills to help children deal with identity issues and concerns of joining a new family. Addresses the impacts of race, ethnicity, gender, economic deprivation, physical illness, and disability.

**SOWK 654 Therapeutic Interventions with Older Adults (2)**

Integrates the theories and practice skills needed for effective practice with older adults and their families. Focuses both on the significance of the older client's history; as well as the influences of race, ethnicity, and gender on behavior within the clients environmental context. Emphasizes assessment and intervention methods that bridge health and mental health services. Examines service-delivery and case-management systems; as well as individual, family, and small-group intervention approaches.

**SOWK 656 Religion and Spirituality in Direct Practice (2)**

Acquaints students with predominant theories regarding religion and spirituality from the "person-in-the-situation" perspective. Theoretical orientations include psychodynamic, philosophical, and sociocultural. Examines the implications of these theories in terms of their impact on professional practice.

**SOWK 658 Children's Psychotherapy (2)**

Considers treatment techniques appropriate for young children with a wide range of diagnoses and behavior problems. Emphasizes the integration of theory and practice of psychotherapy with the ecological perspective of social work practice. Discusses diagnosis, phases of treatment, and special communication issues. Research, ethical, and value issues addressed.

**SOWK 659 Interventions with the Chronically Mentally Ill (2)**

Provides students with an understanding of theories and techniques of direct interventions useful in helping those with major mental disorders to cope with their illnesses and aspects of their life situations. Topics include dangerous behavior, acute psychotic episodes, definitions of long-term chronic disability, enhancing social skills and social support systems, case management, and the interaction of medication and social functioning.

**SOWK 660 Advanced Theory and Practice with Ethnically Diverse Clients (3)**

Explores theories and concepts of ethnicity, with particular focus on their usefulness for understanding ethnic diversity in psychosocial functioning. Examines norms, values, and adaptive coping styles; generational and gender issues in the formation of ethnic identity; the impact of social, political, and economic deprivation on development; attitudes toward health and mental health; degrees of acculturation; styles in the use of help; and other patterns. Students explore their own ethnicity-related styles and identities, as well as the potential “fit” between worker and client values and beliefs. Students learn how to apply ethnicity concepts in case situations, including the exploration of ethnic factors in the assessment of functioning and in the development of the therapeutic relationship. Gives particular attention to practice with people of color and recent immigrants. Critically examines prevailing models of social work practice in terms of their sensitivity to issues of ethnic diversity.

**SOWK 661 Time-Limited Services and Interventions (3)**

Examines the rationales and assumptions of brief treatment, presenting the techniques and strategies of time-limited services, as compared with extended models of treatment. Examines the nature and characteristics of crisis versus traumatic events for their long-term effects on psychosocial functioning. Examines continuum as it guides assessment, treatment modalities and settings, and interdisciplinary interactions.

Prerequisite: Pass qualifying examination, or permission of Academic Standards Committee.

**SOWK 663 Advanced Social Work Practice with Individuals (3)**

Focuses on developing students' knowledge and skills in advanced clinical social work with individuals. Classification, evaluation, and diagnosis of the psychiatric disorders described in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR). Emphasizes diagnostic and psychosocial evaluation, psychiatric epidemiology, genetic factors in mental illness, and the major categories of drugs used in treating psychiatric disorders.

Prerequisite: Pass qualifying examination, or permission of Academic Standards Committee.

**SOWK 665 Advanced Practice Group (3)**

Deepens knowledge of group processes and treatment. Through lecture, discussion, use of case material, and experiential learning in the classroom, group is examined for its therapeutic impact on individual members. Emphasizes assessment and interventional skills in relation to the development of the group and to the ego functioning of individuals in therapeutic groups.

Prerequisite: Pass qualifying examination, or permission of Academic Standards Committee.

**SOWK 666 Women's Clinical Issues and Treatment (2)**

Presents students with the major psychosocial considerations and modalities applicable for working with women in clinical settings. Racial, ethnic, and sociopolitical-economic issues addressed.

**SOWK 667 Advanced Integrative Practice (3)**

Provides students in the clinical concentration an opportunity to deepen their knowledge and integration of advanced theories and treatment modalities. Emphasizes developing students' skill in selecting practice methods appropriate for working with client populations presenting complex, multidimensional considerations for diagnosis and treatment. Special attention given to furthering students' appreciation for practice evaluation and interdisciplinary interactions as guided by an “autonomy in collegiality” perspective. Underscores the responsibilities of clinical social workers to anticipate and respond to social, political, and other environmental factors changing the nature and availability of services.

Prerequisite: Pass qualifying examination, or permission of Academic Standards Committee.

**SOWK 668 Men's Clinical Interventions and Treatment (2)**

Focuses on psychosocial issues faced by men that have implications for clinical interventions. Gives attention to appreciating the influence of life stage, role definitions, race, ethnicity, and gender orientation. Focuses on the psychosocial, emotional, economic, and familial impact of health-status change (including chronic illness, disability, and AIDS).

**SOWK 669 Child and Adolescent Clinical Issues and Treatment (2)**

Explores the use of creative and expressive techniques as alternatives to traditional assessment and intervention methods used with children and adolescents in medical, mental health, and other community-intervention settings. Students gain knowledge and skill in the use of play therapy, art therapy, programmed writing, and other expressive intervention techniques.

**SOWK 671 Foundation Practice V: Social Work Administration (3)**

Provides macropractice knowledge, skills, and perspectives of administrative practices with which to develop, support, and maintain effective service delivery. Topics include role identification and development, situational leadership, strategic planning, levels and types of decision making, management of organizational behavior, use of information systems, budgeting, documentation and reporting, resource development and utilization, and community networking.

**SOWK 672 Theories of Organizations and Systems (3)**

Explores the complexities of large organizations and bureaucratic systems. Examines formal and informal structures, communication patterns, and philosophical approaches as these affect the effectiveness and efficiency of services delivery, worker motivation, and resource procurement and allocation. Accomplishes the objectives of the course through the application of diverse organizational and diffusion theories and perspectives as a means to increase students' understanding of their practicum experiences in the policy, planning, and administration concentration.

Prerequisite: Pass qualifying review, or permission of Academic Standards Committee.

**SOWK 673 Program Planning and Evaluation (3)**

Introduces students to the range of issues, knowledge, and skills required in designing, planning, implementing, monitoring, and evaluating programs. Students build on knowledge obtained in other concentration courses. Integrates the course focus through the development of a comprehensive program proposal for the students' practicum agency or other identified community group.

Prerequisite: Pass qualifying examination, or permission of Academic Standards Committee.

**SOWK 674 Fiscal and Information Management (2 or 3)**

Examines the types of decision-support systems utilized by social work administrators in public and private settings. Emphasizes understanding the theories, principles, methods, and technologies inherent in effective fiscal and information management. Additional special project, with permission of instructor, to receive the additional unit.

**SOWK 675 Supervision (3)**

Examines the supervisory process in relation to clinical, administrative, educational, and supportive functions. Emphasizes supervisory knowledge, skills, and techniques necessary for the development of staff capable of functioning creatively and independently.

Prerequisite: SOWK 613, 660, 682.

**SOWK 676A Human Resources Planning and Development (3)**

Examines the complexities of human-resources management in large organizations and/or with diverse employee populations. Strengthens students' knowledge and professional decision-making relative to the implementation of federal, state, and local policies (i.e., affirmative action, nondiscrimination, sexual harassment, etc.). Permission of instructor required for students not in the policy/administration concentration.

Prerequisite: Pass qualifying examination, or permission of Academic Standards Committee.

**SOWK 676B Human Resources Planning and Development Seminar (3)**

Selective course, taken to supplement SOWK 676A, deepens students' exposure to leading-edge discussions on the legal and ethical aspects of human-resources management and contemporary issues affecting morale and productivity in today's work environments (e.g., familial dysfunction of employees, single-parent families, care-provider roles of employees, and co-worker violence). Learning supported through guest speakers and panel discussions. Permission of instructor required for registration by students not in the policy, planning, and administration concentration.

**SOWK 677 Advanced Integrative Seminar in Psychotherapy (2)**

Provides an opportunity to integrate advanced courses with individuals (SOWK 663) and groups (SOWK 665) by furthering the application of in-depth psychodynamic analysis of mentally ill individuals. Identifies specific themes of intrapsychic dilemmas and treatment interventions. Students enhance their analytic writing and verbal skills via presentations based on the bio-psycho-social-spiritual perspective of psychopathologies to be encountered as a clinical social worker. Expands the body of knowledge of social work students who are interested in cultivating expertise in clinical social work via advanced training institutes and/or a doctoral program.

Prerequisite: SOWK 663, 665.

**SOWK 678 Integrative Generic Practice and Seminar (2)**

Required of students with advanced standing. Students complete 200 hours of practicum and 20 hours of practicum seminar. Designed to provide a bridge quarter to integrate the B.S.W. degree experience with the second year of the M.S.W. degree program. Emphasizes reviewing the knowledge, values, and skills of generalist social work practice; and defines the additional competencies required for advanced practice. Assists instructor and students in identifying and addressing individualized needs for further development, including application of professional ethics and judgment, use of self as a therapeutic tool, and self-awareness. At the culmination of this course, students also formulate conceptual and experiential learning objectives for their second year of study.

**SOWK 679 Universal Psychiatric Care (1 or 2)**

Provides an opportunity to participate in an international institute featuring world leaders in psychiatric care. Topics include: world diagnostic guidelines, psychotropic medications and issues in treating ethnic populations, spirituality and psychiatry, transpersonal psychiatry in theory and practice, multidisciplinary teams in the practice of mental health services, and problems of mental health in immigrant populations. Students registering for 1 unit participate in ten hours of lecture, including a pre- and postsession. Those taking 2 units also develop a major paper on one of the institute topics.

**SOWK 680 Children and Families Policies and Services (2)**

Provides students with an understanding of the major social-policy issues affecting the current organization and delivery of human services for children and families. Analyzes current debates about the tensions between social policy and the doctrine of family privacy, with attention to the legal basis of state interventions and judicial decisions affecting family relationships, including parent to parent and child to parent.

**SOWK 681 Health and Mental Health Policy and Services (2)**

Provides a conceptual understanding of the development and organization of the health and mental health systems within institutional and community-based settings as they stem from national and local policy perspectives. Considers major issues dealing with the economics of health, health planning, and health legislation. Reviews health and mental health programs based on selected cross-national comparisons.

**SOWK 682 Legal and Ethical Aspects in Health and Mental Health Services (3)**

Focuses on those instances when legal mandates or concerns interact with and affect the practice of social work. Overviews the sources of legal authority, the judicial system, and the legal standards applicable to particular proceedings. Examines the legal implications of the social worker/client relationship. Emphasizes consent to treatment. Examines the statutes and judicial decisions that govern the confidentiality implicit in a social worker/client relationship. Examines the statutes and judicial decisions that permit or place an obligation on social workers to breach client confidentiality. Explores course content in the context of common and high-risk situations.

**SOWK 683 Advanced Policy Analysis (3)**

Deepens students' understanding of both the conceptual and analytical requirements of policy analysis through the integration of behavioral, political, economic, and sociometric frameworks for understanding human conditions. Students gain experience in structuring and defining policy problems, establishing criteria for policy choices, mapping alternative strategies, and applying appropriate analytical and research methods to policy questions. Use of cost-benefit analysis, cost-effectiveness analysis, and decision analysis as means toward developing formal augmentation toward sustained change.

Prerequisite: Pass qualifying examination, or permission of Academic Standards Committee.

**SOWK 684 Advanced Policy Projects (2 or 3)**

Enhances understanding of the interconnections between politics, policy-making, and policy analysis through firsthand participation in a political-action campaign. Choices for projects may focus on local initiatives or those coordinated annually through the California chapter of NASW.

**SOWK 685 International Environment of Social Welfare (2)**

Explores the social, cultural (including religious), political, and economic factors impacting social-welfare policies and the delivery of services in Third-World, developing, industrial, and postindustrial societies. Explores models for conceptualizing the differences and commonalities of infrastructure development in these various settings to enhance students' appreciation for creating and implementing policies and programs sensitive to the unique characteristics of the host environment.

**SOWK 787A Advanced Practicum and Seminar (4)**

Provides students with advanced social work experience in their selected concentration. Advanced practica assigned by the program's director of field education. Students complete 200 practicum hours concurrent with 20 hours of practicum seminar for each of three consecutive quarters.

Prerequisite: SOWK 578, 757A, 757B, 757C; or SOWK 678.

**SOWK 787B Advanced Practicum and Seminar (4)**

Provides students with advanced social work experience in their selected concentration. Advanced practica assigned by the program's director of field education. Students complete 200 practicum hours concurrent with 20 hours of practicum seminar for each of three consecutive quarters.

Prerequisite: SOWK 578, 757A, 757B, 757C; or SOWK 678.

**SOWK 787C Advanced Practicum and Seminar (4)**

Provides students with advanced social work experience in their selected concentration. Advanced practica assigned by the program's director of field education. Students complete 200 practicum hours concurrent with 20 hours of practicum seminar for each of three consecutive quarters.

Prerequisite: SOWK 578, 757A, 757B, 757C; or SOWK 678.

**SOWK 695A Advanced Research Methods (2)**

A three-quarter, sequential course that supports students choosing to advance their knowledge through the examination and application of a broad spectrum of research methods used in professional-practice settings. Combines didactic course work with laboratory experiences integrated into the student's advanced practicum, in which the student makes use of the identified research designs and techniques. Emphasizes developing student's ability to differentiate and apply the most appropriate and widely used research designs and methods at the micro, mezzo, and macro levels of practice, i.e., qualitative versus quantitative or combined formats. Attention given at each level to preparing the student to work with the increasing federal and state requirements for demonstrating intervention effectiveness.

**SOWK 695B Advanced Research Methods (2)**

A three-quarter, sequential course that supports students choosing to advance their knowledge through the examination and application of a broad spectrum of research methods used in professional-practice settings. Combines didactic course work with laboratory experiences integrated into the student's advanced practicum, in which the student makes use of the identified research designs and techniques. Emphasizes developing student's ability to differentiate and apply the most appropriate and widely used research designs and methods at the micro, mezzo, and macro levels of practice, i.e., qualitative versus quantitative or combined formats. Attention given at each level to preparing the student to work with the increasing federal and state requirements for demonstrating intervention effectiveness.

**SOWK 695C Advanced Research Methods (2)**

A three-quarter, sequential course that supports students choosing to advance their knowledge through the examination and application of a broad spectrum of research methods used in professional-practice settings. Combines didactic course work with laboratory experiences integrated into the student's advanced practicum, in which the student makes use of the identified research designs and techniques. Emphasizes developing student's ability to differentiate and apply the most appropriate and widely used research designs and methods at the micro, mezzo, and macro levels of practice, i.e., qualitative versus quantitative or combined formats. Attention given at each level to preparing the student to work with the increasing federal and state requirements for demonstrating intervention effectiveness.

**SOWK 697 Applied Research (2)**

Supports students choosing to complete the thesis option. Provides research matriculation in the collection and analysis of data for the thesis. Students required to register for two quarters, or a total of 4 units.

Prerequisite: SOWK 547, 549.

**SOWK 697C Research: Project (1)**

Supports students choosing to complete the thesis option. Provides research matriculation in the collection and analysis of data for the thesis. Students required to register for two quarters, or a total of 4 units.

**SOWK 698 Thesis (2)**

The culminating work of the students' independent research, under the direction of the research adviser. Registration during the quarter in which student defends research and submits the final document to the department and School of Science and Technology.

**SOWK 787A Field Practicum and Seminar (3)**

Provides students with experiential learning opportunities in foundation social work practice. Students placed at practicum social work sites, as determined by the program's director of field education. Students complete 160 practicum hours concurrent with 20 hours of practicum seminar for each of three consecutive quarters.

Prerequisite: SOWK 578.

**SOWK 787B Field Practicum and Seminar (3)**

Provides students with experiential learning opportunities in foundation social work practice. Students placed at practicum social work sites, as determined by the program's director of field education. Students complete 160 practicum hours concurrent with 20 hours of practicum seminar for each of three consecutive quarters.

Prerequisite: SOWK 578.

**SOWK 787C Field Practicum and Seminar (3)**

Provides students with experiential learning opportunities in foundation social work practice. Students placed at practicum social work sites, as determined by the program's director of field education. Students complete 160 practicum hours concurrent with 20 hours of practicum seminar for each of three consecutive quarters.

Prerequisite: SOWK 578.

**SPANISH****SPAN 099 Conversational Spanish I (3)**

Introduces students to basic conversational Spanish. Content includes oral comprehension drills, pronunciation exercises, and vocabulary designed to develop language skills in Spanish (listening and speaking).

**SPAN 101 Elementary Spanish for Professionals (Medical and General) (4)**

Introduces Spanish culture and language, providing the fundamentals of language: pronunciation, intonation, and grammatical structures. Covers beginning-level grammar and communication (medical and general), designed for students and professionals having little or no previous exposure to the Spanish language. Includes a three-hour language laboratory.

**SPAN 102 Elementary Spanish II (4)**

Continues SPAN 101, with emphasis on reflexive, preterite, present perfect, and imperfect verbs. Focuses on conversational skills. Includes medical and social vocabulary.

Prerequisite: SPAN 101 or equivalent, with instructor's approval.

**SPAN 118 Spanish Literature I (4)**

Surveys literature from the peninsular Spanish writers. Includes a directed study project covering a review of short stories, discussions of worldview issues of literature, and cultural perspectives. Taught in English.

**SPAN 119 Spain: Culture and Civilization (4)**

Introduces and reviews the culture and language of Spain; summarizes and analyzes Spain's achievements in the new world. A directed study project that includes spending time with a Spanish family and writing an eight-page report. Taught in English.

**SPAN 122 Tradition and Paradox of Latin American Women (4)**

Provides health care providers, through literature, with knowledge of the Latina growing population; their cultural needs and experiences in social, academic and family life activities, and how they strike a balance between their old and new worlds. Taught in English.

**SPAN 123 Practicum in Spanish I (4)**

Practicum in the Spanish language and culture in a total immersion environment. Part of the total cost of tuition may include a trip to a Spanish-speaking country. Supervised experiences communicating with the Spanish-speaking population (behavioral and medical vocabulary included).

Prerequisite: SPAN 118 or 119 or 122; or equivalent (40 hours/contact lectures).

**SPAN 128 Practicum in Spanish II (4)**

Practicum in the Spanish language and culture in a total-immersion environment. Part of the total cost of tuition may include a trip to a Spanish-speaking country. Supervised experiences communicating with the Spanish-speaking population (behavioral and medical vocabulary included).

Prerequisite: SPAN 118 or 119 or 123; or equivalent.

**SPAN 201 Intermediate Spanish I (4)**

Prerequisite: SPAN 102.

**SPAN 202 Intermediate Spanish II (4)**

Reviews and continues SPAN 201. Uses an interactive, communicative approach in which students learn clinical and social vocabulary and are tested at the end of the quarter. Four clinical interviews in Spanish (recording and transcribing); 30-60 minutes of language laboratory; future, conditional, past subjunctive, conditional perfect, and compound tenses.

Prerequisite: SPAN 201 or equivalent.

**SPAN 430 Diversity in the Twenty-First Century (4)**

Discusses the philosophy of diversity, including language and culture, taking into account the larger group of immigrants to California—including the Latino and Asian perspective, as compared with the mainstream and the African American group. Explores practical and philosophical ways for promoting personal and social unity in diversity.

**SOCIAL POLICY****SPOL 554 Environment, Resources, and Development Policy (3)**

Provides an advanced interdisciplinary analysis of the sustainability framework in both urban and rural contexts of the developing and developed world. Policy issues of focus selected from: geoinformation science for development, biotechnology and genetic resources, poverty reduction and trade competitiveness, human health and disease, global environmental governance, natural hazards and disaster mitigation, and natural resource management issues such as agroforestry, drylands goods and services, mountain development, integrated water-resource management, and sustainable tourism. Seminar discussions enhanced with case studies, computer-simulation games, laboratory exercises, and student presentations.

Prerequisite: Permission of instructor.

**SPOL 614 Social Science Concepts and Theories (4)**

Team-taught course covering key theoretical concepts in the social sciences from the perspectives of economics, political science, anthropology, and sociology. Students read and discuss primary sources. Key concepts studied include: ideology, power and authority, democracy and bureaucracy, equality and inequality, alienation and anomie, language and culture, exchange and markets, conflict and control.

**SPOL 615 Economic Theory and Social Policy (4)**

Presents the basic ideas and concepts of macroeconomic theory and applies them to understanding current and recent developments in social policy. Student learns to evaluate macroeconomic conditions—such as unemployment, inflation, growth wages, and income distribution—and gain understanding of how such conditions impact the provision of health and human services.

**SPOL 624 Nature/Society Thought and Social Policy (4)**

Explores fundamental integrative theories and ideas that explore nature/society interactions and change—including key contributions from systems science, economics, sociology, demography, political science; as well as political, social, and cultural ecology. Focuses on learning how to assess the complex interactions between natural and built environments, technology, institutions, social groups and individuals, and value/ethical systems that shape the context for social-policy analysis and decision-making in a rapidly changing world. Emphasizes integrative habits of thought and practice that promote sustainable development both at the community and national/international levels from a Christian perspective. Considers a wide range of issues, such as population growth, food production, natural resources management, globalization and technology, energy policy, and socioeconomic restructuring and sustainable development planning.

**SPOL 654 Qualitative Research Methods (4)**

Advanced qualitative research methods. Key topics include: epistemology; conceptualization and theory building; research design—including case study, comparative case study, ethnography; data gathering—including interviewing, observation, archival and historical research; and data analysis and writing. Various coding and interpretive techniques—such as ethnomethodology—as well as contextual and discourse analysis.

**SPOL 655 Quantitative Research Methods (4)**

Advanced quantitative research methods. Emphasizes survey-research design and data analysis, and experimental and quasiexperimental design. Topics include questionnaire and item design, measurement, sampling designs, planning and management of a survey, logic of analysis, and problems of statistical interpretation. Introduces estimating techniques, social forecasting, analysis of time-series data, and structural equation modeling.

**SPOL 664 Applied Research for Social Policy (2)**

Provides students with a series of formal exercises simulating primary applied social research strategies used in the development of social policy. Explores the contributions of social research to social policy through studies of public records and data bases; clinical contexts; social experimentation; program planning, development, and evaluation; and action research.

**SPOL 665 Information Technology and Social Policy (4)**

Surveys key concepts and tools from information science; operations research; systems science; dynamic modeling; and visualization theory within the social, behavioral and natural sciences. Focuses on knowledge management in the public and private sector, i.e., design and application of decision-support tools; database creation and management; and communications tools for health, social welfare, public administration, sustainable development, and human services management. Includes computer laboratory experience both in class and on-line.

**SPOL 671 Research Orientation I (2)**

First quarter of a three-quarter sequence that introduces doctoral students to the research process, with emphasis on research-problem identification and formulation. Introduces student to the process of literature review using library tools for searching literature databases and other library skills. Students required to carry out a thorough literature review on a research question.

**SPOL 672 Research Orientation II (2)**

Introduces doctoral students to the research process, with emphasis on research-problem identification and formulation. Students continue their orientation with the study of theoretical models and conceptual frameworks. Students complete a series of required readings on the epistemology of theory construction in the social sciences and prepare a conceptual framework or theoretical model.

Prerequisite: SPOL 671.

**SPOL 673 Research Orientation III (2)**

Introduces doctoral students to the research process, with emphasis on research-problem identification and formulation. Students focus on writing and presenting a competent theory paper to seminar participants and doctoral program faculty. Paper includes a literature review, a theoretical framework, and a clearly described research problem. Satisfactory completion of this paper meets the theory paper requirement of the comprehensive examination.

Prerequisite: SPOL 671, 672.

**SPOL 681 Research Seminar I (2)**

First quarter of a three-quarter sequence. Introduces a wide variety of current research models and methodologies. Faculty and guest lecturers give students depth in various specialized research projects. Students prepare written responses to each lecture and present to the faculty the research problem and design for their research paper. Paper is a requirement of the comprehensive examination.

**SPOL 682 Research Seminar II (2)**

The steps of the research design. Focuses on data analysis, presentation, and interpretation. Students present the findings of their research to seminar participants and the doctoral program faculty.

Prerequisite: SPOL 681.

**SPOL 683 Research Seminar III (2)**

Focuses on writing and presenting a competent research paper to seminar participants and doctoral program faculty. Paper demonstrates competence in articulating a research question, formulating relevant hypotheses, identifying an appropriate research design, conducting analysis of the data, and presenting and discussing the findings. Satisfactory completion of this paper meets the research paper requirement of the comprehensive examination.

Prerequisite: SPOL 681, 682.

**SPOL 697 Research (4 or 8)**

Credit for dissertation research. Total of 24 credits required. May be repeated for credit.

**SPOL 699 Dissertation (12)**

Should be taken during the last quarter of registration prior to completion and defense.

**SPEECH-LANGUAGE PATHOLOGY AND AUDIOLOGY****SPPA 216 Deaf Bicultural Bilingual Development (2)**

Issues important to speech, language, and literacy development. Clinicianship that is sensitive to deaf culture. Course may not be taught every year.

**SPPA 217 Beginning Sign Language (3)**

Focuses on learning American Sign Language (ASL) for conversational purposes. Finger spelling, a sign vocabulary of approximately 500 words, and acquisition of the basic grammatical rules of ASL. ASL contrasted with the various sign systems currently being used in educational settings in this country.

**SPPA 276 Communication Across the Lifespan (4)**

Overview of language development and normal changes over the lifespan. Development of language from infancy to adolescence, and the effects of aging on communication. Includes study of hearing.

**SPPA 284 Introduction to Speech-Language Pathology and Audiology (3)**

Major types of disorders. Etiology and treatment. Survey course for students majoring in speech-language pathology and audiology, prospective teachers, and others who may encounter speech-language or hearing disorders in their professions.

**SPPA 304 Hearing Science (4)**

Introduces basic theories and laboratory exercises in acoustics, psychoacoustics, and physiological acoustics.

**SPPA 314 Language Analysis for Speech-Language Pathology (4)**

Introduces techniques of linguistic analyses used in the study of phonology, morphology, syntax, and semantics.

**SPPA 317 Acoustic and Physiological Phonetics (2)**

Acoustic and physiological correlates of speech-sound production.

**SPPA 318 Transcription Phonetics (3)**

Student develops transcription skills using the International Phonetic Alphabet.

**SPPA 324 Language Disorders of Children (4)**

Impairments of language development in children. Formal and informal assessment of children. Program planning and remediation procedures.

Prerequisite: SPPA 276.

**SPPA 334 Phonological and Articulation Disorders (4)**

Definition, classification, etiology, diagnosis, and treatment of phonological/articulation disorders.

Prerequisite: SPPA 318.

**SPPA 375 Assistive Technology (2)**

Introduces the development and use of assistive technology. Use of assistive technology for individuals in need of augmentative or alternative means of communication.

**SPPA 376 Anatomy of Speech-Hearing Mechanism (4)**

Anatomy and physiology of auditory-vocal communicative process.

**SPPA 377 Bilingualism and Biculturalism I (2)**

Explores theories and issues of bilingualism and biculturalism, introducing the literature that gives insights into the experiences and achievements of minority college students and young adults. Opportunities given to examine students' own identity and competence when faced with another culture or language. Critiques the efficacy of various bilingual/dual language education practices based on psycholinguistic models.

**SPPA 424 Adult Language Pathology (4)**

Impairment of language and speech related to organic neuropathology.

Prerequisite: SPPA 376.

**SPPA 426 Behavior Management Applications with Special Populations (2)**

Addresses the principles of behavior modification and discrete-trials training as they apply to persons with autism, developmental delays, congenital syndromes, and attention deficit hyperactivity disorders.

**SPPA 434 Disorders of Fluency (2)**

Characteristics, theories of etiology, and principles of management of stuttering and other fluency disorders.

**SPPA 435 Voice Disorders (2)**

Definition, classification, etiology, diagnosis, and treatment of voice disorders. Pitch, intensity, quality, and resonance.

Prerequisite: SPPA 376.

**SPPA 444 Organic Speech Disorders (4)**

Introduces the classification, cause, manifestations, assessment, and treatment of craniofacial disorders/cleft palate, tongue thrust, dysarthria, apraxia of speech, and dysphagia.

Prerequisite: SPPA 376.

**SPPA 445 Techniques for ESL and Accent Modification (2)**

Principles and procedures for teaching English as a second language (ESL) and accent modification to bilingual speakers of English.

**SPPA 454 Hearing Problems and Basic Audiometry (4)**

Anatomy and physiology of the auditory mechanism. Nature of the acoustic stimulus, disorders of the ear, problems of the hard-of-hearing. Pure-tone audiometry. Applicable toward California audiometric certification.

**SPPA 467 Speech-Language Pathology and Audiology Practicum (1-4)**

Supervised practice in diagnosis and therapy.

Prerequisite: SPPA 324, 334, 485, 486.

**SPPA 477 Bilingualism and Biculturalism II (2)**

Addresses the clinical competencies and cultural sensitivity needed in dealing with bicultural and bilingual clients. Discusses the impact of such knowledge on assessment and intervention.

**SPPA 485 Procedures and Materials in Speech Pathology (4)**

Principles and procedures of speech-language therapy within and across disorders. Methods of determining treatment effectiveness. Regulations governing public school services.

**SPPA 486 Diagnostic Methods in Speech-Language Pathology (4)**

Purposes for assessment. Procedures employed in describing and diagnosing speech-language impairments.

Prerequisite: SPPA 318, 324, 334.

**SPPA 496 Workshops in Speech-Language Pathology and Audiology (1-4)**

May be repeated with new content for additional credit.

**SPPA 499 Speech-Language Pathology and Audiology Independent Study (1-2)**

Student submits a project or paper on a topic of current interest in an area related to speech-language pathology and audiology. Regular meetings to provide the student with guidance and evaluation. Elected on the basis of need or interest.

**SPPA 523 Early-Childhood Language Disorders (3)**

Lectures and discussions dealing with principles and procedures in assessment and interventions of language disorders in children. Specific emphasis on early-language learners (birth to 3 years). Conferencing, report writing, and goal writing.

**SPPA 525 Preschool and School-Age Child Language Disorders (3)**

Lectures and discussions dealing with principles and procedures of assessment and intervention of preschool primary, and adolescent school-age child with language disorders. Emphasizes school-age learning in the areas of semantics, syntax, pragmatics, narrative, and phonological awareness. Language disorders in autism and mental retardation addressed.

**SPPA 535 Voice Disorders (3)**

Discusses diagnosis and intervention techniques used with children and adults displaying a variety of voice disorders. Includes demonstration and operation of instrumentation used for physiological and acoustic analysis of abnormal voice production.

**SPPA 554 Swallowing Disorders (3)**

Lecture and discussion of the speech-language pathologist's role in the diagnosis and treatment of swallowing disorders in children and adults. Addresses ethical and cultural issues. Emphasizes analysis of current literature and clinical applications. Selected laboratory experiences.

**SPPA 564 Auditory Rehabilitation and Hearing Aids (3)**

Studies the mechanisms for achieving hearing rehabilitation—including amplification, speech reading, auditory training, hearing-aid orientation, and speech conservation. Considers hearing-aid function and philosophies of rehabilitation for the hearing impaired (e.g., auditory, aural, manual, and total communication).

**SPPA 567 Clinical Practice in Speech-Language Pathology and Audiology, Advanced (1)**

Supervised practice in diagnosis and therapy.

**SPPA 568 Clinical Practice in Speech-Language Pathology Diagnostics (1-3)**

Supervised practice in diagnostics. Studies the principles of diagnostics applicable to communication.

**SPPA 575 Instrumentation in Speech and Hearing (1)**

Lecture, discussion, and laboratory experience in the areas of speech acoustics, speech production and perception, psychoacoustics, and speech and hearing physiology.

**SPPA 585 Professional Aspects of Speech-Language Pathology—Portfolio Development (3)**

Studies the ethical, business, and legal considerations in organizing and administering programs: accountability; record keeping; case selection; case load; supervision; staffing; budgeting; and interagency cooperation in schools, clinics, and private practice.

**SPPA 587 Counseling in Communication Disorders (3)**

Explores the counseling role of the speech-language pathologist and identifies clinician responsibilities in working with individuals of different cultures, ethnicity, gender, age, and belief systems.

**SPPA 588 Directed Teaching in Speech-Language Pathology (3)**

Supervised therapy on the elementary and/or secondary level and/or in a classroom for the severely language-handicapped child. (No more than 6 units of clinical practicum applicable toward the master's degree, including directed teaching.)

**SPPA 596 Workshop in Speech-Language Pathology/Audiology (1-4)**

May be repeated with new content for additional credit.

**SPPA 597 Externship in Speech-Language Pathology (2-4)**

Supervised clinical practice in a medical center, rehabilitation facility, or skilled-nursing facility. (No more than 6 units of clinical practicum applicable toward the master's degree, including directed teaching.)

**SPPA 598 Research Methods and Professional Literature in Speech-Language Pathology (2)**

Lecture and discussion designed to facilitate the student's ability to read and interpret professional literature, develop research ideas, and develop professional writing skills.

**SPPA 679 Seminar: Motor Speech Disorders/Augmentative Communication (3)****SPPA 682 Seminar: Traumatic Brain Injury (3)**

Explores pathophysiology, diagnosis, and rehabilitation of cognitive communication disorders in children and adults with traumatic closed-head injuries. Lecture and discussion format emphasizes reading current professional literature and developing skills in formal and informal assessment and functional treatment.

**SPPA 684 Seminar: Adult Language Disorders (3)****SPPA 685 Seminar: Stuttering (3)****SPPA 687 Seminar: Open Seminar (1-3)****SPPA 688 Seminar: Articulation (3)****SPPA 697 Research (1-4)****SPPA 698 Thesis (1-6)****SPPA 699 Directed Study (1-3)**

Independent study on a research project selected in consultation with the adviser. For advanced students. May be repeated once. Student's transcript will show specific area of study, for example: SPPA 699 Directed Study—Adult Language Disorders.

**STATISTICS****STAT 414 Introduction to Biostatistics I (3)**

Fundamental procedures in collecting, summarizing, presenting, analyzing, and interpreting data. Measures of central tendency and variation. Investigates binomial and normal probability distributions. Topics include: probability; confidence intervals; and hypothesis testing using t-tests, chi-square, correlation, and regression. Briefly introduces ANOVA and multivariate analysis. Emphasizes practical application. Laboratory use of the personal computer in statistical problem solving.

Prerequisite: Competency in algebra.

Corequisite: STAT 415.

**STAT 415 Computer Applications in Biostatistics (1)**

Laboratory use of the personal computer in statistical problem solving.

Prerequisite or Concurrent: STAT 414 or equivalent.

**STAT 416 Introduction to Biostatistics II (4)**

Continues STAT 414, including a more in-depth examination of hypothesis testing, power, and sample size. One-way analysis of variance. Introduces nonparametric analysis. Additional experience in evaluating bioresearch literature.

Prerequisite: STAT 414, 415.

**STAT 417 Biomedical Data Management I (4)**

Software designed for data collection, entry, and management. Develops skills in the use of relational databases and spreadsheets.

Corequisite: STAT 416.

**STAT 418 Biomedical Data Management II (4)**

Student designs questionnaires and data-abstraction forms. Data collection, entry, and verification. Data cleaning.

Prerequisite: STAT 417.

**STAT 419 Biomedical Data Management III (4)**

Deployment and maintenance of client/server databases in a research/health care setting.

Prerequisite: STAT 418.

**STAT 421 Data Presentation (3)**

Student summarizes and presents biomedical research data. Explores several application-software packages for graphing, summarizing, and presenting data explored.

Prerequisite: STAT 419.

**STAT 439 Fundamentals of Microcomputer Usage (1)**

Fundamental principles of microcomputer use. Introduces DOS and Windows commands and features. Lectures and in-class demonstrations emphasizing how to create, organize, manage, and protect files on diskettes and hard disks. Laboratory homework required. Not applicable toward a graduate degree in the School of Public Health.

**STAT 441 Word Processing Fundamentals (1)**

Word processing principles and practice featuring current version of Word Perfect. Laboratory homework required. Not applicable toward a graduate degree in the School of Public Health.

Prerequisite: STAT 439.

**STAT 443 Database Fundamentals (1)**

Database principles and practice featuring current version of FoxPRO. Laboratory homework required.

Prerequisite: College algebra.

**STAT 448 Analytical Applications of SAS (3)**

Features of SAS computer package for analysis of statistical data. Decisions regarding choice of statistical procedures and interpretation of computer output to answer specific research questions.

Cross-listing: STAT 548.

Prerequisite: STAT 439 or a passing score on the computer-competency examination and a previous or concurrent statistical course.

**STAT 449 Analytical Applications of SPSS (3)**

Familiarizes student with features of the SPSS computer package for analysis of statistical data. Includes decisions regarding choice of statistical procedures and interpretation of computer output to answer specific research questions.

Cross-listing: STAT 549.

Prerequisite: Passing score on the computer competency examination.

Prerequisite or Concurrent: STAT 439 or 414.

**STAT 464 Survey and Advanced Research Methods (4)**

Principles and procedures of surveys as applied to the health sciences. Survey and research designs, questionnaire construction, interviewing techniques, sampling techniques, sample-size determination, nonresponse problems. Data collection, coding, processing, and evaluation. Presentation of results. Practical experience gained by completing a survey project.

Cross-listing: STAT 564.

Prerequisite: STAT 414, 415.

**STAT 468 Data Analysis (4)**

Concepts and applications of the most common data-analysis methods: correlation and regression, contingency tables, t-tests, analysis of variance, nonparametric methods, and multivariate analyses. Selection of appropriate method of analysis and reporting results. Emphasizes individual analysis of real-data sets. Lecture-demonstrations and laboratory work. Data analysis assignments to be completed in SPSS.

Cross-listing: STAT 568.

Prerequisite: STAT 414, 415; STAT 448 or 449.

**STAT 498 Senior Project (5)**

Under faculty direction, student participates in on-the-job experience in data collection, management, and presentation. Requires written summary and oral presentation.

**STAT 499 Directed Study/Special Project (1-4)**

Individual arrangements for undergraduate, upper-division students to study under the guidance of a program faculty member. May include readings, literature review, or other special projects. Minimum of thirty hours required for each unit of credit. Maximum of 4 units applicable to any undergraduate degree program.

**STAT 509 General Statistics (4)**

Fundamental procedures of collecting, summarizing, presenting, analyzing, and interpreting data. Sampling, measures of central tendency and variation, probability, normal distribution, sampling distribution and standard error, confidence intervals, hypothesis testing, t-test, chi-square, and correlation. Interpretation of computer output for solution of statistical problems. Use and application of the computer to conduct analyses using a statistical package.

Prerequisite: Mathematics competency examination.

**STAT 514 Intermediate Statistics for Health-Science Data (3)**

Selected topics in ANOVA, multiple regression, logistic regression, ANCOVA, nonparametric tests, survival and analysis, and meta-analysis. Emphasizes understanding selection and application of statistical procedures and interpretation of computer output.

Prerequisite: STAT 549.

**STAT 515 Grant- and Contract-Proposal Writing (3)**

Basic grantsmanship skills, sources of funding information, use of a prospectus, and preparation of a competitive proposal for grants and contracts. Applies aspects of research design, objectives and methodology, data management, evaluation, budget development, and peer-review procedures to the preparation of an actual proposal.

**STAT 521 Biostatistics I (4)**

Fundamental procedures of collecting, tabulating, and presenting data. Measures of central tendency and variation, normal distribution, sampling, t-test, confidence intervals, chi-square, correlation, and regression. Emphasis on statistical inference.

Prerequisite: Consent of instructor.

Prerequisite or Concurrent: STAT 548 or 549.

**STAT 522 Biostatistics II (4)**

Analysis of variance (fixed-effects model S) with multiple comparisons, including orthogonal contrasts, factorial designs, analysis of covariance, multiple and partial correlation, log transformations, and polynomial regression. Power analysis and sample-size determination for these models.

Prerequisite: STAT 521.

**STAT 523 Biostatistics III (4)**

Applies the general linear model to a number of analysis-of-variance, regression, and multivariate procedures, including repeated measures and mixed models. Power and sample-size determination of these models. Research-design issues. Computer implementation.

Prerequisite: STAT 522.

**STAT 525 Applied Multivariate Analysis (3)**

Multivariate normal distribution, discriminant analysis, principal-components analysis, factor analysis, and canonical correlation. Emphasizes application of these analyses and interpretation of results.

Prerequisite: STAT 522.

**STAT 534 Quantitative Data Presentation (3)**

Quantitative data summaries and presentation. Uses selected software programs for graphing, summarizing, and presenting data.

**STAT 535 Introduction to Nonparametric Statistics (3)**

Includes application and theory of nonparametric methods for analysis of nominal and ordinal data and distribution-free tests, including rank tests for matched and independent samples, chi-square and goodness-of-fit tests, McNemar's test, rank correlation, k-sample tests, randomizations tests, Komogorov-Smirnov statistics.

Prerequisite: STAT 509 or 521.

**STAT 538 Probability and Statistical Theory I (3)**

Statistical regularity, probability spaces. Fundamental theorems in discrete probability. Bayes' Theorem. Random variables, densities, and distribution functions.

Prerequisite: STAT 521.

**STAT 539 Probability and Statistical Theory II (3)**

Continuous distributions. Transformations of random variables. Central-limit theorem. Distributions of sample statistics. Statistical inference, estimation, hypothesis testing, chi-square tests. Correlation.

Prerequisite: STAT 521, 538.

**STAT 545 Survival Analysis (3)**

Statistical methods for analysis of survival data. Censoring mechanisms. Concepts of failure rates and different classes of life distributions under parametric and nonparametric settings. Statistical properties of competing survival-functions estimators. Kaplan-Meier estimator, piecewise exponential estimator, and other equivalent estimators. Cox proportional hazard model and associated statistical inferences.

Prerequisite: STAT 522.

**STAT 548 Analytical Applications of SAS (4)**

Features of SAS computer package for analysis of statistical data. Includes decisions regarding choice of statistical procedures and interpretation of computer output to answer specific research questions.

Cross-listing: STAT 448.

Prerequisite: STAT 439 or passing score on the computer-competency examination.

Prerequisite or Concurrent: STAT 509 or 521.

**STAT 549 Analytical Applications of SPSS (2)**

Features of SPSS computer package for analysis of statistical data. Includes decisions regarding choice of statistical procedures and interpretation of computer output to answer specific research questions.

Cross-listing: STAT 449.

Prerequisite: STAT 439; 509 or 521; or passing score on the computer-competency examination.

**STAT 557 Research Data Management (2 or 3)**

Basic data and file manipulation using database-management systems for health research. Uses several applications, with emphasis on Microsoft Access. Topics include: importing, exporting, merging, and linking files for a variety of applications; creating, updating, and querying databases; and basic programming, application development, and data entry.

Prerequisite: For 3 units—STAT 509 or 521; 548 or 549. For 2-3 units—general computer skills expected, but no prior computer programming experience necessary.

**STAT 558 Advanced Statistical Packages (3)**

Computer applications to advanced statistical procedures using SAS, SPSS, and other statistical software. Advanced techniques facilitating statistical analysis useful to biostatisticians, epidemiologists, health planners, and others transferring data files between software packages, combining and matching files, modifying data, and creating graphical presentations of data.

Prerequisite: STAT 548 or 549, 521, 522.

**STAT 564 Survey and Advanced Research Methods (3)**

Principles and procedures of surveys as applied to the health sciences. Topics covered include: survey and research designs, questionnaire construction, validity techniques, sampling methods, sample-size determination, nonresponse problems, data collection, coding, processing, evaluation, and presentation of results. Hands-on experience presented as a combination of lecture and laboratory activities.

Cross-listing: STAT 464.

Prerequisite or Concurrent: STAT 509 or 521.

**STAT 568 Data Analysis (3)**

Concepts and applications of the most common data-analysis methods: correlation and regression, contingency tables, t-tests, analysis-of-variance, nonparametric methods, and multivariate analyses. Student selects appropriate method of analysis and reporting results. Emphasizes individual analysis of real-data sets. Lecture-demonstrations and laboratory work. All data-analysis assignments to be completed in SPSS.

Cross-listing: STAT 468.

Prerequisite: STAT 509 or 521; 548 or 549.

**STAT 569 Advanced Data Analysis (3)**

Brings together other biostatistics courses in a unified, applied approach. Specifically provides practical experience with real-world biostatistical data, using a wide variety of statistical procedures—including general linear models, generalized linear models, and nonparametric alternatives. Includes guidelines for choosing statistical procedures, model building, validation, and written presentation of results.

**STAT 594 Statistical Consulting (1-4)**

Advanced students participate in statistical consultation with senior staff members. Statement of the problem, design of the experiment, definition of response variables, appropriate analysis of data, statistical inferences, and interpretation of data.

Prerequisite: Consent of instructor.

**STAT 605 Seminar in Biostatistics (1)**

Presents and discusses area of interest. Individual research and report.

**STAT 692 Research Consultation (1-8)**

Individual advice on project design, data collection, analysis, and evaluation.

Prerequisite: Consent of instructor.

**STAT 694 Research (1-14)**

Independent research. Research program arranged with faculty member(s) involved. Written report and oral presentation required.

Prerequisite: Consent of instructor responsible for supervision and of academic adviser.

**STAT 695 Thesis (2-8)**

Student prepares report of individual guided experimental research study in biostatistics, under direct faculty supervision. Limited to graduate students whose thesis projects have been approved by their research committee.

**STAT 696 Directed Study/Special Project (1-4)**

Individual arrangements for advanced students to study under the guidance of a program faculty member. May include readings, literature reviews, or other special projects. Minimum of thirty hours required for each unit of credit. Maximum of 4 units applicable to any master's degree program.

Prerequisite: Consent of instructor responsible for supervision and of program adviser.

**SURGERY****SURG 599 Surgery Directed Study (1.5–18)****SURG 701 Surgery Clerkship (1.5–18)**

Includes one week on each service: anesthesiology, emergency medicine, neurosurgery, otolaryngology, ophthalmology, orthopaedic surgery, plastic surgery, and urology; and one month of general surgery.

**SURG 791 Surgery Third Year Elective (3)**

A two-week elective in the third year of medicine.

**SURG 821 Surgery Clerkship (60 to 240 hours)**

A subinternship in surgery in which the student performs in the intern's role as part of a team in the clinical care of surgical patients. Subinterns expected to take responsibility for the daily care of individual patients, to practice procedural skills, and to assist and participate in surgical procedures at a level appropriate to their training. Subinterns participate in overnight in-house calls, and respond to in-house emergencies and requests for routine consultations and for evaluation of patients in the emergency department. Duty hours and hours of responsibility for night call will not exceed the guidelines set for the junior house staff by the respective institutions where rotations occur and by the guidelines set forth for medical students on surgery.

**SURG 822 Surgery ICU (120 hours)**

Includes two-week service on a surgical intensive-care unit.

Prerequisite: SURG 701.

**SURG 891 Surgery Elective (60 to 720 hours)**

May include pediatric surgery, vascular surgery, trauma surgery, general surgery, cardiothoracic surgery, plastic surgery, neurosurgery, otolaryngology, surgical intensive care, and urology.

**UROLOGY****UROL 891 Urology Elective (60 to 720 hours)****WRITING****WRIT 077 Basic Writing I (2)**

Instruction in grammar, sentence structure, and vocabulary usage.

**WRIT 084 Guerilla Grammar (1)**

Polishes and fine-tunes writing fluency by building on grammar and punctuation basics for immediate results. A user-friendly, laser-focused, light-hearted format that enlightens student in the mechanics of written English. Highly recommended to meet ESL needs.

**WRIT 117 Writing I (2)**

Basic writing techniques essential for academic success, developed in three major areas: understanding of concepts within writing; understanding and following the overall writing process; and building specific grammar skills on a conceptual framework of language structure. Course develops specific skills: building vocabulary; spelling; understanding the special and peculiar words, idioms, and expressions of American culture; building sentences; structuring paragraphs; organizing content; creating logical arguments; and clarifying thoughts (writing what the student means to express). Emphasizes correct use of punctuation, capitalization, and the general mechanics of writing.

**WRIT 317 Writing II (2)**

Advanced writing. Combines creative and affective procedures (visualization skills, music, the visual arts) in a proactive, lateral-thinking process to enrich traditional academic/logical/cognitive learning approaches and to develop highly conceptual, high-level critical-thinking/cognitive skills essential for successful academic writing. Skills include: preplanning techniques; organizing, prioritizing, and structuring ideas; revising and editing; using a consistent personal style; citing sources with correct footnote and bibliographic content and format; applying metalingual understanding to grammar, English language concepts, and English metaphors. Applies these skills to quality writing of expository compositions, assignments, projects, clinical reports, observation reports, and case studies.

**WRIT 319 Writing for Health Professionals—Short Course (1)**

A truncated version of WRIT 317 that includes the basics of genre structure, language structure, prewriting techniques, and self-editing techniques. Emphasizes development of logic through argument and causal factors for purposes of writing clear reports, literature reviews, and research essays. Incorporates basic strategies for reducing writer's block.

**WRIT 417 Writing III: Research Writing (2)**

Advanced technical writing. Provides advanced skills for technical/scientific writing of research assignments, major projects, clinical reports, observation reports, case studies, etc. Highly conceptual writing combines technical skills with creative/critical-thinking skills. Combines traditional cognitive learning with enriching affective learning styles and methods. Specific skills include: prewriting techniques; organizing, prioritizing, and structuring of ideas; revising and editing; correct annotation style (e.g., APA, MLA, etc.); and applying metalingual understanding to grammar and English language concepts.

**WRIT 418 Writing IV: Business Writing (2)****WRIT 425 Critical Thinking and Writing (1)**

Assists and guides students through the writing process of drafting an orderly, coherent, and acceptable final modality position paper, thesis statement, dissertation abstract, and/or dissertation proposal. A straightforward, intensive, accelerated teaching and learning approach to scholarly writing. Approaches writing as a critical, creative-thinking process. Taught in sections, according to students' needs as s/he learns by working on his/her own project.

**WRIT 451 Writing for Publication I (2)**

Focuses on producing writing that leads to publication. Emphasizes individual writing processes, revision strategies, and polishing drafts prior to sending out for publication. Open to faculty and others by permission of instructor.

**WRIT 452 Writing for Publication II (2)**

Focuses on producing writing that leads to publication. Emphasizes individual writing processes, revision strategies, and polishing drafts prior to sending out for publication. Open to faculty and others by permission of instructor.

Prerequisite: WRIT 451.

**WRIT 453 Writing for Publication III (2)**

Focuses on producing writing that leads to publication. Emphasizes individual writing processes, revision strategies, and polishing drafts prior to sending out for publication. Open to faculty and others by permission of instructor.

Prerequisite: WRIT 452.

**WRIT 486 New Graduate's Guide to Resumes, CVs, and Cover Letters (.5)**

Takes an in-depth look at the anatomy of a resume and CV, and explains how they differ. Discusses what makes a good cover letter, and how cover letters can undermine even the best resume or CV. Discusses the latest on computerized resume scanning, including a hands-on, roundtable tutorial to create, edit, or revitalize one's personal resume, CV, or cover letter.

**WRIT 499 Directed Study (1-4)**

Provides graduate students the opportunity to pursue advanced study under the guidance and tutelage of a faculty member in an area related to their graduate study and relevant to their writing skills and needs. Students design an individualized program in professional writing. The developed study program may include attending specified classes, library research, relevant literature review, or interviews and discussions with resource persons who have the expertise in the desired specialty area.

# VI

## THE FACULTY



**Key to Codes**

In the alphabetical listing that follows, the two-letter code following the department name indicates the school or faculty in which the faculty member holds academic appointment. The two-letter symbols are:

AH	School of Allied Health Professions
PH	Public Health
SD	School of Dentistry
SM	School of Medicine
SN	School of Nursing
ST	School of Science and Technology
GS	Faculty of Graduate Studies
FR	Faculty of Religion

- ABBATE, MATTY FRANCIS. Professor, Department of Restorative Dentistry SD  
D.D.S. University of California at San Francisco 1958
- ABBEY, DAVID E. Professor, Department of Preventive Medicine SM  
Ph.D. University of California at Los Angeles 1972
- ABBOUD, CARLOS S. Instructor, Department of Periodontics SD  
D.M.D. University of Louisville 1993
- ABBOY, RAMADAS. Assistant Clinical Professor, Department of Medicine SM  
M.B.B.S. Stanley Medical College (India) 1967
- ABD-ALLAH, SHAMEL A. Associate Professor, Department of Pediatrics SM; Assistant Professor, Department of Emergency Medicine SM  
M.D. Loyola Stritch Medical School 1989
- ABDOLLAHI, KARIM. Assistant Clinical Professor, Department of Orthopedic Surgery SM  
M.D. University of Health Sciences, Chicago Medical School 1990
- ABEDI, HAMID REZA. Assistant Professor, Department of Endodontics SD  
B.D.S. Royal London Hospital 1991
- ABIDIN, CAROL J. Clinical Instructor, Department of Nutrition PH  
B.S. California State Polytechnic University 1991
- ABOGADO, ELVA J. Clinical Instructor, SN  
B.S.N. California State University at Dominguez Hills 1998  
M.H.A. California State University at San Bernardino 2000
- ABOU-ZAMZAM, AHMED MOHAMMED, JR.  
Associate Professor, Department of Surgery SM  
M.D. Yale University School of Medicine 1992
- ABU-ASSAL, MAGED L. Assistant Clinical Professor, Department of Surgery SM  
M.D. Loma Linda University SM 1982
- ACOSTA, ABRAHAM A. Assistant Professor, Department of Health Promotion and Education PH  
M.D. Cartagena University (Colombia) 1980  
M.P.H. Loma Linda University PH 1989
- ADAMICH, THOMAS S. Assistant Professor, Department of Periodontics SD  
D.D.S. Case Western Reserve University 1983
- ADAMS, JANE E. Assistant Professor, Department of Health Administration PH  
M.H.A. University of LaVerne 1991
- AFIFI, GHADA YOUSSEF. Assistant Clinical Professor, Department of Surgery SM  
M.D. Albany Medical College 1990
- AGARWAL, MADHU R. Assistant Professor, Department of Ophthalmology SM  
M.D. University of California at Los Angeles 1999
- AHMAD, BORHAAN S. Assistant Professor, Department of Pediatrics SM  
M.D. Kabul University 1981
- AHMAD, IMDAD. Assistant Professor, Department of Medicine SM  
M.B.B.S. University of the Punjabi 1969
- AIYAR, SHOBHA S. Assistant Professor, Department of Medicine SM  
M.B.B.S. Mahatma Gandhi Memorial Medical College 1989
- AKA, PAUL KOJI. Assistant Clinical Professor, Department of Surgery SM  
M.D. Loma Linda University SM 1986
- AKAMINE, SANDRA M. Clinical Instructor, Department of Ophthalmology SM  
O.D. Southern California College of Optometry 1989
- AKANLI, LEYLA. Assistant Professor, Department of Pediatrics SM  
M.D. I.U. Cerrahpasa 1982
- AKIN, MARIE-ROSE MINHTAM LEVAN. Adjunct Assistant Professor, Department of Pathology and Human Anatomy SM  
M.D. Indiana University SM 1981
- AL FAGIH, MOHAMMED RASHID. Adjunct Clinical Professor, Department of Cardiopulmonary Sciences AH  
M.B.Ch.B. Baghdad Medical College 1971

- AL-ARDAH, ALADDIN JAMAL. Assistant Professor, Department of Restorative Dentistry SD  
B.D.S. Jordan University of Science and Technology 1999
- ALBERT, JULIE C. Associate Professor, Department of Psychiatry SM  
D.S.W. University of Southern California 1978
- ALBERTSON STEWART R. Assistant Professor, Department of Health Administration PH  
J.D. Loyola University New Orleans Law School 2002
- ALCAIDE, JEFF G. Instructor, Department of Pediatric Dentistry SD  
D.D.S. Loma Linda University 2000 SD
- ALDANA, DANIEL H. Assistant Clinical Professor, Department of Pediatrics SM  
M.D. Yale University 1993
- ALEXANDER, WIL. Emeritus Professor, Faculty of Religion; Professor, Department of Family Medicine SM  
Ph.D. Michigan State University 1962  
M.Th. Edinburg University 1966
- ALIPOON, LAURA LYNN. Professor, Department of Radiation Technology AH  
Ed.D. La Sierra University 2001
- ALLANSON, ELIZABETH HEARN. Assistant Professor, University Libraries  
M.L.S. San Jose State University 1992
- ALLARD, MARTIN W. Professor, Department of Anesthesiology SM  
M.B.Ch.B. University of Capetown 1971
- ALOIA, ROLAND C. Clinical Professor, Department of Anesthesiology SM  
Ph.D. University of California at Riverside 1970
- ALSIP, ANDEE SHARON. Assistant Clinical Professor, School of Nursing SN  
M.S.N. California State University at Dominguez Hills 1991
- ALTMAN, ALAN F. Adjunct Assistant Professor, Department of Dental Education Services SD  
D.D.S. Loma Linda University SD 1982
- ALVAREZ, LOUIS R. Clinical Instructor, Department of Psychiatry SM  
M.D. Autonomous University of Guadalajara 1986
- ALVAREZ, RICARDO. Assistant Professor, Department of Restorative Dentistry SD  
D.D.S. Universidad Autonoma Baja California 1989
- ALVES, DANIEL. Assistant Professor, Department of Environmental and Occupational Health PH  
M.D. Loma Linda University SM  
M.P.H. Loma Linda University PH 1996
- AMAAR, YOUSEF G. Associate Research Professor, Department of Surgery SM  
Ph. D. Simon Fraser University (British Columbia, Canada) 1997
- AMINIKHARRAZI, TAHER. Clinical Instructor, Department of Restorative Dentistry SD  
D.M.D. Boston University 2001
- AMOS, RICHARD A. Assistant Clinical Professor, Department of Radiation Technology AH  
M.S. University of Birmingham 1994
- ANACAYA, MARGIE T. Assistant Professor, Department of Physical Medicine SM  
M.D. Loma Linda University SM 1999
- ANDERSON, DAVID L. Professor, Department of Dental Anesthesiology SD  
D.D.S. Loma Linda University SD 1970
- ANDERSON, DAVID V. Assistant Clinical Professor, Department of Orthopedic Surgery SM  
M.D. Michigan State University 1977
- ANDERSON, DENNIS K. Assistant Clinical Professor, Department of Surgery SM  
M.D. Loma Linda University SM 1966
- ANDERSON, DONALD LEE. Associate Professor, Department of Psychiatry SM  
M.D. Loma Linda University SM 1971
- ANDERSON, DONALD LYNN. Associate Professor, Department of Anesthesiology SM  
M.D. Loma Linda University SM 1973
- ANDERSON, NANCY J. Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1976
- ANDERSON, S. ERIC. Associate Professor, Department of Health Administration PH  
Ph.D. University of North Texas 1992
- ANDO, NAOKI. Adjunct Instructor, Department of Allied Health Studies AH  
M.A. Nagoya University (Japan) 1997
- ANDREASEN, TROY J. Assistant Clinical Professor, Department of Surgery SM  
M.D. University of Utah Medical School 1995
- ANDREIKO, CRAIG A. Assistant Professor, Department of Orthodontics SD  
D.D.S. Loma Linda University SD 1988
- ANDREWS, D. JEANNE. Associate Professor, Department of Pediatrics SM  
M.D. Loma Linda University SM 1950

- ANDREWS, JENNIFER. Adjunct Associate Professor, Department of Counseling and Family Science ST  
Ph.D. The Union Institute of Cincinnati 1989
- ANGELES, DANILYN MAG-AKAT. Assistant Clinical Professor, School of Nursing SN  
Ph.D. Loma Linda University GS 2000
- ANGELOV, NIKOLA. Assistant Professor, Department of Periodontics SD  
D.D.S. University of St. Cyril and Methodius 1993
- ANHOLM, J. MILFORD. Professor, Department of Orthodontics SD  
D.D.S. University of the Pacific 1946
- ANHOLM, JAMES D. Associate Professor, Department of Medicine SM  
D.D.S. Loma Linda University SD 1976
- AOYAGI, PAUL Y. Assistant Clinical Professor, Department of Family Medicine SM  
M.D. Loma Linda University SM 1973
- APPEL, JAMES ERIC. Assistant Professor, Department of Family Medicine SM  
M.D. Loma Linda University SM 2000
- APPLEGATE, PATRICIA JEAN. Associate Professor, Department of Medicine SM  
M.D. University of Southern California 1980
- APPLEGATE, RICHARD LEE II. Professor, Department of Anesthesiology SM  
M.D. Loma Linda University SM 1982
- APPLETON, CAROL J. MUTH. Assistant Professor, Department of Physical Therapy AH  
M.P.H. Loma Linda University PH 1974
- APPLETON, STANTON SHERWOOD. Professor, Department of Oral Diagnostic Radiology and Pathology SD  
D.D.S. Loma Linda University SD 1972  
M.P.H. Loma Linda University PH 1973
- APUY, HEIDI J. Instructor, Department of Pediatric Dentistry SD  
D.D.S. Loma Linda University SD 2005
- APUY, ROBERT C. Adjunct Assistant Professor, Department of Dental Education Services SD  
D.D.S. Loma Linda University SD 1978
- ARAKAKI, SHIGENOBU. Adjunct Assistant Professor, Department of Allied Health Studies AH  
D.Min. San Francisco Theological Seminary 1974
- ARAKAKI, TAKIKO N. Adjunct Assistant Professor, School of Nursing SN  
M.S.N Loma Linda University GS 1982
- ARANI, SIAVASH B. Assistant Professor, Department of Medicine SM  
M.D. Ross University School of Medicine 1999
- ARCHAMBEAU, JOHN O. Professor, Department of Radiation Medicine SM  
M.D. Stanford University School of Medicine 1955
- ARJOMANDY, BIJAN. Associate Professor, Department of Radiation Medicine SM  
Ph.D. University of Arizona 1990
- ARMIJO, JAVIER ALONSO. Assistant Clinical Professor, Department of Family Medicine SM  
M.D. University of California at Irvine 1991
- ARMSTRONG, DANIEL REID. Assistant Professor, Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1972
- ARMSTRONG, DARLENE A. Assistant Professor, Department of Dental Hygiene SD  
M.A. Azusa Pacific University 2005
- ARNETT, WILLIAM G. Assistant Professor, Department of Orthodontics SD  
D.D.S. University of Southern California 1972
- ARNETT, R. LESLIE, JR. Associate Professor, Department of Periodontics SD  
D.D.S. University of Southern California 1959  
M.S.N Loma Linda University GS 1968
- ARNOTT, TIMOTHY J. Adjunct Assistant Professor, Department of Preventive Medicine SM  
M.D. Loma Linda University SM 1990
- ASAI, YUJI. Adjunct Assistant Professor, Department of Allied Health Studies AH  
B.S. National Institution for Academics 2000
- ASHLEY, EDD J. Professor, Department of Physical Therapy AH  
Ed.D. Boston University 1971
- ASHWAL, STEPHEN. Distinguished Professor, Department of Pediatrics SM  
M.D. New York University 1970
- ASK, MIHRAN N. Assistant Professor, Department of Medicine SM, Department of Preventive Medicine SM, and Department of Health Promotion and Education PH  
M.D. Loma Linda University SM 1979
- ATHISON, MARVIN J. Assistant Clinical Professor, Department of Surgery SM  
M.D. Loma Linda University SM 1998
- ATKIN, ROY D. Assistant Professor, Department of Orthodontics SD  
D.D.S. Marquette University 1966

- ATKINS, GORDON J. Adjunct Assistant Professor,  
Department of Earth and Biological  
Sciences ST  
Ph.D. McGill University 1987
- AUNE-NELSON BETH. Clinical Instructor,  
Occupational Therapy AH  
B.S. Loma Linda University AH 1998
- AUSTIN, BRUCE T. Assistant Professor,  
Department of Radiology SM  
Ph.D. University of Iowa 1973
- AUSTIN, CRAIG EUGENE. Clinical Instructor,  
Department of Clinical Laboratory Science  
AH  
B.S. Loma Linda University AH 1983
- AVANTS, TERESA PFIEFLE. Assistant Clinical  
Professor, Department of Gynecology and  
Obstetrics SM  
M.D. Loma Linda University SM 1984
- AVELING, D. LEIGH. Adjunct Assistant  
Professor, Faculty of Religion FR  
D.Min. Claremont School of Theology 1996
- AVILA, KAROLE S. Assistant Professor,  
Department of Psychiatry SM  
M.D. Albany Medical College 1978
- AVINA, ROBERT L. Assistant Professor,  
Department of Family Medicine SM  
M.D. University of California at San Diego  
1977
- AYYOUB, BASHAR S. Instructor, Department of  
Restorative Dentistry SD  
B.D.S. Jordan University of Science and  
Technology 2002
- AZER, SHERIF A. Associate Professor,  
Department of Anesthesiology SM  
M.D. Assuit University Faculty of Medicine  
1972
- BACKSTROM-GONZALES, MELISSA  
KATHERINE. Clinical Instructor,  
Department of Speech-Language Pathology  
and Audiology AH  
M.S. University of Redlands 1987
- BADA, MARCELO VILLALOBOS. Assistant  
Professor, Department of Restorative  
Dentistry SD  
D.D.S. Loma Linda University SD 2004
- BAE, MOON SOON. Assistant Professor,  
Department of Physical Medicine SM  
M.D. Medical School of Ewha Women's  
University 1965
- BAE, WON-CHUL. Assistant Professor,  
Department of Radiology SM  
M.D. Medical College, Busan National  
University 1963
- BAEK, HESUK H. Instructor, Department of  
Medicine SM  
M.D. Medical College of Georgia 2000
- BAERG, JOANNE E. Assistant Professor,  
Department of Surgery SM and Department  
of Pediatrics SM  
M.D. University of British Columbia 1990
- BAEZ, MERCEDES. Adjunct Assistant Professor,  
Department of Health Promotion and  
Education PH  
M.P.H. Universidad de Chile 1959
- BAILEY, DONALD WILLIAM. Assistant Professor,  
Department of Restorative Dentistry SD  
D.D.S. University of Maryland SD 1970
- BAILEY, LEONARD L. Professor, Department of  
Surgery SM  
M.D. Loma Linda University SM 1969
- BAKER, CAROL S. Assistant Clinical Professor,  
Department of Nutrition and Dietetics AH  
M.S. Loma Linda University GS 1983  
M.B.A. University of Redlands 2002
- BAKER, SUSAN M. Assistant Professor,  
Department of Physical Therapy AH  
D.P.T.Sc. Loma Linda University AH 1999
- BAKLAND, LEIF KRISTIAN. Professor,  
Department of Endodontics SD  
D.D.S. Loma Linda University SD 1963
- BALAGOPALAN, MOHAN. Clinical Instructor,  
Department of Environmental and  
Occupational Health PH  
M.B.A. Azusa Pacific University 1984
- BALASUBRANANIAM, KUMARAVELU. Associate  
Clinical Professor, Department of Medicine  
SM  
M.B.B.S. Madras Medical College 1973
- BALDWIN, DALTON D. Associate Professor,  
Department of Surgery SM  
M.D. Loma Linda University SM 1991
- BALGUMA, FREDDIE B. Associate Clinical  
Professor, Department of Pediatrics SM  
M.D. University of Santo Tomas 1962
- BALLI, KEVIN C. Assistant Professor,  
Department of Gynecology and Obstetrics  
SM  
M.D. Loma Linda University SM 1998
- BANGASSER, RONALD P. Assistant Clinical  
Professor, Department of Family Medicine  
SM  
M.D. Chicago Medical School 1975
- BANSAL, DALJEET BHATA. Assistant Professor,  
Department of Medicine SM  
M.D. Delhi University 1968

- BANSAL, RAMESH C. Professor, Department of  
Medicine SM  
M.B.B.S. All India Institute of Medical Sciences  
1972
- BANTA, JIMMIE E., JR. Assistant Professor,  
Department of Health Administration PH  
Ph.D. University of California at Los Angeles  
2004
- BARCEGA, BESH R. Assistant Professor,  
Department of Emergency Medicine SM  
and Department of Pediatrics SM  
M.D. Loma Linda University SM 1990
- BARKER, GARY R. Assistant Professor,  
Department of Surgery SM  
M.D. Loma Linda University SM 1980
- BARNES, DONALD T. Assistant Professor,  
Department of Radiology SM  
M.D. Howard University 1971
- BARNHART, DIANE L. Clinical Instructor,  
Department of Nutrition PH  
B.S. Loma Linda University PH 1982
- BARON, PEDRO W. Associate Professor,  
Department of Surgery SM  
M.D. University of Antioquia School of  
Medicine 1977
- BARRERA, MARCO. Clinical Instructor,  
Department of Ophthalmology SM  
M.D. Montemorelos University 1995
- BARTON, LORAYNE. Adjunct Associate  
Professor, Department of Health Promotion  
and Education PH  
M.D. University of California at Irvine 1996  
M.P.H. Loma Linda University PH 2000
- BARTOS, REBEKAH. Instructor, Department of  
Medicine SM  
M.S.N. Azusa Pacific 2001
- BASTA, SAEDA H. Assistant Professor,  
Department of Restorative Dentistry SD  
D.D.S. Damascus University Dental School  
1994
- BASTIDAS, J. AUGUSTO. Adjunct Professor,  
Department of Surgery SM  
M.D. University of Cincinnati 1985
- BATESOLE, MARK KENNETH. Assistant  
Professor, Department of Orthodontics SD  
D.D.S. University of Southern California 1998
- BAUGH, WILSON B., JR. Assistant Professor,  
Department of Oral and Maxillofacial  
Surgery SD  
D.D.S. University of Southern California 1981
- BAUM, MARTI F. Assistant Professor, Department  
of Pediatrics SM  
M.D. Loma Linda University SM 1979
- BAYLINK, DAVID J. Distinguished Professor,  
Department of Medicine SM  
M.D. Loma Linda University SM 1957
- BEAL, WILLIAM S. Instructor, Department of  
Orthopedic Surgery SM  
D.P.M. California College of Podiatric Medicine  
1976
- BEARDSLEY, LISA M. Professor, Department of  
Health Promotion and Education PH;  
Assistant Professor, Faculty of Religion FR  
M.P.H. Loma Linda University PH 1983  
Ph.D. University of Hawaii at Manoa 1989
- BECKNER, ARDIS S. Assistant Clinical Professor,  
Department of Nutrition PH; Clinical  
Instructor, Department of Nutrition and  
Dietetics AH  
M.S. Loma Linda University GS 1963
- BECKNER, JEANNE. Instructor, School of  
Nursing SN  
M.S.N. Azusa Pacific University
- BECKWITH, J. BRUCE. Adjunct Professor,  
Department of Pathology and Human  
Anatomy SM, Department of Surgery SM,  
and Department of Pediatrics SM  
M.D. University of Washington School of  
Medicine 1958
- BEDASHI, ALLAN M. Assistant Professor,  
Department of Physician Assistant  
Sciences AH  
M.S. Western University of Health Sciences  
1997
- BEDROS, ANTRANIK A. Associate Professor,  
Department of Pediatrics SM  
M.D. University of Damascus 1970
- BEE, DAVID M. Assistant Professor, Department  
of Medicine SM  
M.D. University of Southern California 1967
- BEELE, LAUREN M. Clinical Instructor,  
Department of Physical Therapy AH  
B.S. Indiana University 1979
- BEESON, W. LAWRENCE, Associate Professor,  
Department of Epidemiology and  
Biostatistics PH  
Dr.P.H. Loma Linda University PH
- BEHRENS, B. LYN. Professor, Department of  
Pediatrics SM  
M.B.B.S. Sydney University (Australia) 1963
- BEKENDAM, PAMELA Y. Assistant Professor,  
Department of Ophthalmology SM  
M.D. Loma Linda University SM 1994
- BELEN, NENITA P. Assistant Clinical Professor,  
Department of Psychiatry SM  
M.D. University of Santo Tomas 1967

- BELIN, LYNNA SUE. Adjunct Assistant Professor,  
Department of Health Administration PH  
Ph.D. Claremont Graduate School 1994
- BELLIARD, JUAN C. Assistant Professor,  
Department of Global Health PH and  
Department of Environmental and  
Occupational Health PH  
Ph.D. Loma Linda University GS 1996
- BELLINGER, DENISE L. Associate Research  
Professor, Department of Pathology and  
Human Anatomy SM  
Ph.D. Indiana State University 1985
- BELOTE, JAMES H. Assistant Clinical Professor,  
Department of Pediatrics SM  
M.D. Emory University 1961
- BENCH, RUEL WATSON. Associate Professor,  
Department of Orthodontics SD  
D.D.S. University of the Pacific 1953
- BENJAMIN, JOHN A. Adjunct Professor,  
Department of Psychology ST; Assistant  
Clinical Professor, Department of Physical  
Medicine SM  
Ph.D. California School of Professional  
Psychology at Los Angeles 1977
- BENJAMIN, YONAN K. Clinical Instructor,  
Department of Environmental and  
Occupational Health PH  
B.S. Loma Linda University PH 1982
- BENNETT, JACK L. Clinical Instructor,  
Department of Surgery SM  
M.D. Loma Linda University SM 1962
- BERDEJA, JESUS G. Assistant Professor,  
Department of Medicine SM  
M.D. Harvard Medical School 1994
- BERGENDAHL, KELLIE R. Assistant Professor,  
Department of Dental Hygiene SD  
B.S. Loma Linda University SD 2002
- BERGEY, DARREN L. Instructor, Department of  
Orthopedic Surgery SM  
M.D. Loma Linda University SM 1996
- BERK, LEE S. Associate Research Professor,  
Department of Pathology and Human  
Anatomy SM; Associate Professor,  
Department of Health Promotion and  
Education PH  
Dr.P.H. Loma Linda University PH 1981
- BERNAL, GUILLERMO D. Professor, Department  
of Restorative Dentistry SD  
D.D.S. San Cristobel Hospital 1988
- BERRIMAN, DIANE J. Assistant Professor,  
Department of Medicine SM  
M.D. Oral Roberts University School of  
Medicine 1988
- BERRY, FREDERICK A. Professor, Department of  
Restorative Dentistry SD  
D.D.S. University of Pennsylvania 1962
- BESTARD, EDUARDO A. Instructor, Department  
of Orthopedic Surgery SM  
M.D. Facultad de Medical (Paraguay) 1945
- BETANCOURT, HECTOR M. Professor,  
Department of Psychology ST  
Ph.D. University of California at Los Angeles  
1983
- BHASKERRAO, SOFIA. Assistant Professor,  
Department of Medicine SM  
M.B.B.S. Andhra Medical College 1994
- BHAT, VENKATESH G. Associate Professor,  
Department of Psychiatry SM  
M.B.B.S. University of Mysore (India) 1979
- BHATT, DILIP R. Assistant Clinical Professor,  
Department of Pediatrics SM  
M.B.B.S. Baroda Medical College (India) 1963
- BIANCHI, CHRISTIAN. Assistant Professor,  
Department of Surgery SM  
M.D. University of Buenos Aires School of  
Medicine 1993
- BIGELOW-PRICE, SHAYNE MICHELINE. Clinical  
Instructor, School of Nursing SN  
M.S.N. University of Phoenix 1998
- BILLIMORIA, PHIROZE E. Professor, Department  
of Radiology SM  
M.B.B.S. Grant Medical College, Bombay  
University 1951
- BILLOCK, L. CHRISTINE. Assistant Professor,  
Department of Occupational Therapy AH  
M.A. University of Southern California 1998
- BISCHOFF, FREDERICK M. Assistant Clinical  
Professor, Department of Health Promotion  
and Education PH and Department of  
Preventive Medicine SM  
M.D. Loma Linda University SM 1979  
M.P.H. Loma Linda University PH 1983
- BISCHOFF, JOAN K. Assistant Professor,  
Department of Medicine SM  
M.D. Loma Linda University SM 1981
- BISHARA, MICHAEL F. Assistant Clinical  
Professor, Department of Medicine SM  
M.B.B.Ch. Ain Shams University (Egypt) 1981
- BISHARA, MOE H. Assistant Professor,  
Department of Medicine SM  
M.B.B.Ch. Ain Shams University (Egypt) 1980  
M.S. Loma Linda University SD 1973
- BIVONA-TELLEZ, CHRISTINA M. Assistant  
Clinical Professor, School of Nursing SN  
M.P.H. University of North Carolina 1983

- BLACHARSKI, PAUL A. Associate Clinical Professor, Department of Ophthalmology SM  
M.D. Loma Linda University SM 1976
- BLACK, BRIAN PHILIP. Assistant Professor, Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 2000
- BLACKWELDER, J. TIMOTHY. Assistant Clinical Professor, Department of Radiology SM  
M.D. Loma Linda University SM 1973
- BLAINE, ANDREW C. Assistant Clinical Professor, Department of Psychiatry SM  
M.D. New York University School of Medicine 1989
- BLAINE, CYRIL DELABERE. Assistant Professor, Department of Medicine SM  
M.B.Ch.B. University of Capetown 1952
- BLAIR, ROBERT DELMER, JR. Assistant Clinical Professor, Department of Health Administration PH  
M.P.H. University of California at Los Angeles 1988
- BLAKELY, ELEANOR A. Adjunct Research Professor, Department of Radiation Medicine SM  
Ph.D. University of Illinois, Champaign-Urbana 1975
- BLAKELY, PATRICIA. Assistant Professor, Department of Medicine SM  
M.D. University of Southern California 1988
- BLAND, DAVID K. Associate Professor, Department of Medicine SM  
M.B.B.S. University of South Wales (Australia) 1976
- BLANK, RONALD PAUL. Adjunct Associate Professor, Department of Oral Diagnostic Radiology and Pathology SD  
D.D.S. Loma Linda University SD 1975
- BLANKENSHIP, JAMES W. Adjunct Professor, Department of Nutrition PH  
Ph.D. University of Wyoming 1969
- BLANTON, CHRISTOPHER LEE. Assistant Clinical Professor, Department of Ophthalmology SM  
M.D. Medical College of Ohio 1986
- BLASEIO, GUNTHER WALTER ANDREAS. Assistant Professor, Department of Orthodontics SD  
D.D.S. University of Erlangen (Germany) 1977
- BLAYLOCK, ANDRE V. Assistant Clinical Professor, Department of Family Medicine SM  
M.D. Loma Linda University SM 1980
- BLAZEN, IVAN T. Professor, Faculty of Religion FR  
Ph.D. Princeton Theological Seminary 1979
- BLOCK, BARRY S. Associate Professor, Department of Gynecology and Obstetrics SM  
M.D. Temple University 1975
- BLOMQUIST, INGRID K. Associate Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1981
- BLOUNT, GEORGE A. Assistant Professor, Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1977
- BOCACHICA, JOHN H. Assistant Clinical Professor, Department of Medicine SM  
M.D. State University of New York at Stony Brook 1976
- BOGLE, GARY CLARK. Associate Professor, Department of Periodontics SD  
D.D.S. Loma Linda University SD 1969  
M.S. Loma Linda University GS 1973
- BOHR, THOMAS W. Associate Professor, Department of Neurology SM  
M.D. University of California at San Francisco 1984
- BOLING, EUGENE P. Assistant Clinical Professor, Department of Medicine SM  
M.D. University of California at Los Angeles 1976
- BOLLA, LISA DAWN. Instructor, Department of Family Medicine SM
- BONNET, REINER B. Clinical Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1981
- BONYANPOOR, SHAHNAZ. Assistant Professor, Department of Pediatric Dentistry SD  
D.M.D. Shiraz University 1977
- BOOTH-WILLIAMS, MARY M. Clinical Instructor, Department of Nutrition and Dietetics AH  
B.A. San Diego State University 1970
- BORK, JANE N. Associate Professor, Department of Pediatrics SM  
M.D. Loma Linda University SM 1979
- BORUT, DANIELLE L. Assistant Clinical Professor, Department of Pediatrics SM  
M.D. University of Southern California 1969
- BOSKOVIC, DANILO. Assistant Professor, Department of Biochemistry and Microbiology SM  
Ph.D. Queen's University (Canada) 1997
- BOSKOVIC, MILOS MOMIR. Assistant Professor, Department of Restorative Dentistry SD  
D.D.S. University of Belgrade (Yugoslavia) 1977

- BOSSERT, ELIZABETH ANNE. Professor, School of Nursing SN  
D.N.S. University of California at San Francisco 1990
- BOULAND, DANIEL L. Associate Clinical Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1982
- BOUNDS, JEFFREY ALLEN. Associate Professor, Department of Neurology SM  
M.D. Loma Linda University SM 1972
- BOURNE, KENRICK CARLYLE. Assistant Professor, Department of Physician Assistant Sciences AH  
Dr.P.H. Loma Linda University PH 1997
- BOWEN, JANA D. Clinical Instructor, Department of Nutrition and Dietetics AH  
B.S. Loma Linda University AH 2002
- BOWEN, WILLIAM W. Assistant Clinical Professor, Department of Surgery SM  
M.D. Loma Linda University SM 1973
- BOYD, KENDAL C. Assistant Professor, Department of Psychology ST  
Ph.D. Fuller Theological Seminary 1999
- BOYKO, MICHAEL PETER. Assistant Professor, Department of Oral and Maxillofacial Surgery SD  
D.D.S. Loma Linda University SD 1975  
M.P.H. Loma Linda University PH 1975
- BOYNE, PHILIP J. Emeritus Professor, Department of Oral and Maxillofacial Surgery SD  
D.M.D. Tufts University 1947
- BRACHO, YASMIN. Clinical Instructor, Department of Physician Assistant Sciences AH  
M.P.A. Loma Linda University AH 2002
- BRADLEY, BEVERLY J. Associate Clinical Professor, Department of Health Promotion and Education PH  
Ph.D. University of Southern California 1985
- BRADLEY, BRUCE D. Assistant Professor, Department of Physical Therapy AH  
D.P.T.Sc. Loma Linda University AH 2001
- BRAHAM, ARLENE F. Assistant Clinical Professor, Department of Preventive Medicine SM  
M.D. University of Illinois, Champaign-Urbana 1988
- BRAMAN, MARCUS A. Adjunct Clinical Instructor, Department of Preventive Medicine SM  
M.D. Loma Linda University SM 1995  
M.P.H. Loma Linda University PH 2003
- BRAND, LEONARD R. Professor, Department of Earth and Biological Sciences ST  
Ph.D. Cornell University 1970
- BRANDSTATER, BERNARD JOHN. Clinical Professor, Department of Anesthesiology SM  
M.B.B.S. Adelaide University (Australia) 1951
- BRANDSTATER, MURRAY E. Professor, Department of Physical Medicine SM and Department of Neurology SM  
M.B.B.S. Melbourne University 1957  
Ph.D. University of Minnesota 1972
- BRANDT, ALLEN L. Associate Clinical Professor, Department of Anesthesiology SM  
M.D. College of Medical Evangelists 1952
- BRANDT, JAMES ALLAN. Instructor, Department of Clinical Laboratory Science AH  
M.S. Loma Linda University GS 1982
- BRANTLEY, EILEEN J. Assistant Professor, Department of Pharmaceutical Sciences SP  
Ph.D. Meharry Medical College 1999
- BRAR, HARBINDER S. Associate Clinical Professor, Department of Pediatrics SM  
M.D. University of Jabalpur (India) 1978
- BRASLOW, LAWRENCE. Associate Clinical Professor, Department of Surgery SM  
M.D. Loma Linda University SM 1940
- BRAUER, STANLEY D. Professor, Department of Anesthesiology SM  
M.D. Loma Linda University SM 1980
- BRENES, EUGENIO J. Instructor, Department of Restorative Dentistry SD  
D.D.S. Universidad Internacional de las Americas 2003
- BRESSLER, SUSAN HUTCHERSON. Clinical Instructor, Department of Clinical Laboratory Science AH  
B.S. Loma Linda University AH 1979
- BRIGGS, BURTON A. Professor, Department of Anesthesiology SM  
M.D. Loma Linda University SM 1966
- BRIGGS, ROGER ALLEN. Assistant Professor, Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1973
- BRINEGAR, CHARLES, HOWARD, JR. Associate Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1963
- BRITT, WILLIAM, G. III. Associate Professor, Department of Psychiatry SM  
Ph.D. Rosemead Graduate School of Professional Psychology 1981

- BRITTON, DOUGLAS R. Assistant Professor,  
Department of Earth and Biological  
Sciences ST  
Ph.D. University of Wyoming 1998
- BROCK, DAVID P. Instructor, Department of  
Restorative Dentistry SD  
D.M.D. Harvard School Dental Medicine 2001
- BRODEUR, DAVID C. Assistant Professor,  
Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1971  
M.P.A. Loma Linda University AH 1972
- BROOKS, DANIEL A. Assistant Clinical Professor,  
Department of Psychiatry SM  
M.D. Temple University Medical School 1975
- BROOME, DALE R. Associate Professor,  
Department of Radiology SM  
M.D. University of Missouri at Kansas City  
1987
- BROWN, BRANDON R. Instructor, Department of  
Oral and Maxillofacial Surgery SD  
D.D.S. University of Iowa 2003
- BROWN, GARTH W. Assistant Professor,  
Department of Oral Diagnostic Radiology  
and Pathology SD  
D.D.S. Loyola University 1964
- BROWN, GARY W. Assistant Clinical Professor,  
Department of Medicine SM  
M.D. Universidad Autonoma de Guadalajara  
1980
- BROWN, LANCE A. Associate Professor,  
Department of Emergency Medicine SM  
and Department of Pediatrics SM  
M.D., M.P.H. Harvard University 1994
- BROWN, LAURA DENISE. Assistant Librarian,  
Library Faculty  
M.L.S. University of California at Los  
Angeles 1988
- BROWN, WILLIAM E. Assistant Clinical  
Professor, Department of Orthopedic  
Surgery SM  
M.D. College of Medical Evangelists 1952
- BROWN-HARRELL, VICKIE D. Assistant  
Professor, Department of Medicine SM  
M.D. University of Iowa 1992
- BRUCE-LYLE, LESLIE A. Assistant Clinical  
Professor, Department of Ophthalmology  
SM  
M.B.Ch.B. University of Ghana Medical School  
1976
- BRUCKNER, EVERT A. Associate Professor,  
Department of Medicine SM  
M.D. Stanford University 1958
- BRUNO, RICHARD. Assistant Clinical Professor,  
Department of Health Administration PH  
M.B.A. Woodbury University 1972
- BRUNT, JOHN C. Adjunct Professor, Faculty of  
Religion FR  
Ph.D. Emory University 1978
- BRUTTOMESSO, SAMUEL D. Assistant Clinical  
Professor, Department of Pediatrics SM  
M.D. Hahneman Medical College 1970
- BRYAN, PATRICK J. Associate Clinical Professor,  
Department of Radiology SM  
M.B.Ch.B. University College at Galway  
(Ireland) 1967
- BUCHHEIM, H. PAUL. Professor, Department of  
Earth and Biological Sciences ST  
Ph.D. University of Wyoming 1978
- BUCHHOLZ, JOHN N. Professor, Department of  
Physiology and Pharmacology SM  
Ph.D. Loma Linda University GS 1989
- BUCKERT, LINDA SCUDDER. Clinical Instructor,  
Department of Clinical Laboratory Science  
AH  
B.S. University of Illinois 1980
- BUCKLES, BEVERLY J. Professor, Department of  
Social Work and Social Ecology ST  
D.S.W. Adelphi University 1989
- BUI, HONG DANG. Assistant Clinical Professor,  
Department of Pediatrics SM  
M.D. Faculty of Medicine of Saigon 1969
- BULL, BERYL HEATHER. Assistant Professor,  
Department of Physical Medicine SM  
M.D. Loma Linda University SM 1994
- BULL, BRIAN S. Professor, Department of  
Pathology and Human Anatomy SM and  
Department of Clinical Laboratory Science  
AH  
M.D. Loma Linda University SM 1961
- BULLOCK, WELDON K. Clinical Professor,  
Department of Pathology and Human  
Anatomy SM  
M.D. Northwestern University Medical School  
1934
- BUNNELL, WILLIAM P. Professor, Department of  
Orthopedic Surgery SM and Department of  
Pediatrics SM  
M.D. Temple University 1968
- BURGOS, AUREA ESCOBAR. Clinical Instructor,  
Department of Nutrition and Dietetics AH  
B.S. Puerto Rico University 1955
- BURK, KELLY A. Instructor, Department of  
Radiation Technology AH  
B.S. Loma Linda University AH 2003

- BURKE, KENNETH IBER. Associate Professor,  
Department of Nutrition PH  
Ph.D. Florida State University
- BURLEY, TODD D. Clinical Professor,  
Department of Psychology ST  
Ph.D. University of Tennessee at Knoxville 1972
- BURNHAM, GILBERT M. Adjunct Associate  
Professor, Department of Global Health PH  
and Department of Preventive Medicine SM  
M.D. Loma Linda University SM 1968  
Ph.D. University of London 1988
- BURNS, MARGARET ANNE. Associate Professor,  
School of Nursing SN  
D.N.Sc. Catholic University of America 1985
- BURSTEIN, JEROME. Associate Professor,  
Department of Radiology SM  
M.D. Albert Einstein College of Medicine
- BURTON, PAUL D. Instructor, Department of  
Orthopedic Surgery SM  
D.O. University of Health Sciences College of  
Osteopathic Medicine
- BUSH, DAVID A. Associate Professor, Department  
of Radiation Medicine SM  
M.D. Loma Linda University SM 1992
- BUSH, SEAN P. Associate Professor, Department  
of Emergency Medicine SM  
M.D. Texas A & M College of Medicine 1992
- BUTLER, DIANNE GREIVE. Assistant Professor,  
Department of Nutrition PH  
M.S. Loma Linda University GS 1999  
M.B.A. Charles Stuart University 1999
- BUTLER, TERRENCE L. Assistant Professor,  
Department of Epidemiology and  
Biostatistics PH and Department of  
Preventive Medicine SM  
Dr.P.H. University of California at Los Angeles  
1986
- BYRNE, JOHN MAURICE. Assistant Professor,  
Department of Medicine SM  
D.O. University of Osteopathic Medicine and  
Health Sciences 1989
- CABALLERO, CORA ALMARIO. Assistant  
Professor, School of Nursing SN  
M.A. New York University 1993
- CABANSAG, ROGER J. Assistant Professor,  
Department of Psychiatry SM  
M.D. Loma Linda University SM 1998
- CALDERON-VIZCAINO, RAQUEL M. Clinical  
Instructor, Department of  
Cardiopulmonary Sciences AH  
B.S. University of Redlands 2002
- CALLA PAULINE JOYCE. Instructor, Department  
of Health Information Management AH  
B.S. Loma Linda University AH 2005
- CAMACHO, ELBER SAMUEL. Assistant Clinical  
Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1972
- CAMPBELL, MICHAEL W. Instructor, Library  
Faculty  
M.A. Andrews University 2004
- CANGA-SIAO, CYNTHIA R. Assistant Professor,  
Department of Medicine SM  
M.D. Cebu Institute of Medicine 1988
- CANTIN, EDOUARD M. Adjunct Associate  
Research Professor, Department of  
Biochemistry and Microbiology SM  
Ph.D. University of Cambridge (England) 1976
- CANTOS, KENNETH A. Assistant Professor,  
Department of Pathology and Human  
Anatomy SM, Department of Medicine SM,  
and Department of Clinical Laboratory  
Science AH  
M.D. Loma Linda University SM 1993
- CAO, JEFFREY D. Associate Professor,  
Department of Pathology and Human  
Anatomy SM  
M.D. Loma Linda University SM 1971
- CAPLANIS, NICHOLAS. Assistant Professor,  
Department of Restorative Dentistry SD  
and Department of Periodontics SD  
D.M.D. University of Medicine and Dentistry at  
New Jersey 1991
- CARLSON, JOHN P. Assistant Clinical Professor,  
Department of Ophthalmology SM  
M.D. Creighton University 1995
- CARMICINO, KATHLEEN E. Instructor,  
Department of Dental Hygiene SD  
B.S. Loma Linda University SD 1969  
M.B.A. Pepperdine University SB 1986
- CARNAHAN, CLARENCE, E., JR. Clinical  
Professor, Department of Psychiatry SM  
M.D. Loma Linda University SM 1954
- CARNEY, JOHN P. Assistant Clinical Professor,  
Department of Health Administration PH  
and Department of Epidemiology and  
Biostatistics PH  
M.B.A. University of Phoenix 1992
- CARPENTER, MARK J. Assistant Professor,  
Department of Dental Education Services  
SD  
D.D.S. Loma Linda University SD 1980
- CARPIO, MOISES R. Assistant Professor,  
Department of Medicine SM  
M.D. San Marcos National University 1970

- CARR, MARK F. Associate Professor, Faculty of Religion FR  
Ph.D. University of Virginia 1998
- CARRIEDO, HEATHER A. Assistant Professor, Department of Pediatrics SM  
M.D. University of California at Los Angeles 1996
- CARRIGG, KAREN GRIGSBY. Associate Professor, School of Nursing SN  
Ed.D. Loma Linda University SE 1988
- CARSON, MARGIE INDRAJIT. Clinical Instructor, Department of Nutrition and Dietetics AH  
B.S. Western Michigan University 1995
- CARTER, ETHELRED E. Assistant Clinical Professor, Department of Medicine SM  
M.D. University Autonoma de Guadalajara 1968
- CARTER, RONALD L. Professor, Department of Earth and Biological Sciences ST and FR  
Ph.D. Loma Linda University GS 1977
- CARUSO, JOSEPH MICHAEL. Associate Professor, Department of Orthodontics SD  
D.D.S. Loma Linda University SD 1973
- CARVALHO, JULIANA. Assistant Professor, Department of Periodontics SD  
B.D.S. Federal University of Minas Gerais (Brazil) 1997
- CASELLINI, RENZO CARLO. Instructor, Department of Restorative Dentistry SD  
M.D.T. Swiss Dental Tech College 1976
- CASIANO, CARLOS A. Associate Professor, Department of Biochemistry and Microbiology SM and Assistant Professor, Department of Medicine SM  
Ph.D. University of California at Davis 1992
- CASSIMY, CLYDE P. Adjunct Assistant Professor, Faculty of Religion FR  
D.Min. Vanderbilt University Divinity School 1981
- CASTANOTTO, DANIELA. Adjunct Associate Research Professor, Department of Biochemistry and Microbiology SM  
Ph.D. University of Messina 1987
- CASTILLO-YETTER, GLENDA M. Clinical Instructor, School of Nursing SN  
B.S.N. Loma Linda University SN 1979
- CASTRO, DANIEL. Associate Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1986
- CATALANO, RICHARD D. Professor, Department of Surgery SM and Department of Emergency Medicine SM  
M.D. Loma Linda University SM 1976
- CATALON, SAMUEL R. Assistant Clinical Professor, Department of Pediatrics SM  
M.D. Loma Linda University SM 1984
- CEA, ELIZABETH. Clinical Instructor, Department of Clinical Laboratory Science AH  
B.S. La Sierra University 1998
- CERVERA, JOSE E. Instructor, Department of Restorative Dentistry SD  
D.D.S. University Autonoma de Yucatan 2000
- CESTERO, GRETCHEN ELIZABETH. Assistant Professor, Department of Dental Hygiene SD  
B.S. Loma Linda University SD 2002
- CHA, CHUL C. Associate Clinical Professor, Department of Pediatrics SM  
M.D. Seoul National University 1961
- CHA, JIN SO. Instructor, Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 2002
- CHADWICK, ROBERT B. Assistant Professor, Department of Medicine SM  
Ph.D. Ohio State University 2000
- CHAMBERS, JEFFREY GEORGE. Clinical Instructor, Department of Clinical Laboratory Science AH  
M.B.A. California State University at San Bernardino 1989
- CHAMPLIN, THAD L. Adjunct Associate Professor, Department of Orthodontics SD  
D.D.S. University of Southern California 1969  
M.S.D. University of the Pacific 1984
- CHAN, BOBBY S. Assistant Professor, Department of Medicine SM  
M.D. Franklin University of Medicine and Science of Chicago Medical School 1999
- CHAN, CLEMENT KAR-MAN. Associate Clinical Professor, Department of Ophthalmology SM  
M.D. Loma Linda University SM 1980
- CHAN, FRANCIS D. Assistant Professor, Department of Pediatrics SM and Department of Medicine SM  
M.D. Loma Linda University SM 1994
- CHAN, GARY H. Assistant Professor, Department of Dental Anesthesiology SD  
D.D.S. Loma Linda University SD 1989
- CHAN, JACQUELINE. Assistant Research Professor, Department of Epidemiology and Biostatistics PH  
Dr.P.H. Loma Linda University PH 1999

- CHAN PHILIP J. Professor, Department of Gynecology and Obstetrics SM and Department of Physiology and Pharmacology SM  
Ph.D. Michigan State University 1983
- CHAND, IAN P. Professor, Department of Counseling and Family Science, ST  
Ph.D. Pennsylvania State University 1980
- CHANG, BERNARD CHUL HO. Assistant Professor, Department of Orthodontics SD  
D.D.S. Loma Linda University SD 1993  
M.S. Loma Linda University SD 1996
- CHANG, EDDIE. Assistant Professor, Department of Pediatric Dentistry SD  
D.D.S. Loma Linda University SD 1999
- CHANG, RICHARD M. Instructor, Department of Medicine SM  
M.D. Manila Central University 1999
- CHANG, SUZANNE E. Assistant Professor, Department of Medicine SM  
M.D. Northeastern Ohio University 1997
- CHARLES-MARCEL, ZENO L. Associate Clinical Professor, Department of Medicine SM  
M.D. Harvard University 1980
- CHASE, DONALD R. Professor, Department of Pathology and Human Anatomy SM  
M.D. Loma Linda University SM 1977
- CHASE, RESA C. Professor, Department of Pathology and Human Anatomy SM  
M.D. Loma Linda University SM 1977
- CHAVEZ, DAVID V. Adjunct Assistant Professor, Department of Psychology ST  
Ph.D. University of California at Berkeley 1993
- CHEEK, D. DARLENE. Assistant Professor, Department of Dental Hygiene SD  
M.P.H. Loma Linda University PH 1978
- CHEEK, GREGORY A. B. Assistant Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1987
- CHEN, CHIEN-SHING. Associate Professor, Department of Medicine SM  
M.D. China Medical College at Taiwan 1985  
Ph.D. University of Minnesota 1992
- CHEN, JACK J. Adjunct Assistant Professor, Department of Neurology SM  
Pharm.D. University of Utah 1995
- CHEN, JOEY TING-YUEH. Adjunct Professor, Department of Restorative Dentistry SD  
D.D.S. Northwestern University 2001
- CHEN, KENNETH G. Assistant Professor, Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 2005
- CHEN, SHIN-TAI. Associate Research Professor, Department of Biochemistry and Microbiology SM  
Ph.D. University of Texas at Dallas 1986
- CHENG, WAYNE K. Assistant Professor, Department of Orthopedic Surgery SM  
M.D. Loma Linda University SM 1995
- CHEUNG, REBECCA J. Assistant Professor, Department of Pharmacy Practice SP  
Pharm.D. University of Southern California 2002
- CHHABRA, GURBIR. Assistant Clinical Professor, Department of Orthopedic Surgery SM  
M.B.B.S. GS VM Medical College (India) 1968  
M.S. University of Kanpuri 1971
- CHI, ESMOND. Assistant Professor, Department of Surgery SM  
M.D. Loma Linda University SM 1996
- CHICK, WILSON K. W. Assistant Professor, Department of Pathology and Human Anatomy SM  
M.B.B.S. University of Hong Kong 1980
- CHILDERS, BEN J. Associate Clinical Professor, Department of Surgery SM  
M.D. University of Louisville 1989
- CHI-LUM, BONNIE I. Assistant Professor, Department of Health Administration PH and Department of Preventive Medicine PH  
M.D. Loma Linda University SM 1991  
M.P.H. Loma Linda University PH 1995
- CHIN, TERRY WEIHING. Associate Professor, Department of Pediatrics SM  
M.D. Baylor College of Medicine 1977  
Ph.D. Baylor College of Medicine 1980
- CHING, VICTOR C. Assistant Clinical Professor, Department of Surgery SM  
M.D. Loma Linda University SM 1977
- CHINNOCK, LAWRENCE E. Associate Professor, Department of Physical Therapy AH  
Ed.D. La Sierra University 1996
- CHINNOCK, RICHARD E. Professor, Department of Pediatrics SM and Department of Emergency Medicine SM  
M.D. Loma Linda University SM 1982
- CHIRITESCU, ANCA. Assistant Clinical Professor, Department of Psychiatry SM  
M.D. Carol Davilla Medical School 1983
- CHITSAZAN, MORTEZA. Assistant Professor, Department of Medicine SM  
D.O. Western University/Comp 1999

- CHOI, CHUL. Assistant Clinical Professor,  
Department of Gynecology and Obstetrics  
SM  
M.D. Seoul National University 1968
- CHOI, KYUNG-SOO. Adjunct Instructor,  
Department of Restorative Dentistry SD  
D.D.S. University of Illinois at Chicago,  
College of Dentistry 1996
- CHONKICH, GEORGE D. Associate Professor,  
Department of Surgery SM  
M.D. Loma Linda University SM 1960
- CHOO, EVELYN BEE IMM. Assistant Professor,  
Department of Pathology and Human  
Anatomy SM  
M.D. Loma Linda University SM 1992
- CHOW, KENT. Instructor, Department of Allied  
Health Studies AH  
M.B.A. Claremont Graduate School 1995
- CHOW, LORI J. Assistant Clinical Professor,  
Department of Surgery SM  
M.D. University of California at Davis 1994
- CHOW, TONY K. Assistant Professor, Department  
of Emergency Medicine SM  
M.D. University of California at San Diego  
1991
- CHRISLER, JOHN M. Instructor, Department of  
Orthopedic Surgery SM  
B.S. Texas A & M University, School of  
Veterinary Medicine 1985
- CHRISPENS, JERE E. Assistant Clinical  
Professor, Department of Health  
Information Management AH  
M.A. University of California at Los Angeles  
1966
- CHRISTENSEN, HEIDI LAVERNE. Associate  
Professor, Department of Oral Diagnostic  
Radiology and Pathology SD  
D.D.S. Loma Linda University SD 1983
- CHRISTISON, CARON SHIZUE. Assistant  
Clinical Professor, Department of  
Psychiatry SM  
M.D. University of California at San Diego  
1982
- CHRISTISON, GEORGE W. Professor,  
Department of Psychiatry SM  
M.D. University of California at San Diego  
1982  
M.Div. Andrews University 1970
- CHU, PEK SONG. Adjunct Assistant Professor,  
Department of Dental Education Services  
SD  
D.D.S. Loma Linda University SD 1976
- CHUA, KENG L. Instructor, Departemnt of  
Periodontics SD  
D.D.S. University of Melbourne 1998
- CHUA, SAMNUEL C. Assistant Professor,  
Department of Emergency Medicine SM  
M.D. University of Southern California 1990
- CHUI, JAMES. Assistant Clinical Professor,  
Department of Surgery SM  
M.D. Hahnemann University 1993
- CHUNG, DEBORAH MICHELLE. Assistant  
Professor, Department of Anesthesiology  
SM  
M.D. Loma Linda University SM 1986
- CHUNG, DANIEL J. Assistant Professor,  
Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 2005
- CHUNG, PAUL Y. Assistant Clinical Professor,  
Department of Ophthalmology SM  
M.D. Loma Linda University SM 1991
- CHUNG, SEUNG-HWAN. Clinical Instructor,  
Department of Restorative Dentistry SD  
M.S. Chonnam National University (Korea)  
2000
- CHURCH, CHRISTOPHER A. Assistant Professor,  
Department of Surgery SM  
M.D. Loma Linda University SM 1996
- CHURG, WARREN, B. Assistant Clinical  
Professor, Department of Family Medicine  
SM  
M.D. Johns Hopkins University SM 1975
- CIMPOERU, PETRE. Associate Librarian, Library  
Faculty  
M.L.S. San Jose State University 1992
- CIPTA, ANNE T. Assistant Professor, Department  
of Anesthesiology SM and Department of  
Physical Medicine SM  
M.D. University of Airlangga 1982
- CLAFFEY, NOEL M. Professor, Department of  
Periodontics SD  
B.D.S. National University of Ireland 1974
- CLARK, ALEXANDRA M. Assistant Professor,  
Department of Pediatrics SM  
M.D. Albany Medical College 1999
- CLARK, DENNIS E. Adjunct Professor,  
Department of Oral Diagnostic Radiology  
and Pathology SD  
D.D.S. Loma Linda University SD 1983
- CLARK, ROBIN D. Associate Professor,  
Department of Pediatrics SM  
M.D. University of Arizona 1978
- CLARK, SUSAN A. Associate Clinical Professor,  
Department of Pediatrics SM  
M.D. Loma Linda University SM 1973

- CLARKE, ANDREA M. Assistant Clinical Professor, Department of Family Medicine SM  
M.D. Loma Linda University SM 1997
- CLARKE, IAN CAMERON. Research Professor, Department of Orthopedic Surgery SM  
Ph.D. University of Strathclyde 1972
- CLAUSEN, BENJAMIN LEROY. Adjunct Assistant Professor, Department of Earth and Biological Sciences ST  
Ph.D. University of Colorado at Boulder 1987
- CLEEK, N. EUGENE. Assistant Professor, Department of Surgery SM  
M.D. Autonomous University of Guadalajara 1975
- CLEGG, WILLIAM R. Assistant Professor, Department of Ophthalmology SM  
M.D. Loma Linda University SM 1961
- CLEMENTS, HERMAN R. Assistant Professor, Department of Psychiatry SM  
M.D. Ohio State University SM 1992
- CLEMENTS, MARK JAN. Assistant Professor, Department of Radiation Technology AH  
M.A. University of Colorado at Boulder 1970
- CLEMONS, SHERYL LYNN. Clinical Instructor, Department of Occupational Therapy AH  
B.S. Loma Linda University AH 1988
- CLIFTON, BRETT D. Assistant Professor, Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1986
- CLINE, DENIS J. Assistant Clinical Professor, Department of Ophthalmology SM  
M.D. Loma Linda University SM 1992
- CLOVER, WILLIAM M. Assistant Clinical Professor, Department of Pediatrics SM  
M.D. University of Southern California 1954
- COCHRANE, EDWARD. Associate Professor, Department of Social Work and Social Ecology ST  
M.S.W. University of Kentucky
- COEN, MICHAEL J. Assistant Professor, Department of Orthopedic Surgery SM  
M.D. University of Nebraska Medical Center 1990
- COGIN, C. JOAN. Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1953
- COHEN, JOSEPH I. Assistant Clinical Professor, Department of Pathology and Human Anatomy SM  
M.D. Medical College of Wisconsin 1986
- COJOCARU, TRAIAN T. Associate Professor, Department of Surgery SM  
M.D. Facultatea de Medicina IMF/University of Bucharest 1972
- COLBURN, KEITH K. Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1970
- COLE, BRADLEY ALAN. Assistant Professor, Department of Neurology SM  
M.D. Loma Linda University SM 1992
- COLE, DOROTHEE. Assistant Professor, Department of Neurology SM  
M.D. Loma Linda University SM 1994
- COLEMAN, MARLENE M. Assistant Clinical Professor, Department of Pediatrics SM  
M.D. University of California at Irvine 1970
- COLEMAN, MELVIN A. Assistant Professor, Department of Endodontics SD  
D.D.S. Case Western Reserve University 1958
- COLLEN, MARTIN J. Clinical Professor, Department of Medicine SM  
M.D. Chicago Medical School 1970
- COLLIER, CARL E. Assistant Professor, Department of Anesthesiology SM  
D.O. College of Osteopathic in Iowa 1980
- COLLINS, NORBERTO E. Assistant Clinical Professor, Department of Surgery SM  
M.D. University de Cordoba 1973
- COLLINSWORTH, KEN A. Assistant Professor, Department of Medicine SM
- COLOHAN, AUSTIN R. T. Professor, Department of Surgery SM  
M.D. McMaster University (Canada) 1978
- CONCEPCION, WALDO. Associate Professor, Department of Surgery SM  
M.D. Autonomous University of Guadalajara (Mexico) 1978
- CONDON, DAVID S. Assistant Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1994
- CONDON STANLEY C. Associate Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1956
- CONDON, VANETA MABLEY. Associate Professor, School of Nursing SN  
Ph.D. Claremont Graduate School 1996
- CONNELL, BERTRUM C. Professor, Department of Nutrition and Dietetics AH and Department of Nutrition PH  
Ph.D. University of Missouri 1978

- CONNER, MICHAEL LEROY. Assistant Professor,  
Department of Health Administration PH  
Ed.S. Loma Linda University SE 1984
- CONNORS, DIANNA. Assistant Professor,  
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Science ST  
M.A. Western Michigan University 1978
- COOPER, JAN L. Clinical Instructor, Department  
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O.D. Southern California College of  
Optometry 1987
- COORAY, DILRUKSHIE. Instructor, Department  
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M.D. American University of the Caribbean  
1999
- CORBETT STEPHEN W. Associate Professor,  
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Ph.D. University of Wisconsin 1982  
M.D. University of Wisconsin 1988
- CORDERO-MACINTYRE, ZAIDA R. Assistant  
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Ph.D. University of Arizona 1998
- COREY, GERALD. Adjunct Professor, Department  
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Ed.D. University of Southern California 1967
- CORSELLI, JOHANNAH. Assistant Professor,  
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1986
- CORTEZ, ELISA ANNETTE. Assistant Professor,  
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- CORTEZ-FLORES, FRANK CORTEZ. Assistant  
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D.D.S. University of Southern California 1957  
Ph.D. Claremont Graduate University 1992
- COTA, LOUIS J., JR. Clinical Instructor,  
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Hills 1981
- COTE, DOMINIC. Instructor, Department of  
Endodontics SD  
D.M.D. University de Montreal 1997
- COTTON, ADRIAN N. Assistant Professor,  
Department of Medicine SM  
M.D. Loma Linda University SM 1996
- COTTRELL, ALFRED C., JR. Assistant Professor,  
Department of Medicine SM  
M.D. Hahnemann Medical College 1982
- COUPERUS, JAMES J. Associate Professor,  
Department of Medicine SM  
M.D. Loma Linda University SM 1967
- COUTRAKON, GEORGE B. Assistant Professor,  
Department of Radiation Medicine SM  
Ph.D. State University of New York at Stony  
Brook 1982
- COVRIG, DUANE M. Adjunct Assistant Professor,  
FR  
Ph.D. Loma Linda University GS
- COWAN, GLORIA E. Adjunct Professor,  
Department of Psychology ST  
Ph.D. Rutgers State University of New Jersey  
1964
- CRAIG, DEBRA D. Associate Professor,  
Department of Medicine SM and  
Department of Family Medicine SM  
M.D. Loma Linda University SM 1982
- CRAIG, KEVAN Z. Clinical Instructor,  
Department of Physical Medicine SM  
D.O. University of New England College of  
Osteopathic Medicine 1991
- CRAIG-MILLER, LORALEE ILA. Assistant  
Professor, Department of Dental Hygiene  
SD  
B.S. Loma Linda University SD 1970
- CRANE, HEATHER A. Instructor, Department of  
Emergency Medicine SM  
M.D. Loma Linda University SM 2001
- CRANE, MARILYN TURNER. Associate Librarian,  
Library Faculty  
M.S.L.S. University of Southern California  
1962
- CRANIN, A. NORMAN. Adjunct Assistant  
Professor, Department of Restorative  
Dentistry SD  
D.D.S. New York University College of  
Dentistry 1951
- CRANSTON, RICHARD THOMAS. Assistant  
Professor, Department of Psychiatry SM  
M.S. Ohio State University 1974
- CRAWFORD, JAMES MERLIN. Professor,  
Department of Dental Education Services  
and Department of Health Administration  
PH  
D.D.S. Loma Linda University SD 1960  
M.P.H. Harvard University 1969
- CREECH, JOSEPH C., JR. Assistant Professor,  
Department of Pediatric Dentistry SD  
D.D.S. University of Missouri 1978
- CRESS, C. RAYMOND. Associate Professor,  
Department of Physiology and  
Pharmacology SM  
Ph.D. Oregon State University 1969

- CRIGGER, MAX. Professor, Department of Periodontics SD  
D.D.S. Ohio State University 1965
- CROUSE, BARBARA ANNE. Clinical Instructor, Department of Nutrition PH  
B.Sc. University of Alberta at Edmonton 1983
- CRUDO, RONALD P. Assistant Professor, Department of Restorative Dentistry SD  
D.M.D. University of Medicine and Dentistry of New Jersey 1973
- CRUZ, ERNESTO, JR. Assistant Clinical Professor, Department of Pediatrics SM  
M.D. Loma Linda University SM 1981
- CRUZ, F. DANIEL. Assistant Professor, Department of Family Medicine SM  
M.D. New York Medical College 1994
- CRUZ-VALLES, NILSA V. Clinical Instructor, Department of Nutrition and Dietetics AH  
M.S. Loma Linda University GS 1984
- CUMINGS, CHRISTOPHER D. Assistant Clinical Professor, Department of Radiology SM  
M.D. Loma Linda University SM 1970
- CUMMINGS, G. R. REED. Assistant Professor, Department of Endodontics SD  
D.D.S. Loma Linda University SD 1991
- CUMMINGS, JOSEPH H. Assistant Clinical Professor, Department of Preventive Medicine SM  
M.D. University of Illinois
- CUMMINGS, MICHAEL A. Associate Clinical Professor, Department of Psychiatry SM  
M.D. Loma Linda University SM 1981
- CUNNINGHAM, JANET A. Assistant Professor, Department of Family Medicine SM  
M.D. Wright State University School of Medicine 1981
- CURNOW, SALLY M. Assistant Professor, School of Nursing SN  
M.S.N. Whitworth College, ICNE 1993
- CURRIE, BRUCE L. Professor, Department of Pharmaceutical Sciences, School of Pharmacy SP  
Ph.D. University of Utah 1970
- CUSHMAN, ROBERT, A. JR. Assistant Professor, Department of Earth and Biological Sciences ST  
Ph.D. Colorado School of Mines 1994
- CUTLER, DREW C. Assistant Professor, Department of Pediatrics SM  
M.D. University of Washington School of Medicine 1982
- CUTLER, THERESA L. Assistant Professor, Department of Restorative Dentistry SD  
D.D.S. Detroit Mercy School of Dentistry 2003
- CUTTING, CHARLES ALBERT, JR. Assistant Professor, Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1968
- DAHER, NOHA SALIM. Assistant Professor, Department of Allied Health Studies AH  
M.S.P.H. Loma Linda University PH 1992
- DAHER, TONY. Associate Professor, Department of Restorative Dentistry SD  
D.D.S. University of St. Joseph (Lebanon) 1977
- DAI, QIANG GUO. Assistant Research Professor, Department of Orthopedic Surgery SM  
Ph.D. University of Iowa 1990
- DAI, VO MINH. Assistant Clinical Professor, Department of Pediatrics SM  
M.D. University of Saigon Faculty of Medicine 1974
- DAILEY, RONALD JAMES. Associate Professor, Department of Dental Education Services SD  
Ph.D. University of Southern California 1994
- DAJNOWICZ, ANTHONY M. Assistant Professor, Department of Pediatrics SM  
M.D. Wayne State University
- DALY, JERRY E. Associate Librarian, Library Faculty  
M.S.L.S. University of Southern California 1980
- DANDAMUDI, NAGAMANI. Assistant Professor, Department of Medicine SM  
M.B.B.S. SV Medical College (India) 1981
- DANIEL, ALTHEA P. Assistant Professor, Department of Pediatrics SM  
M.D. University of California at Los Angeles/Drew Medical School 1988
- DANIEL-UNDERWOOD, LYNDIA. Assistant Professor, Department of Emergency Medicine SM  
M.D. Loma Linda University SM 1991
- D'ANTONIO, LINDA L. Professor, Department of Surgery SM  
Ph.D. University of California at San Francisco 1982
- DARNELL, LAURA LEE. Clinical Instructor, Department of Nutrition and Dietetics AH  
M.S. University of Nebraska 1971
- DARNELL, T. ALLAN. Assistant Professor, Department of Global Health PH  
M.D. Loma Linda University SM 1995  
M.P.H. Loma Linda University PH 1998

- DART, G. CHARLES, JR. Assistant Professor,  
Department of Allied Health Studies AH  
M.B.A. La Sierra University 1994
- DAVIDIAN, JAMES L. Associate Clinical  
Professor, Department of Ophthalmology  
SM  
M.D. Loma Linda University SM 1970
- DAVIDIAN, MARILYN HOPKINS. Assistant  
Professor, Department of Health  
Information Management AH  
M.A. Claremont Graduate School 1997
- DAVIDIAN, RICHARD D. Professor, Division of  
General Studies ST  
Ph.D. Northwestern University 1986
- DAVIDSON, BERT J. Associate Clinical Professor,  
Department of Gynecology and Obstetrics  
SM  
M.D. Municipal University of Amsterdam 1972  
Ph.D. University of Utrecht (Netherlands)  
1983
- DAVIDSON, MICHAEL JAMES. Clinical  
Instructor, Department of Physical  
Medicine SM  
B.S. California State University at Dominguez  
Hills 1992
- DAVIS, CAROL HORE. Clinical Instructor,  
Department of Radiation Technology AH  
M.A. Loma Linda University GS 1997
- DAVIS, JOSEPH V. III. Assistant Clinical  
Professor, Department of Surgery SM  
D.O. Texas College of Osteopathic Medicine  
1982
- DAVIS, KATHERINE GLADKOWSKI. Instructor,  
Department of Clinical Laboratory Science  
AH  
B.S. Loma Linda University AH 1973
- DAVIS, MARK L. Assistant Professor, Department  
of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1988  
Pharm.D. University of Southern California  
2002
- DAVIS, MICHAEL KEITH. Clinical Instructor,  
Department of Occupational Therapy AH  
M.B.A. University of Redlands 1997
- DAVIS, NICCETA. Associate Professor,  
Department of Physical Therapy AH  
Ph.D. American University 1999
- DAVIS, SCOTT M. Clinical Instructor,  
Department of Psychiatry SM  
M.D. Boston University School of Medicine 1991
- DAVIS, WILLIE L., JR. Assistant Professor,  
Department of Pharmaceutical Sciences,  
School of Pharmacy SP  
Ph.D. Meharry Medical College 2001
- DE GUZMAN, ODETTE. Assistant Clinical  
Professor, Department of Pharmacy  
Practice, SP  
Pharm. D. University of Southern California  
2002
- DE LEON, DAISY D. Associate Professor,  
Department of Physiology and  
Pharmacology SM  
Ph.D. University of California at Davis 1987
- DE LEON, MARINO A. Associate Professor,  
Department of Physiology and  
Pharmacology SM and Department of  
Pathology and Human Anatomy SM  
Ph.D. University of California at Davis 1987
- DE SILVA, PAULA C. Clinical Instructor,  
Department of Nutrition PH  
B.S. California State Polytechnic University at  
Pomona 1987
- DEGUZMAN, LINO J. Assistant Clinical Professor,  
Department of Medicine SM  
M.D. University of Santo Tomas (Philippines)  
1986
- DEL RIO, MICHAEL J. Assistant Clinical  
Professor, Department of Surgery SM  
M.D. Cornell University Medical College 1981
- DELANGE, MARIE T. Instructor, Department of  
Radiation Technology AH  
B.S. University of Redlands 1988
- DEMING, DOUGLAS D. Professor, Department of  
Pediatrics SM  
M.D. Loma Linda University SM 1975
- DEMIRDJI, SAMUEL A. Assistant Professor,  
Department of Orthodontics SD  
Ph.D. University of Colorado at Boulder 1993  
D.D.S. Loma Linda University SD 2001
- DENLER, LOREN LEE. Assistant Clinical  
Professor, Department of Ophthalmology  
SM  
M.D. Loma Linda University SM 1964
- DENMARK, THOMAS K. Assistant Professor,  
Department of Emergency Medicine SM  
and Department of Pediatrics  
M.D. Loma Linda University SM 1994
- DEPPE, LINDA B. Assistant Professor,  
Department of Family Medicine SM  
D.O. University of Osteopathic Medicine and  
Health Sciences 1986
- D'ERRICO, ELLEN M. Assistant Professor, SN  
M.S.N. Loma Linda University GS 1987
- DESAI, SANDIP J. Assistant Professor,  
Department of Restorative Dentistry SD  
B.D.S. University of Bombay 1985

- DEVASUNDARAM, JAYANTH K. Clinical Instructor, Department of Environmental and Occupational Health PH  
M.B.B.S. Christian Medical College (Vellore) 1981
- DEVENDRA, TITUS. Assistant Professor, Department of Medicine SM  
M.B.B.S. University of Ceylon 1965
- DEVLIN, VINCENT J. Assistant Clinical Professor, Department of Orthopedic Surgery SM  
M.D. State University of New York, Downstate 1984
- DEW, ANN L. Assistant Professor, Department of Environmental and Occupational Health PH and Department of Preventive Medicine SM  
D.O. University of Osteopathic Medicine at Des Moines 1989
- DEXTER, JAMES R. Associate Clinical Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1974
- DIAZ, LYNN. Assistant Professor, Department of Endodontics SD  
D.D.S. University of California at Los Angeles 1995
- DICKINSON, BARBARA F. Clinical Instructor, Department of Nutrition and Dietetics AH; Assistant Professor, Department of Nutrition PH  
M.S. Loma Linda University GS 1982
- DICKINSON, ELDON C. Adjunct Assistant Professor, Department of Dental Education Services SD  
D.D.S. Loma Linda University SD 1964
- DICKINSON, ELIZABETH J. Associate Professor, Department of Cardiopulmonary Sciences AH  
M.P.H. Loma Linda University PH 1993
- DINGER, CORALIE LYNN. Instructor, Department of Dental Hygiene SD  
B.S. Loma Linda University SD 1990
- DOETSCH, JANE M. Clinical Instructor, School of Nursing SN  
B.S.N. California State University at San Bernardino 1976  
M.H.A. California State University at San Bernardino 1989
- DOHR, MAK NAI. Instructor, Department of Dental Hygiene SD  
B.S. Loma Linda University SD 1992
- DONALDSON, THOMAS K. Assistant Professor, Department of Orthopedic Surgery SM  
M.D. Loma Linda University SM 1984
- DORAN, KENNETH D. Clinical Instructor, Department of Medicine SM  
M.D. Loma Linda University SM 1957
- DOROSHOW, GEORGE D. Associate Clinical Professor, Department of Pediatrics SM  
M.D. University of Minnesota School of Medicine 1931
- DOROTTA, IHAB. Instructor, Department of Anesthesiology SM  
M.B.Ch.B. University of Alexandria 1995
- DORSEY, JOHN A. Instructor, Department of Psychiatry SM  
M.D. Jefferson Medical College 2000
- DOWNEY, RALPH III. Associate Professor, Department of Medicine SM and Department of Neurology SM  
Ph.D. University of California at Riverside 1989
- DOYLE, BRIAN S. Assistant Clinical Professor, Department of Orthopedic Surgery SM  
M.D. Baylor College of Medicine 1985
- DRAKE, CARLENE M. Associate Librarian, Library Faculty  
M.S.L.S. University of Southern California 1978
- DRAKE-HURST, ELAINE. Adjunct Assistant Professor, Department of Psychology ST  
Psy.D. Pepperdine University 1990
- DRIEBERG, KEITH. L. Adjunct Associate Professor, Department of Psychology ST; Assistant Clinical Professor, Department of Physical Medicine SM  
Ph.D. United States International University 1990  
M.P.H. Loma Linda University PH 1994
- DRINKARD, JAMES PHILLIP. Clinical Professor, Department of Medicine SM  
M.D. Georgetown University 1961
- DRYE, DANIEL J. Instructor, Department of Orthodontics SD  
D.D.S. Case Western Reserve University 2000
- DU, DAI VIEN. Assistant Professor, Department of Family Medicine SM  
M.D. University of California at Davis 1998
- DUCSAY, CHARLES A. Professor, Department of Physiology and Pharmacology SM  
Ph.D. University of Florida 1980
- DUERKSEN, PENELOPE J. Associate Professor, Department of Biochemistry and Microbiology SM  
Ph.D. Emory University 1987
- DUFF, JANEEN C. Instructor, Department of Dental Hygiene SD  
B.S. Loma Linda University SD 1981

- DUFFIN, R. MICHAEL. Assistant Clinical Professor, Department of Ophthalmology SM  
M.D. Johns Hopkins Medical School 1977
- DUMITRESCU, ADRIAN. Assistant Professor, Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 2001
- DUNBAR, JENNIFER A. Assistant Professor, Department of Ophthalmology SM  
M.D. Loma Linda University SM 1991
- DUNBAR, MARCIA A. Assistant Professor, School of Nursing SN  
M.S. Loma Linda University GS 1962
- DUNBAR, RICHARD D. Associate Professor, Department of Radiology SM  
M.D. Loma Linda University SM 1962
- DUNBAR, SABINE S. Assistant Professor, School of Nursing SN  
M.S. Central Queensland University 2002
- DUNBAR, STEPHEN G. Assistant Professor, Department of Earth and Biological Sciences ST  
Ph.D. Central Queensland University 2002
- DUNN, JAMES R. Associate Professor, Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1969
- DUONG, CHRISTINE A. Instructor, Department of Medicine SM  
M.D. Ross University SM 2000
- DUPPER, BRENT D. Assistant Professor, Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1988
- DUPPER, GILBERT L. Associate Professor, Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1967
- DUROSEAU, DANIEL. Adjunct Assistant Professor, Department of Dental Education Services SD  
D.D.S. Loma Linda University SD 2001
- DURY, DOROTHY C. Associate Professor, Department of Oral Diagnostic Radiology and Pathology SD  
D.D.S. University of Maryland Dental School 1980  
Ph.D. The Catholic University of America 1973
- DUS, IVAN. Assistant Professor, Department of Orthodontics SD  
M.D. University of Padua (Italy) 1980
- DUWAL, RAMILA D. Assistant Professor, Department of Psychiatry SM  
M.D. Loma Linda University SM 1998
- DYER, JAMES F., JR. Assistant Professor, Department of Psychiatry SM; Associate Professor, Department of Social Work and Social Ecology ST  
M.S.W. West Virginia University at Morgantown 1966
- DYJACK, ANGELA B. Assistant Clinical Professor, Department of Environmental/Occupational Health PH  
M.P.H. Loma Linda University PH 1981
- DYJACK, DAVID T. Associate Professor, Department of Preventive Medicine SM and Department of Environmental and Occupational Health PH  
Dr.P.H. University of Michigan 1996
- DYSINGER, JUNE. Instructor, School of Nursing SN  
M.N. Emory University Nell Hodgson Woodruff School of Nursing 1994
- DYSINGER, WAYNE S. Assistant Professor, Department of Preventive Medicine SM and Department of Health Administration PH; Associate Professor, Department of Family Medicine SM  
M.D. Loma Linda University SM 1986  
M.P.H. Loma Linda University PH 1990
- EACHUS, H. TODD. Clinical Instructor, Department of Pediatrics SM  
Ed.D. University of Massachusetts at Amherst 1969
- EARL, JOYCE. Adjunct Professor, Department of Psychology ST  
Ph.D. United States International University 1982
- EARLL, ART CHARLES. Adjunct Assistant Professor, Faculty of Religion FR
- EARP, JUDY HALSTEAD. Clinical Instructor, School of Nursing SN  
M.H.A. University of La Verne 1997
- EBBE, CHRISTOPHER E. Clinical Professor, Department of Psychology ST  
Ph.D. University of Missouri at Columbia 1971
- EBY, MICHAEL W. Instructor, Department of Gynecology and Obstetrics SM  
M.D. Loma Linda University SM 1998
- EDDOW, CHRISTINE MARIE. Clinical Instructor, Department of Physical Therapy AH  
M.P.T. University of Southern California 1990
- EDMUNDSON, DONNA T. Clinical Instructor, School of Nursing SN  
M.S.N. California State University at Dominguez Hills 1995

- EDWARDS, LINCOLN PAUL. Assistant Professor,  
Department of Physiology and  
Pharmacology SM  
Ph.D. Loma Linda University GS 1998
- EFTIMIE, LIVIU FLORIAN. Assistant Professor,  
Department of Oral and Maxillofacial  
Surgery SD  
D.M.D. Dental School Tg at Mures (Romania)  
1989  
D.D.S. Loma Linda University SD 1993
- EGELBERG, JAN H. Adjunct Professor,  
Department of Periodontics SD  
D.D.S. Royal Dental School (Malmo) 1960
- EGGER, DAVID W. Assistant Professor,  
Department of Pediatrics SM  
M.D. Oregon Health Sciences University 1996
- EHRLER, TODD B. Instructor, Department of  
Orthodontics SD  
D.D.S. Loma Linda University SD 2002
- EHRLER, V. LORRAINE. Instructor, Department  
of Dental Hygiene SD  
B.S. Loma Linda University SD 1968
- EICHENBERG, BRIAN J. Clinical Instructor,  
Department of Surgery SM  
M.D. Georgetown School of Medicine 1994
- EJIKE, JANETH C. Assistant Professor,  
Department of Pediatrics SM  
M.B.B.S. University of Lagos 1994
- EKE, CLIFFORD C. Assistant Clinical Professor,  
Department of Surgery SM  
M.D. Loma Linda University SM 1992
- ELDER, HARVEY A. Professor, Department of  
Medicine SM and Department of Global  
Health PH  
M.D. Loma Linda University SM 1957
- ELI, BRADLEY ALLEN. Adjunct Assistant  
Professor, Department of Physical Medicine  
SM  
D.M.D. Temple University School of Dentistry  
1987
- ELIAS, GRACE SALIM. Assistant Clinical  
Professor, Department of Surgery SM  
M.D. Loma Linda University SM 1979
- ELIAS, INTITHAR S. M. Assistant Professor,  
Department of Allied Health Studies AH  
M.S. Loma Linda University GS 1979
- ELISON, JOSEPH M. Assistant Professor,  
Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 2003
- ELKEEB, LAILA M. Instructor, Department of  
Medicine SM  
M.B.B.Ch. Al Fateh University at Tripoli  
(Libya) 1990
- ELLER, CHERYL G. Assistant Professor,  
Department of Dental Hygiene SD  
B.S. Loma Linda University SD 1980
- ELLINS, STUART. Adjunct Professor, Department  
of Psychology ST  
Ph.D. University of Delaware 1972
- ELLIS, GERALD ALLEN. Clinical Instructor,  
Department of Cardiopulmonary Sciences  
AH  
M.B.A. University of La Verne 1990
- ELLIS, JANE E. Assistant Professor, Department  
of Oral Diagnostic Radiology and Pathology  
SD  
D.D.S. Loma Linda University SD 1983
- ELLSTROM, MERVIN L. Assistant Professor,  
Department of Pediatric Dentistry SD  
D.D.S. Loma Linda University SD 1975  
M.P.H. Loma Linda University PH 1975
- ELMENDORF, EDWARD NEIL III. Associate  
Professor, Department of Pediatrics SM  
M.D. Loma Linda University SM 1973
- ELO, JEFFREY A. Instructor, Department of Oral  
and Maxillofacial Surgery SD  
D.D.S. Indiana University School of Dentistry  
2002
- ELSHERIF, ISMAIL I. Assistant Professor,  
Department of Endodontics SD  
B.D.S. Cairo University 1979
- EMANUELLI, SILVIO F. Adjunct Assistant  
Professor, Department of Restorative  
Dentistry SD  
D.D.S. University of Pavia 1986
- EMMERSON, WILLIAM JOHN. Assistant  
Professor, Department of Orthodontics SD  
D.D.S. Loma Linda University SD 1980
- ENGE, KARI M. Assistant Clinical Professor,  
Department of Psychiatry SM  
M.D. University of Oslo School of Medicine  
1983
- ENGLANDER, DAVID M. Assistant Professor,  
Department of Emergency Medicine SM  
M.D. Temple School of Medicine 1973
- ENIX, DEBORAH. Clinical Instructor,  
Occupational Therapy AH  
M.P.H. Loma Linda University PH 1984
- ERICKSON, DAVID G. Clinical Instructor,  
Department of Orthopedic Surgery SM  
B.S. Loma Linda University 1986
- ERICSON, AVIS. Professor, Department of  
Pharmacy Practice, SP  
Pharm.D. University of Kentucky (Lexington)  
1973

- ESCHER, ALAN PIERRE. Associate Professor,  
Department of Biochemistry and  
Microbiology SM  
Ph.D. Cornell University 1992
- ESCOBAR-PONI, BERTHA C. Assistant Professor,  
Department of Pathology and Human  
Anatomy SM  
M.D. University Centro–Occidental Lisandro  
Alvarado
- ESCUTIN, RODOLFO ONG, JR. Assistant  
Professor, Department of Neurology SM  
M.D. University of Santo Tomas College of  
Medicine 1987
- ESTEY, MARK EDWARD. Assistant Professor,  
Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1998
- ESTRELLA, JAIME R. Instructor, Department of  
Restorative Dentistry SD  
D.D.S. Universidad Autonoma de Baja  
California 2001
- EVANS, DWIGHT C. Associate Professor,  
Department of Medicine SM and  
Department of Health Administration PH  
M.D. Loma Linda University SM 1973
- EVANS, J. ROBERT. Clinical Instructor,  
Department of Medicine SM  
M.D. Jefferson Medical College 1982
- EVERETT, LORI LYNN. Adjunct Professor,  
Department of Dental Education Services  
SD  
D.D.S. Loma Linda University SD 1988
- EVERETT, ROLANDA R. Instructor, Department  
of Pediatrics SM  
M.D. Loma Linda University SM
- EZPELETA, ERMA P. Instructor, Department of  
Radiation Technology AH  
B.S. Loma Linda University 1994
- FAHEY, LEONA W. Instructor, Department of  
Periodontics SD  
B.S. Loma Linda University SD 1991
- FAIRHURST, JANELLE C. Instructor, Department  
of Dental Hygiene SD  
B.S. Loma Linda University SD 1988
- FALTAS, NABIL S. Assistant Clinical Professor,  
Department of Psychiatry SM  
M.D. Cairo University 1978
- FAN, JOSEPH T. Assistant Professor, Department  
of Ophthalmology SM  
M.D. University of California at San Diego  
1990
- FAN, VICTOR S. C. Assistant Professor,  
Department of Endodontics SD  
Ph.D. University of Minnesota 1973  
D.M.D. University of Louisville 1984
- FANG, DENNY Y. Assistant Professor, Department  
of Endodontics SD  
D.D.S. University of California at Los Angeles  
SD 1998
- FANOUS, YVONNE F. Associate Professor,  
Department of Pediatrics SM  
M.D. Cairo University 1973
- FARGO, RAMIZ A. Assistant Professor,  
Department of Medicine SM  
M.D. Loma Linda University SM 1996
- FARGO, WISE N. Assistant Professor, Department  
of Pediatrics SM  
M.D. University of Baghdad 1967
- FARLEY, JOHN R. Research Professor,  
Department of Medicine SM and  
Department of Biochemistry and  
Microbiology SM  
Ph.D. University of California at Davis 1977
- FARNOS-VISEDÓ, ALVARO. Adjunct Assistant  
Professor, Department of Restorative  
Dentistry SD  
D.D.S. Murcia University School of Dentistry  
(Spain) 1998
- FAROKHIAN, FARSHIN. Assistant Professor,  
Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 2003  
D.M.D. Azad University 1999
- FAROOQI, MUBASHIR A. Assistant Clinical  
Professor, Department of Psychiatry SM  
M.B.B.S. Khyber Medical College (Pakistan)  
1979
- FARRAGE, JAMES ROBERT. Associate Professor,  
Department of Orthodontics SD  
D.D.S. Loyola University School of Dentistry  
1965
- FAYARD, CARLOS R. Associate Professor,  
Department of Psychiatry SM  
Ph.D. California School of Professional  
Psychology 1988
- FAYARD, ELBA E. S. Associate Professor,  
Department of Pediatrics SM  
M.D. Buenos Aires Medical School 1979
- FECHTER, LAURENCE D. Research Professor,  
Department of Surgery SM  
Ph.D. University of Rochester 1973
- FEDAK, MARIAN ANNE. Assistant Clinical  
Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1969

- FEENSTRA, LAURENCE A. Clinical Instructor,  
Department of Cardiopulmonary Sciences  
AH  
B.S. California State University at San  
Bernardino 1974
- FERNANDO, MIGUELITO M. Associate Clinical  
Professor, Department of Gynecology and  
Obstetrics SM  
M.D. Far Eastern University 1961
- FERNANDO, NANCY R. Assistant Professor,  
Department of Pediatrics SM  
D.O. College of Osteopathic Medicine of the  
Pacific 1991
- FERNANDO, RONALD S. Assistant Professor,  
Department of Medicine SM  
M.D. Loma Linda University SM 1993
- FERRY, DAVID R. Associate Professor,  
Department of Medicine SM  
M.D. Loma Linda University SM 1976
- FERRY, LINDA H. Associate Professor,  
Department of Health Promotion and  
Education PH, Department of Family  
Medicine SM, and Department of  
Preventive Medicine SM  
M.D. Loma Linda University SM 1979  
Dr.P.H. Loma Linda University PH
- FIERRO, ROBERT A. Instructor, Department of  
Surgery SM  
B.S. University of Southern California 1999
- FILLMAN, MICHAEL J. Associate Professor,  
Department of Orthodontics SD  
M.P.H. Loma Linda University PH 1974  
D.D.S. Loma Linda University SD 1974
- FINLEY, J. MICHAEL. Assistant Clinical  
Professor, Department of Medicine SM  
D.O. Chicago College of Osteopathic Medicine  
1986
- FIREK, ANTHONY R. Assistant Professor,  
Department of Medicine SM  
M.D. University of Hawaii SM 1984
- FISCHER, DAN E. Adjunct Assistant Professor,  
Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1974
- FISHER, BRENT A. Assistant Professor,  
Department of Health Administration PH  
M.B.A. University of Texas at Austin 1992
- FISHER, FRANZ P. Assistant Professor,  
Department of Medicine SM  
M.D. Loma Linda University SM 1984
- FISHER, KENDRA L. Assistant Professor,  
Department of Radiology SM  
M.D. University of Calgary 1989
- FISHER, LORRAINE WHEATON. Clinical  
Instructor, Department of Nutrition and  
Dietetics AH  
M.S. Loma Linda University GS 1983
- FISHER, ROSS. Assistant Clinical Professor,  
Department of Pediatrics SM  
M.D. McGill University 1988
- FITZGERALD, GARRY J. Assistant Professor,  
Department of Health Administration PH  
M.D. Autonomous University of Guadalajara  
1973
- FITZPATRICK, MICHAEL J. Associate Professor,  
Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1987
- FITZSIMMONS, BETTY M. Clinical Instructor,  
Department of Clinical Laboratory Science  
AH  
M.S. California State University at Fullerton  
1987
- FLAXEL, CHRISTINA J. Assistant Professor,  
Department of Ophthalmology SM  
M.D. Oregon Health Sciences University 1988
- FLEMING, DIANA J. Adjunct Assistant Clinical  
Professor, Department of Preventive  
Medicine SM  
Ph.D. Tufts University 2001
- FLEMING, ELAINE HELEN. Assistant Professor,  
Department of Nutrition PH and  
Department of Nutrition and Dietetics AH  
M.P.H. Loma Linda University PH 1975
- FLEMING, JOHN S. Assistant Professor,  
Department of Family Medicine SM  
M.D. University of Tennessee 1961
- FLETCHER, HANSEL M. Associate Professor,  
Department of Biochemistry and  
Microbiology SM, Department of Surgery  
SM, and Department of Periodontics SD  
Ph.D. Temple University 1990
- FLETCHER, MADELYN LUCILLE. Assistant  
Professor, Department of Restorative  
Dentistry SD  
D.D.S. Loma Linda University SD 2000
- FLETCHER, WILLIAM. Professor, Department of  
Pathology and Human Anatomy SM  
Ph.D. University of California at Berkeley  
1972
- FLOREA, NAOMI R. Assistant Professor,  
Department of Pharmacy Practice, SP  
Pharm.D. University of Southern California  
2001

- FLORES, DANIEL ALEXANDER. Assistant Professor, Department of Orthodontics SD  
D.D.S. Loma Linda University SD 1982  
M.S. Loma Linda University GS 1988
- FLORES, LUIS A. Adjunct Professor, Department of Restorative Dentistry SD  
D.D.S. Universidad de San Carlos de Guatemala 1972
- FLORES, MARIO M. Assistant Professor, Department of Periodontics SD  
D.D.S. University of Mexico at Puebla State 1977
- FLOWERS, MARY A. Assistant Clinical Professor, Department of Medicine SM  
M.D. Harvard University 1978
- FODOR, ISTVAN PROFESSOR. Department of Biochemistry and Microbiology SM  
Ph.D. Institute of Molecular Biology, U.S.S.R. Academy of Science 1968
- FOGEL, TRAVIS G. Assistant Clinical Professor, Department of Physical Medicine SM  
Ph.D. Michigan State University at East Lansing 1999
- FOO, RON S. Assistant Clinical Professor, Department of Psychiatry SM  
M.D. Loma Linda University SM 1998
- FORD, ROBERT E. Professor, Department of Social Work and Social Ecology ST and Department of Earth and Biological Sciences ST  
Ph.D. University of California at Riverside 1982
- FORDE, RONALD E. Assistant Professor, Department of Dental Education Services SD  
D.D.S. Loma Linda University SD 1983
- FORLAND, STEVEN C. Assistant Professor, Department of Medicine SM and Department of Physiology and Pharmacology SM  
Pharm.D. University of California at San Francisco School of Pharmacy 1974
- FORRESTER, BONNIE JO. Associate Professor, Department of Physical Therapy AH  
D.P.T.Sc. Loma Linda University AH 2002
- FORRESTER, TERENCE JOHN. Associate Professor, Department of Social Work and Social Ecology ST  
M.S.S.W. University of Louisville 1979
- FOSTER, GARY PAUL. Assistant Professor, Department of Medicine SM  
M.D. Loma Linda University SM
- FOSTER, GLENN L. Emeritus Professor, Department of Medicine SM  
M.D. College of Medical Evangelists 1957
- FOSTER, RAY L. Assistant Clinical Professor, Department of Orthopedic Surgery SM  
M.B.Ch.B. University of Cape Town (South Africa) 1959
- FOULSTON, R. MICHAEL. Assistant Professor, Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1986
- FOX, CURTIS A. Associate Professor, Department of Counseling and Family Science ST  
Ph.D. University of Tennessee at Knoxville 1997
- FOX, DAVID. Associate Clinical Professor, Department of Pediatrics SM  
Ph.D. United States International University 1980
- FOX, GEORGE. Clinical Professor, Department of Pediatrics SM  
Ph.D. George Peabody College 1954
- FOY, MAUDIE CANTRELL. Clinical Instructor, School of Nursing SN  
M.S.N. Loma Linda University GS 1997
- FRANCO, EDSON S. Instructor, Department of Surgery SM  
M.D. University of California at San Diego 1994
- FRANK, BEVERLY B. Adjunct Associate Professor, Department of Psychology ST  
Psy.D. Pepperdine University 1990
- FRANK, ROBERT JOHN. Lecturer, Department of Endodontics SD  
D.D.S. Ohio State University 1972
- FRANKS, KEVIN R. Assistant Professor, Department of Restorative Dentistry SD  
D.D.S. University of California at Los Angeles 1994
- FRASER, GARY E. Professor, Department of Medicine SM, Department of Preventive Medicine SM, and Department of Epidemiology and Biostatistics PH  
Ph.D. University of Auckland (New Zealand)  
M.B.Ch.B. University of Otago (New Zealand) 1969
- FRAUSTO, TERESA. Assistant Professor, Department of Psychiatry SM  
M.D. University of Illinois 1991
- FREDERICH, MICHAEL E. Assistant Professor, Department of Family Medicine SM  
M.D. University of Washington 1978

- FREEMAN, KIMBERLY R. Assistant Clinical Professor, Department of Social Work and Social Ecology ST  
Ph.D. Loma Linda University GS 1999
- FREIER, MARY-CATHERIN. Associate Professor, Department of Psychology ST and Department of Pediatrics SM  
Ph.D. University of Health Sciences, Chicago Medical School 1989
- FRENCH, KATTY JOY FENTON. Associate Professor, School of Nursing SN  
Ph.D. University of California at Riverside 1988
- FRENCH, ROBERT E. Assistant Professor, Department of Orthodontics SD  
D.D.S. Chicago College of Dental Surgery 1954  
M.S. Loma Linda University GS 1964
- FRIDEY, JOY L. Assistant Clinical Professor, Department of Pathology and Human Anatomy SM  
M.D. Medical College of Pennsylvania 1982
- FRIEDMAN, GERALD S. Assistant Clinical Professor, Department of Medicine SM  
M.D. University of Miami 1966
- FRIEDRICHSEN, ERIC J. Assistant Clinical Professor, Department of Ophthalmology SM  
M.D. Loma Linda University SM 1987
- FRIESEN, DEBRA K. Instructor, Department of Dental Hygiene SD  
B.S. Loma Linda University SD 1993
- FRITZ, HELMUTH F. Assistant Clinical Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1973
- FRITZSCHE, PEGGY J. Clinical Professor, Department of Radiology SM  
M.D. Loma Linda University SM 1966
- FRIVOLD, GEIR PAUL. Assistant Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1981  
M.P.H. Loma Linda University PH 1981
- FROST, DANETTA S. Clinical Instructor, Department of Nutrition and Dietetics AH  
B.S. Pacific Union College 1965
- FRYKMAN, ERIK K. Assistant Clinical Professor, Department of Environmental and Occupational Health PH and Department of Preventive Medicine  
M.D. Loma Linda SM 1996  
M.P.H. Loma Linda University PH 1999
- FRYKMAN, GARY K. Clinical Professor, Department of Orthopedic Surgery SM  
M.D. Loma Linda University SM 1965
- FUENTES, J. PAUL. Assistant Professor, Department of Periodontics SD  
D.D.S. University of California at Los Angeles 1981
- FUJIMOTO, EDWARD K. Professor, Department of Health Promotion and Education PH  
Dr.P.H. Loma Linda University PH 1982
- FUNADA, DEAN TAKASHI. Assistant Professor, Department of Pediatric Dentistry SD  
D.D.S. Loma Linda University SD 1996
- FUNG, GLEN A. Assistant Professor, Department of Dental Education Services SD  
D.D.S. Loma Linda University SD 1997
- FUNKHOUSER, LAURA S. Assistant Professor, Department of Pediatrics SM  
M.D. Eastern Virginia Medical School 1978  
M.P.H. Johns Hopkins University 1984
- FURBER, JULINE K. Assistant Professor, Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1980
- GABRIEL, EDWARD. Assistant Clinical Professor, Department of Radiology SM  
M.D. UHS/Chicago Medical School 1987
- GAEDE, DONN P. Assistant Professor, Department of Health Administration PH  
M.P.H. Loma Linda University PH 1979
- GAGE, ARTHUR DALE. Assistant Professor, Department of Endodontics SD  
D.D.S. University of California at Los Angeles 1991
- GALARNYK, IHOR A. Associate Clinical Professor, Department of Psychiatry SM  
M.D. McGill University at Montreal (Canada) 1982
- GALBRAITH, MICHAEL E. Adjunct Professor, School of Nursing SN and Department of Psychology ST  
Ph.D. Claremont Graduate School 1989
- GALLEMORE, JOSEPH D. Adjunct Assistant Professor, Department of Dental Education Services SD  
D.D.S. Loma Linda University SD 1993
- GALLEZ, FABRICE J. Instructor, Department of Periodontics SD  
D.D.S. Catholic University of Louvain (Belgium) 1996
- GALVEZ, CESAR AUGUSTO. Assistant Professor, Department of Health Promotion and Education PH  
Dr.P.H. Loma Linda University PH 2001

- GAMUNDOY, MARION E. Assistant Professor,  
School of Nursing SN  
J.D. Western University 1994
- GANCHINGCO, BARBARA J. Clinical Instructor,  
Department of Clinical Laboratory Science  
AH  
B.S. Loma Linda University AH 2001
- GANDY, MARY L. Assistant Clinical Professor,  
Department of Pediatrics SM  
M.D. Loma Linda University SM 1951
- GANGOLLY, JOTHI H. Instructor, Department of  
Anesthesiology SM  
M.B.B.S. Mysore Medical (India) 1972
- GANTES, BERNARD GEORGES. Associate  
Professor, Department of Periodontics SD  
D.D.S. University Rene Descartes (France)  
1978
- GARBER, DAVID L. Assistant Professor,  
Department of Restorative Dentistry SD  
D.D.S. Temple University 1974
- GARBER, STUART E. Assistant Professor,  
Department of Endodontics SD  
D.D.S. University of Texas–Dental Branch  
Houston 1999
- GARBEROGLIO, CARLOS A. Professor,  
Department of Surgery SM  
M.D. National University of Rosano 1973
- GARBEROGLIO, MARIA C. Assistant Professor,  
Department of Pediatrics SM  
M.D. National University of Rosano 1974
- GARCIA, GABRIELA ELIZABETH. Assistant  
Professor, Department of Orthodontics SD  
D.D.S. Universidad Nacional Autonoma de  
Honduras 1998
- GARCIA, HENRY ALBERT. Clinical Instructor,  
Department of Physical Therapy AH  
A.S. Loma Linda University AH 1990
- GARCIA, SANDRA T. Assistant Professor,  
Department of Dental Hygiene SD  
B.S. Loma Linda University SD 2003
- GARDINER, GEOFFREY A., SR. Professor,  
Department of Radiology SM  
M.D. College of Medical Evangelists 1949
- GARDNER, ROBERT W. Professor, Department of  
Social Work and Social Ecology ST  
Ph.D. University of Utah 1977
- GARLITOS, JUANITO MEDRANO. Assistant  
Clinical Professor, Department of Medicine  
SM  
M.D. University of Santo Tomas (Philippines)  
1978
- GARRETT, CONSTANCE L. Assistant Clinical  
Professor, Department of Nutrition PH;  
Clinical Instructor, Department of  
Nutrition and Dietetics AH  
M.S. Case Western Reserve University 1972  
M.A. University of Redlands 1981
- GARRISON, ROGER C. Assistant Professor,  
Department of Medicine SM  
D.O. Oklahoma State University, College of  
Osteopathic Medicine 1999
- GARVIN, PATRICIA LYNN. Clinical Instructor,  
School of Nursing SN  
M.N. University of Phoenix Southern  
California campus 1996
- GATOV, NELSON REED. Assistant Professor,  
Department of Orthodontics SD  
D.D.S. Loma Linda University SD 1975
- GEACH, BELIN G. Assistant Professor,  
Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 2005
- GELLER, ARNOLD Z. Associate Clinical  
Professor, Department of Radiology SM  
M.D. State University of New York, College of  
Medicine 1955
- GEMECHU, FEKEDE W. Assistant Clinical  
Professor, Department of Surgery SM  
M.D. Loma Linda University SM 1970
- GEORGE, KELLEY W. Assistant Clinical  
Professor, Department of Pediatrics SM  
M.D. University of Nevada at Reno 1985
- GHALAMBOR, NAVID. Assistant Clinical  
Professor, Department of Orthopedic  
Surgery SM  
M.D. University of Southern California 1993
- GHAMSARY, MARK M. Assistant Professor,  
Department of Epidemiology and  
Biostatistics PH  
Ph.D. University of California at Riverside  
1997
- GHAZAL, ELIZABETH A. Assistant Professor,  
Department of Anesthesiology SM  
M.D. Loma Linda University SM 1990
- GHAZAL, RONNY G. Assistant Clinical Professor,  
Department of Orthopedic Surgery SM  
M.D. Loma Linda University SM 1987
- GIANG, DANIEL W. Professor, Department of  
Neurology SM  
M.D. Loma Linda University SM 1983
- GIBBS, LILIANE H. Assistant Professor,  
Department of Radiology SM  
M.D. Lebanese University, Faculty of Medical  
Sciences 1991

- GIBSON, DESMOND D. Assistant Clinical Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1978
- GIBSON, DOROTHY W. Clinical Instructor, Department of Nutrition and Dietetics AH  
B.S. Pacific Union College 1966
- GIBSON, E. DELORES. Clinical Instructor, Department of Gynecology and Obstetrics SM  
CNM Loma Linda University 1973  
B.S.N. Loma Linda University SN 1959
- GIBSON, JAMES I. III. Instructor, Department of Orthodontics SD  
D.D.S. Loma Linda University SD 2003
- GIBSON, L. JAMES, JR. Adjunct Assistant Professor, Department of Earth and Biological Sciences ST  
Ph.D. Loma Linda University GS 1984
- GIEBEL, ARTHUR W. Assistant Professor, Department of Ophthalmology SM  
M.D. Loma Linda University SM 1991
- GIEBEL, HERBERT N. Adjunct Assistant Professor, Department of Family Medicine SM  
M.D. Loma Linda University SM 1988
- GIEM, MARLA GAY. Assistant Clinical Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1977
- GIERZ, MONIKA S. Associate Professor, Department of Psychiatry SM  
M.D. Medical School University of Wuerzburg (Germany) 1978
- GIESE, HERBERT A., JR. Assistant Clinical Professor, Department of Pediatrics SM  
M.D. Louisiana State University 1963  
M.P.H. Tulane University 1970
- GILBERT, BRADLEY PAUL. Assistant Clinical Professor, Department of Health Administration PH  
M.D. University of California at San Diego SM 1983
- GILBERT, MONIQUE. Instructor, Department of Clinical Laboratory Science AH  
B.S. Loma Linda University AH 1989
- GILBERT, RAYMOND D. Professor, Department of Physiology and Pharmacology SM  
Ph.D. University of Florida 1971
- GILBERT, ROGER N. Assistant Professor, Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1991
- GILL, GARRY G. Instructor, Department of Oral and Maxillofacial Surgery SD  
D.M.D. Case Western Reserve University 2004
- GILL, MICHELLE R. Assistant Professor, Department of Emergency Medicine SM  
M.D. Northeastern Ohio University College of Medicine 1995
- GILLESPIE, ANNE MARIE. Assistant Clinical Professor, School of Nursing SN  
M.S.N. Boston University 1981
- GIMBEL, HOWARD V. Professor, Department of Ophthalmology SM  
M.D. Loma Linda University SM 1960  
M.P.H. Loma Linda University PH 1978
- GIORDANO, EUGENIA. Adjunct Assistant Professor, Department of Health Administration PH  
M.D. La Plata National University (Argentina) 1985  
M.P.H. Loma Linda University PH 2000
- GIORDANO, OSCAR. Adjunct Associate Professor, Department of Health Administration PH  
M.D. La Plata National University (Argentina) 1978  
M.P.H. Loma Linda University PH 2000
- GIRGIS, RAAFAT W. Assistant Professor, Department of Psychiatry SM  
M.D. Cairo University SM 1981
- GLASGOW, CYNTHIA J. Instructor, Department of Family Medicine SM  
M.S.N. Azusa Pacific University 2004
- GLAVAZ, GERALD A. Assistant Professor, Department of Physician Assistant Sciences AH  
M.P.A. University of Nebraska 2003
- GNANADEV, APPANNAGARI. Associate Clinical Professor, Department of Surgery SM  
M.D. Kurnool Medical College (India) 1972
- GOBER, CARLA GAYLE. Assistant Professor, Faculty of Religion FR  
M.P.H. Loma Linda University PH 1985  
M.S. Loma Linda University GS 1994
- GODFREY, THOMAS E. Associate Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1957  
M.S. University of Minnesota 1961
- GODGES, JOSEPH JOHN. Assistant Professor, Department of Physical Therapy AH  
D.P.T. Loma Linda University AH 2001
- GOLD, PHILIP MICHAEL. Professor, Department of Medicine SM  
M.D. University of California at Los Angeles 1962
- GOLDEN, ALYSSA J. Instructor, Department of Dental Hygiene SD  
B.S. Loma Linda University SD 1995

- GOLDEN, GARY J. Assistant Professor,  
Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1977
- GOLDSTEIN, MICHAEL A. Adjunct Assistant  
Professor, Department of Psychology ST  
Psy.D. University of Denver School of  
Professional Psychology 1983
- GOLEY, JOHN A. Adjunct Assistant Professor,  
Department of Preventive Medicine SM  
Dr.P.H. Loma Linda University PH 1980
- GOLKAR, LINDA. Assistant Professor,  
Department of Medicine SM  
M.D. University of Southern California 1993
- GOLLIN, GERALD. Associate Professor,  
Department of Surgery SM and Department  
of Pediatrics SM  
M.D. University of California at San Francisco  
1987
- GOLLIN, YVONNE G. Assistant Professor,  
Department of Gynecology and Obstetrics  
SM  
M.D. University of California at San Francisco  
1987
- GOMER, PERIN D. Assistant Clinical Professor,  
Department of Neurology SM  
M.D. Loma Linda University SM 1986
- GOMES, MARSHALL E. Assistant Professor,  
Department of Medicine SM  
D.D.S. 1985
- GONZAGA, ALMA ALMARIO. Assistant Professor,  
Department of Medicine SM  
M.D. Far Eastern University (Philippines) 1979
- GONZAGA, EDUARDO JUAN, JR. Instructor,  
Department of Medicine SM  
M.D. Far Eastern University (Philippines) 1979
- GONZALES, AILEEN, C. Instructor, Department  
of Biochemistry and Microbiology SM  
M.P.H. Emory Rollins School of Public Health  
1999
- GONZALEZ, JAIME E. Assistant Professor,  
Department of Emergency Medicine SM  
M.D. Stanford University Medical School 1998
- GONZALEZ, RAMON RAFAEL, JR. Associate  
Professor, Department of Physiology and  
Pharmacology SM  
Ph.D. Wake Forest University 1973
- GONZALEZ, WILBERTH. Associate Clinical  
Professor, Department of Gynecology and  
Obstetrics SM  
M.D. Loma Linda University SM 1967
- GOODACRE, CHARLES J. Professor, Department  
of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1971
- GOODLOW, GERALD ROSS. Assistant Clinical  
Professor, Department of Physical Medicine  
SM  
M.D. Wayne State University 1984
- GOODRICH, SHARON ANNE. Assistant Clinical  
Professor, School of Nursing SN  
M.A. University of Redlands 1980
- GORDEN, MARK W. Assistant Professor,  
Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1976
- GORDON, ALEIDA. Clinical Instructor,  
Department of Nutrition and Dietetics AH  
M.P.H. Loma Linda University PH 1992  
M.B.A. University of Redlands 1998
- GORENBERG, ALAN E. Assistant Clinical  
Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1986
- GORENBERG, DANIEL. Associate Clinical  
Professor, Department of Medicine SM  
M.D. University of Illinois 1955
- GOSS, JAMES F. Associate Professor, Department  
of Cardiopulmonary Sciences AH  
B.S. Loma Linda University AH 2002
- GOSS, SYLVIA M. Assistant Librarian, Library  
Faculty  
M.L.S. University of Southern California 1985
- GOTTFRIED, MYRON LEON. Assistant Professor,  
Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1976
- GRABOWSKY, RICHARD L. Assistant Professor,  
Department of Pediatric Dentistry SD  
D.D.S. University of California at Los Angeles  
1975
- GRAHAM, DENNIS M. Clinical Instructor,  
Department of Cardiopulmonary Sciences  
AH  
A.A. College of the Desert 1976
- GRAMES, BARRY S. Assistant Clinical Professor,  
Department of Orthopedic Surgery SM  
M.D. Loma Linda University SM 1990
- GRANGAARD, LUELLE MARIE. Clinical  
Instructor, Department of Occupational  
Therapy AH  
M.A. University of Puget Sound 1983
- GRANGE, JEFFREY T. Associate Professor,  
Department of Emergency Medicine SM;  
Adjunct Assistant Professor, Department of  
Cardiopulmonary Sciences AH  
M.D. Loma Linda University SM 1994
- GRASSO, MINA J. Clinical Instructor, School of  
Nursing SN  
M.S.N. University of California at Los Angeles  
1988

- GRAVES, SHIRLEY J. Associate Librarian,  
Library Faculty  
M.S.L.S. University of Southern California  
1969
- GREEK, JAMES O. III. Adjunct Assistant  
Professor, Faculty of Religion FR;  
Department of Surgery SM  
D.Min. Fuller Theological Seminary 1985
- GREEK, RAMONA P. Assistant Professor, School  
of Nursing SN  
Ph.D. Texas Women's University 1987
- GREEN, LORA M. Research Professor,  
Department of Radiation Medicine SM and  
Department of Biochemistry and  
Microbiology; Professor, Department of  
Medicine SM  
Ph.D. University of California at Riverside  
1987
- GREEN, STEVEN M. Professor, Department of  
Emergency Medicine SM and Department  
of Pediatrics SM; Assistant Professor,  
Department of Cardiopulmonary Sciences  
AH  
M.D. University of California at San Diego  
1985
- GREENBECK, SALLY PALANOS. Assistant  
Professor, Department of Clinical  
Laboratory Science AH  
M.P.H. Loma Linda University PH 1996
- GREENWOOD, JOHN P. Assistant Professor,  
Department of Restorative Dentistry SD  
D.D.S. University of Southern California 1982
- GREGG, ROBERT H. Associate Clinical  
Professor, Department of Gynecology and  
Obstetrics SM  
M.D. Ohio State Medical School 1948
- GRIDLEY, DAILA S. Professor, Department of  
Radiation Medicine SM, Department of  
Medicine SM, and Department of  
Biochemistry and Microbiology  
Ph.D. Loma Linda University GS 1978
- GRIFFIN, MARGARET ANN SLAUGHTER.  
Assistant Professor, Department of  
Medicine SM  
M.D. Washington University at St. Louis 1977
- GRIFFIN, RONALD ALPHONSO. Assistant  
Professor, Department of Medicine SM  
M.D. George Washington University 1971
- GRIFFITH, ANDREA Y. Lecturer, Library Faculty  
M.L.I.S. San Jose State University
- GRILL, BRUCE B. Associate Clinical Professor,  
Department of Pediatrics SM  
M.D. Vanderbilt University 1976
- GROHAR, ALBIN H. Associate Professor,  
Department of Health Administration PH  
Ph.D. Andrews University
- GROPEN, JOSEPH. Clinical Professor,  
Department of Medicine SM  
M.D. University of Health Sciences Medical  
School 1948
- GROSS, MATTHEW F. Assistant Professor,  
Department of Pediatrics SM  
M.D. University of Illinois at Chicago
- GRUBE, GERALD L. Assistant Professor,  
Department of Radiology SM  
M.D. Loma Linda University SM 1971
- GRUMMONS, DUANE CHARLES. Assistant  
Professor, Department of Orthodontics SD  
D.D.S. Marquette University 1970
- GRYKA, REBECCA J. Associate Professor,  
Department of Pharmacy Practice SP  
Pharm.D. University of Southern California  
1980  
Ph.D. University of Southern California 1984
- GUEDES, DARTAGNAN P. Adjunct Professor,  
Department of Health Promotion and  
Education PH  
Ph.D. Universidad de Sao Paulo 1994
- GUERRERO, JENNIFER LOUISE. Instructor,  
Department of Health Information  
Management AH  
B.S. Loma Linda University AH 1997
- GUEVARA-CHANNELL, PATRICIA. Assistant  
Clinical Professor, Department of Family  
Medicine SM  
M.D. University Technologique de Pereira  
(Colombia) 1988
- GUGAN, AGNES S. Assistant Professor,  
Department of Pediatrics SM  
M.D. University Catholique de Couvain  
(Belgium) 1977
- GUILLEN, THERESA CHRISTINE. Instructor,  
Department of Dental Hygiene SD  
B.S. Loma Linda University SD 1994
- GULDNER, GREGORY T. Assistant Professor,  
Department of Emergency Medicine SM  
and Department of Pediatrics SM  
M.D. Stanford University 1997
- GULLEY, JAMES LEONARD. Lecturer,  
Department of Oral Diagnostic Radiology  
and Pathology SD  
Ph.D. Loma Linda University GS 1994
- GUNDERSON, KATHRYN I. Clinical Instructor,  
Department of Occupational Therapy AH  
M.S. California State University at Los Angeles  
1988

- GUNNARSSON, DELIGHT S. Assistant Professor,  
Department of Dental Hygiene SD  
B.S. Loma Linda University SD 1999
- GUNNARSSON, JOCELYN E. Assistant Professor,  
Department of Medicine SM  
M.D. Loma Linda University SM
- GUPTA, SUBHAS C. Associate Professor,  
Department of Surgery SM  
M.D. McGill University 1992  
Ph.D. University of Louisville/Columbia State  
University 1997
- GURULE, DONNA LYNNE. Assistant Professor,  
Department of Environmental and  
Occupational Health PH  
M.P.H. Loma Linda University PH
- GUSTAFSON, G. ALLEN. Associate Clinical  
Professor, Department of Orthopedic  
Surgery SM  
M.D. Loma Linda University SM
- GUSTAVSSON, LARS G. Assistant Clinical  
Professor, Department of Global Health PH  
M.B.A. Andrews University 1990
- GUTH, KATHLENE B. Assistant Clinical  
Professor, Department of Radiology SM  
M.D. Loma Linda University SM
- GUTHRIE, GEORGE E. Adjunct Assistant  
Professor, Department of Preventive  
Medicine SM  
M.D. Loma Linda University SM
- GUTHRIE, IVANNA K. Assistant Professor,  
Department of Social Work and Social  
Ecology ST  
Ph.D. Arizona State University
- GUZEK, JAMES P. Associate Clinical Professor,  
Department of Ophthalmology SM  
M.D. Hahnemann Medical College 1978
- GUZMAN, ERNIE. Assistant Professor,  
Department of Pediatrics SM  
M.D. Albert Einstein College of Medicine 1986
- GUZON-CASTRO, ERLINDA. Assistant Professor,  
Department of Anesthesiology SM  
M.D. University of Santo Tomas (Manila) 1965
- GYSIN, REINHARD. Assistant Research Professor,  
Department of Medicine SM  
Ph.D. University of Basel (Switzerland) 1976
- HAACKE, E. MARK. Adjunct Professor,  
Department of Radiology SM  
Ph.D. University of Toronto 1978
- HADDAD, ELLA HASSO. Associate Professor,  
Department of Nutrition PH  
Dr.P.H. Loma Linda University PH 1978
- HADDAD-WILSON, MOUNA EDMOND. Assistant  
Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1991
- HADDOCK, BRYAN LEROY. Assistant Clinical  
Professor, Department of Health Promotion  
and Education PH  
Dr.P.H. Loma Linda University PH 1997
- HADLEY, G. GORDON. Professor, Department of  
Pathology and Human Anatomy SM  
M.D. College of Medical Evangelists 1944
- HADLEY, H. ROGER. Professor, Department of  
Surgery SM  
M.D. Loma Linda University SM 1974
- HAERICH, PAUL E. Professor, Department of  
Psychology ST  
Ph.D. University of Florida 1989
- HAGE, JEAN-CLAUDE. Assistant Clinical  
Professor, Department of Family Medicine  
SM and Department of Physiology and  
Pharmacology SM  
M.D. University of Sherbrooke (Canada) 1992
- HAGGLOV, CALVIN G. Instructor, Department of  
Family Medicine SM  
M.D. University of Manitoba 2002
- HAGLUND, LAUREL A. Instructor, Department  
of Dental Hygiene SD  
B.S. Loma Linda University 1992
- HAHN, YOUNG II. Assistant Clinical Professor,  
Department of Gynecology and Obstetrics  
SM  
M.D. Loma Linda University SM 1964
- HAIIVY, JACOB. Assistant Professor, Department  
of Oral and Maxillofacial Surgery SD  
M.D. Mt. Sinai School of Medicine 1997  
D.D.S. New York University, College of  
Dentistry 1994
- HAIMSON, DAVE. Adjunct Assistant Clinical  
Professor, Department of Psychology ST  
Ph.D. Brigham Young University 1980
- HALL, B. DANIEL. Associate Professor,  
Department of Restorative Dentistry SD  
D.D.S. University of San Francisco 1961
- HALL, RAYMOND G, JR. Associate Professor,  
Department of Physiology and  
Pharmacology SM  
Ph.D. Loma Linda University GS 1968
- HALL, SUSAN L. Assistant Professor, Department  
of Medicine SM  
Ph.D. Loma Linda University GS 1996  
M.D. Loma Linda University SM 1998

- HALLER-WADE, TINA M. Assistant Clinical Professor, Department of Family Medicine SM  
D.O. Kirsville College of Osteopathy 1990
- HALLMEYER, ARND. Adjunct Professor, Department of Environmental and Occupational Health PH  
M.D. Humboldt University Berlin 1968
- HALLSTROM, HADAR P. G. Associate Professor, Department of Periodontics SD  
D.D.S. University of Lund, Faculty of Odontology (Sweden) 1977
- HALSTEAD, LINDA G. Assistant Professor, Department of Health Promotion and Education PH  
M.A. University of California at Riverside 1979
- HALVERSON, JANET E. Instructor, Department of Pediatrics SM  
M.S.N. University of California at Los Angeles 1981
- HAMADA, DEBRA LYNN. Instructor, Department of Health Information Management AH  
A.B. College of St. Scholastica 1984
- HAMAMURA, RICHARD K. Assistant Professor, Department of Anesthesiology SM  
M.D. Loma Linda University SM 1960
- HAMERSLOUGH, RHONDA D. Assistant Professor, Department of Dental Hygiene SD  
M.A. Azusa Pacific University 2000
- HAMMOND, PAUL G. Associate Clinical Professor, Department of Medicine SM  
M.B.B.S. University of Oxford (England) 1970
- HAN, YONG Y. Assistant Professor, Department of Pediatrics SM  
M.D. Tufts University 1994
- HANDYSIDES, ROBERT A. Assistant Professor, Department of Endodontics SD  
D.D.S. Loma Linda University SD 1993
- HANNA, SUZANNE MIDORI. Professor, Department of Counseling and Family Science ST  
Ph.D. Brigham Young University 1982
- HANSEN, KENT A. Assistant Professor, Department of Dental Education Services SD  
J.D. Willamette University 1979
- HANSON, SHARON H. Associate Professor, Department of Pharmacy Practice SP  
Pharm.D. University of Southern California 1979
- HARDER, SHERI L. Adjunct Assistant Professor, Department of Radiology SM  
M.D. University of Saskatchewan 1994
- HARDESTY, JEFFREY STEVEN. Assistant Professor, Department of Gynecology and Obstetrics SM  
M.D. Loma Linda University SM 1980
- HARDESTY, ROBERT A. Clinical Professor, Department of Surgery SM  
M.D. Loma Linda University SM 1978
- HARDIN, STEVEN BARTON. Assistant Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1985
- HARDING, GEORGE T. IV. Professor, Department of Psychiatry SM  
M.D. Loma Linda University SM 1953
- HARDT, WILLIAM HARRY. Assistant Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1994
- HARDY, DIANE S. Clinical Instructor, Department of Occupational Therapy AH  
B.S. Loma Linda University AH 1979
- HARGER, CHARLES G. Adjunct Assistant Professor, Department of Restorative Dentistry SD  
D.D.S. University of Texas at Houston 1961
- HARMS, LAWRENCE A. Assistant Clinical Professor, Department of Surgery SM  
M.D. Loma Linda University SM 1983
- HARRIS, D. P. Assistant Professor, Division of General Studies ST  
Ph.D. Claremont Graduate University 1995
- HARRIS, MELVYN LEWIS. Assistant Professor, Department of Emergency Medicine SM  
M.D. University of Oklahoma Medical Center 1977
- HARRIS, SHEILA ANN. Assistant Professor, Department of Pediatric Dentistry SD  
D.D.S. Loma Linda University SD 1998
- HART, DYNNETTE. Associate Professor, School of Nursing SN  
Dr.P.H. Loma Linda University PH 1994
- HART, ELAINE A. Instructor, Department of Gynecology and Obstetrics SM  
M.D. Loma Linda University SM 2000
- HART, JUDITH A. Clinical Instructor, School of Nursing SN  
M.S.N. Loma Linda University 1969
- HART, KENNETH W. Assistant Professor, Department of Global Health PH and Department of Preventive Medicine SM  
M.D. Loma Linda University SM 1969

- HART, RICHARD H. Professor, Department of Global Health PH, Department of Health Promotion and Education PH, and Department of Preventive Medicine SM  
M.D. Loma Linda University SM 1970  
Dr.P.H. John Hopkins University 1977
- HASANIYA, NAHIDH W. Assistant Professor, Department of Surgery SM  
M.D. Kuwait School of Medicine 1987  
Ph.D. University of Hawaii
- HASHIMOTO, MASAHIRO. Adjunct Instructor, Department of Allied Health Studies AH  
B.A. National Mie University 1983
- HASHMI, AIJAZ. Assistant Professor, Department of Pediatrics SM  
M.D. University of Ottawa 1989
- HASSAN, MOHAMED AMIN. Assistant Professor, Department of Periodontics SD  
B.D.S. Cairo University Dental School 1991
- HASSETT, LESLIE C. Associate Librarian, Library Faculty  
M.L.S. University of California at Los Angeles 1986
- HASSO, ANTON. Clinical Professor, Department of Radiology SM  
M.D. Loma Linda University SM 1967
- HATAMI, KARIN. Assistant Professor, Department of Restorative Dentistry SD  
D.D.S. University of the Pacific 1992
- HATHOUT, EBA H. Professor, Department of Pediatrics SM  
M.D. Faculty of Medicine at Kuwait 1985
- HATTIS, RONALD P. Associate Clinical Professor, Department of Preventive Medicine SM and Department of Health Administration PH  
M.D. University of California at San Francisco 1968
- HAU, BENNY. Assistant Professor, Department of Physician Assistant Sciences AH  
M.D. Loma Linda University SM 1991
- HAUCK, ARTHUR J. Adjunct Associate Professor, Department of Pathology and Human Anatomy SM  
M.D. Loma Linda University SM 1976
- HAVILAND, MARK G. Professor, Department of Psychiatry SM  
Ph.D. University of Northern Colorado 1979
- HAWKINS, LEE ANN. Clinical Instructor, School of Nursing SN  
M.S.N. Azusa Pacific University 1997
- HAYASAKA, RUBY A. Clinical Instructor, Department of Nutrition and Dietetics AH  
M.A. University of Redlands 1986
- HAYCOCK, KORBIN H. Assistant Professor, Department of Emergency Medicine SM  
M.D. Loma Linda University SM 2000
- HAYDEN, JONATHAN M. Assistant Professor, Department of Emergency Medicine SM  
M.D. Loma Linda University SM 1994
- HAYES, WILLIAM K. Professor, Department of Earth and Biological Sciences ST  
Ph.D. University of Wyoming 1991
- HAYNES-LEE, JOAN E. Assistant Professor, Department of Family Medicine SM  
M.D. Howard University 1994
- HAYWOOD, L. JULIAN. Clinical Professor, Department of Medicine SM  
M.D. Howard University 1952
- HEART, JOYA. Assistant Professor, Department of Pediatrics SM  
M.D. Michigan State University College of Human Medicine 1992
- HEGARTY, THOMAS J. Associate Clinical Professor, Department of Radiation Medicine SM  
M.D. Loma Linda University SM 1982
- HEGEWALD, KEVIN G. Assistant Professor, Department of Emergency Medicine SM  
M.D. Eastern Virginia Medical School 1997
- HEGSTAD, DOUGLAS R. Associate Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1980
- HEIGHT, VICKIE Y. Assistant Clinical Professor, Department of Medicine SM  
M.D. Albert Einstein College of Medicine 1981
- HEINE, NANCY J. Instructor, Department of Medicine SM  
M.Ed. University of Southern California 1996
- HEINRICH, BRUCE SCOTT. Assistant Professor, Department of Orthodontics SD  
D.D.S. Loma Linda University SD 1984
- HEINRICHS, GLENN A. Adjunct Assistant Professor, Department of Psychology ST  
Ph.D. Fuller Theological Seminary 1995
- HEISKELL, LAWRENCE E. Assistant Clinical Professor, Department of Surgery SM  
M.D. University of Guadalajara 1985
- HEISLER, WILLIAM HENRY. Professor, Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1959
- HENDERSON, DAVID ANTHONY. Assistant Professor, Department of Pathology and Human Anatomy SM  
Ph.D. University of Southern California 1979

- HENDERSON, SONDRÁ DIMAYO. Clinical Instructor, Department of Nutrition and Dietetics AH  
M.P.H. Loma Linda University PH 1981
- HENRIQUEZ, JORGE A. Adjunct Professor, Department of Health Promotion and Education PH  
Ph.D. Universidade Federal Sao Paulo/EPM 1993
- HENRY-SAVAJOL, OLIVIER. Assistant Clinical Professor, Department of Restorative Dentistry SD  
D.D.S. University of the Mediterranean, School of Dentistry (France) 2001
- HERBER, MARILYN D. Instructor, Department of Gynecology and Obstetrics SM  
M.D. Loma Linda University SM 1958
- HERBER, RAYMOND A. Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1957
- HERFORD ALAN S. Associate Professor, Department of Oral and Maxillofacial Surgery SD and Department of Surgery SM  
D.D.S. Loma Linda University SD 1994  
M.D. University of Texas 1997
- HERINGTON, DIANA LYNN. Clinical Instructor, Department of Nutrition PH  
B.S. Northern Michigan University 1974
- HERNANDEZ, ELVIN ABUEG. Assistant Professor, Department of Social and Administrative Sciences SP  
Dr.P.H. Loma Linda University PH 2005
- HERRERA, LILIA. Assistant Professor, Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 2004
- HERRERA, WILLIAM R. Assistant Professor, Department of Restorative Dentistry SD  
Ph.D. Golden State University 1986
- HERRICK, KEVIN RAY. Assistant Clinical Professor, Department of Family Medicine SM  
Ph.D. University of Davis 1992  
M.D. University of Colorado 1998
- HERRING, ROSA PATRICIA. Associate Professor, Department of Health Promotion and Education PH  
Ph.D. Texas Women's University 1992
- HERRINGTON, VALERIE ROSE. Assistant Professor, Department of Neurology SM  
D.O. Michigan State University College of Osteopathic Medicine at Lansing 1987
- HERRMAN, JAN M. Assistant Clinical Professor, Department of Medicine SM  
M.D. Louisiana State University 1980
- HERRMANN, E. CLIFFORD. Associate Professor, Department of Biochemistry and Microbiology SM  
Ph.D. Virginia Polytechnic Institute 1970
- HERRMANN, MARILYN MURDOCH. Associate Professor, School of Nursing SN  
Ph.D. Claremont Graduate University 1992
- HERSH, H. MICHAEL. Assistant Professor, Department of Periodontics SD  
D.M.D. Washington University School of Dentistry 1972
- HERZBERGER, KATHY A. Instructor, Department of Medicine SM  
B.S.N. University of Phoenix 2000
- HESSINGER, DAVID A. Professor, Department of Physiology and Pharmacology SM  
Ph.D. University of Miami at Coral Gables 1970
- HEUSTIS, DARRYL G. Professor, Department of Pathology and Human Anatomy SM and Department of Clinical Laboratory Science AH  
M.D. Loma Linda University SM 1973
- HEWES, GORDON E. Assistant Professor, Department of Health Administration PH  
M.B.A. University of LaVerne 1992
- HEWITT, LIANE HINAZUMI. Assistant Professor, Department of Occupational Therapy AH  
M.P.H. Loma Linda University PH 1985
- HEYDE, MARILYNN GOULARD. Assistant Professor, Department of Dental Hygiene SD  
M.P.H. Loma Linda University PH 2000
- HEYWOOD, J. THOMAS. Professor, Department of Medicine SM  
M.D. University of California at San Diego 1980
- HICKMAN, DONALD MAC. Assistant Professor, Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1964
- HIEL, ELAINE G. Assistant Clinical Professor, Department of Nutrition PH  
M.P.H. University of California at Berkeley 1967
- HILGERS, JAMES J. Associate Professor, Department of Orthodontics SD  
D.D.S. Loyola University Chicago Dental School 1969
- HILLEBRAND, DONALD J. Associate Professor, Department of Medicine SM  
M.D. University of Iowa 1990
- HILLIARD, DENNIS A. Assistant Clinical Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1975

- HILLIKER, SANDRA R. Instructor, Department of Biochemistry and Microbiology SM  
Ph.D. Massachusetts Institute of Technology 1974
- HILLOCK, RONALD H. Associate Professor, Department of Clinical Laboratory Science AH; Assistant Research Professor, Department of Pathology and Human Anatomy SM  
Ph.D. University of Alabama at Birmingham 1972
- HILLS, RENEE L. Assistant Clinical Professor, Department of Health Administration PH  
M.S. Loma Linda University GS 1981
- HINDMAN, BERNARD W. Associate Professor, Department of Radiology SM  
M.D. University of Miami 1963
- HINDMAN, JOSEPH K. Assistant Clinical Professor, Department of Pediatrics SM  
M.D. Loma Linda University SM 1974
- HINGULA, MELISSA INGRAM. Clinical Instructor, Department of Health Information Management AH  
A.S. Cypress College 1987
- HINKLEMAN, LORRAINE L. Assistant Clinical Professor, Department of Nutrition PH and Department of Health Promotion and Education PH  
Dr.P.H. Loma Linda University PH 1990
- HINSHAW, DAVID B., JR. Professor, Department of Radiology SM  
M.D. Loma Linda University SM 1971
- HIROKANE, JANE M. Assistant Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1990
- HISADA, PAUL A. Assistant Professor, Department of Health Administration PH  
M.Ed. University of Hawaii at Manoa 1988
- HO, ANDREW T. Instructor, Department of Medicine SM  
M.D. University of San Diego Medical School 1999
- HOAG, E. PATRICK. Associate Professor, Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1973
- HOCKO, JANET M. Assistant Professor, Department of Radiation Medicine SM  
M.D. University of California at Irvine 1988
- HODGKIN, GEORGIA W. Professor, Department of Nutrition and Dietetics AH  
Ed.D. Loma Linda University SE 1991
- HODGKINS, MARIE E. Assistant Clinical Professor, School of Nursing SN  
M.B.A. University of LaVerne 1991
- HOFFER, JENNIFER LIANE. Assistant Professor, Department of Pediatric Dentistry SD  
D.D.S. Loma Linda University SD 1994
- HOFFMAN, CHARLES D. Adjunct Professor, Department of Psychology ST  
Ph.D. Adelphi University 1972
- HOFFMAN, WILLIAM C. Adjunct Assistant Professor, Department of Environmental and Occupational Health PH  
M.P.H. Loma Linda University PH 1995
- HOFFMANN, KEITH DAVID. Associate Professor, Department of Oral and Maxillofacial Surgery SD  
D.D.S. Loma Linda University SD 1983
- HOFFMANN, OLIVER C. Assistant Professor, Department of Periodontics SD  
D.D.S. Universidad Wunborg 1997
- HOLDEN, BRENDA HOATSON. Clinical Instructor, Department of Radiation Technology AH  
M.B.A. University of Redlands 1989
- HOLLANDS, J. KAPUA. Clinical Instructor, Department of Clinical Laboratory Science AH  
B.S. California State University at Pomona 1984
- HOLMAN, CHARLES MICHEAL. Assistant Professor, Department of Endodontics SD  
D.D.S. Loma Linda University SD 1963
- HOLMES, TROY ANDREW. Assistant Professor, Department of Health Administration PH  
M.H.A. Chapman University 1991
- HOLNESS, YVETTE ADRIENNE. Assistant Professor, Department of Physical Medicine SM  
M.D. Loma Linda University SM 1981
- HOLSHOUSER, BARBARA A. Associate Professor, Department of Radiology SM; Instructor Department of Radiation Technology AH  
Ph.D. Loma Linda University GS 1983
- HOLT, DAVID LYNN. Assistant Clinical Professor, Department of Health Administration PH  
M.B.A. University of Redlands 1989
- HOLT, ROBERT, JR. Associate Professor, Department of Periodontics SD  
D.D.S. Meharry Medical College 1979
- HOM, WENDELL. Adjunct Assistant Professor, School of Nursing SN  
B.S. University of California at Berkeley 1972
- HOMER, ROBERT JACKSON. Assistant Professor, Department of Orthodontics SD  
D.D.S. Loma Linda University SD 1957

- HONNY, JEAN M. Assistant Professor,  
Department of Dental Hygiene SD  
B.S. Loma Linda University SD 1997
- HOOKER, WILLIAM M. Associate Professor,  
Department of Pathology and Human  
Anatomy SM and Department of Dental  
Education Services SD  
Ph.D. Loma Linda University GS 1969
- HOPEWELL, WILLIAM J. III. Assistant Professor,  
Department of Surgery SM  
M.D. State University of New York at Syracuse  
1970
- HOPKINS, GARY L. Assistant Professor,  
Department of Health Promotion and  
Education PH  
M.D. Universidad Autonoma de Guadalajara  
1975  
Dr.P.H. Universidad Autonoma de Guadalajara  
1975
- HOPP, JOYCE WILSON. Dean Emerita and  
Distinguished Professor Emerita AH;  
Professor, PH  
Ph. D. University of Southern California 1974
- HOPPER, ANDREW O. Professor, Department of  
Pediatrics SM  
M.D. University of Texas Medical School 1977
- HOR, DAVID W. Adjunct Assistant Professor,  
Department of Dental Education Services  
SD  
D.D.S. Loma Linda University SD 1981
- HORINOUCI, CATHERINE KAZUE. Assistant  
Professor, School of Nursing SN  
M.S. California State University at Los Angeles  
1983
- HORSLEY, JOSHUA L. Clinical Instructor,  
Department of Psychiatry SM  
M.D. Loma Linda University SM 1999
- HORSTMANN, JONATHAN WILLIAM. Assistant  
Clinical Professor, Department of Family  
Medicine SM  
M.D. Washington University at St. Louis 1977
- HOTCHNER, BRADLEY R. Assistant Clinical  
Professor, Department of Orthopedic  
Surgery SM  
M.D. St. Louis University 1981
- HOUCHIN, KENNETH W. Assistant Clinical  
Professor, Department of Ophthalmology  
SM  
M.D. Loma Linda University SM 1985
- HOWARD, FRANK D. Assistant Professor,  
Department of Medicine SM  
Ph.D. Stanford University 1981  
M.D. Harvard Medical School 1985
- HOWARD, THORA F. Assistant Professor,  
Department of Radiology SM  
M.D. Loma Linda University SM
- HOXIE, RUSSELL EVAN, JR. Associate Professor,  
Department of Medicine SM  
M.D. Loma Linda University SM 1988
- HOYLE, JERRY D. Associate Clinical Professor,  
Department of Psychiatry SM  
Ph.D. California School of Professional  
Psychology 1980
- HSIA, PATRICIA C. Assistant Clinical Professor,  
Department of Medicine SM  
M.D. State University of New York at Buffalo  
1985
- HSU, FRANK P. K. Assistant Professor,  
Department of Surgery SM  
Ph.D. University of Maryland 1994  
M.D. University of Maryland 1985
- HSU, SHU-CHUAN CHEN. Clinical Instructor,  
Department of Occupational Therapy AH  
M.A. Texas Women's University 1979
- HSZIEH, KEVIN CHIH-WEN. Assistant Professor,  
Department of Pediatric Dentistry SD  
D.D.S. Loma Linda University SD 1998
- HUANG, GALEN C. L. Assistant Clinical  
Professor, Department of Medicine SM  
M.D. University of Miami School of Medicine  
1975
- HUANG, JAMES JUE-TE. Assistant Professor,  
Department of Medicine SM  
M.D. Boston University Medical School 1990
- HUANG, VIRGINIA S. S. Instructor, Department  
of Surgery SM  
M.D. Yale University 1985
- HUANG, WEN-HSIUNG LUKE. Assistant Clinical  
Professor, Department of Pediatrics SM  
M.D. Kaosiung Medical College 1968
- HUARINGA, ARMANDO J. Associate Professor,  
Department of Medicine SM  
M.D. National Major University of San Marcos  
1979
- HUBBARD, DORIS LYNN. Assistant Professor,  
Department of Counseling and Family  
Science ST  
D.V.M. University of Saskatchewan 1987

- HUBBARD, IONELA O. Assistant Professor,  
Department of Physical Medicine SM  
M.D. School of Medicine and Pharmacology  
(Romania) 1982
- HUBBARD, RICHARD W. Associate Research  
Professor, Department of Pathology  
and Human Anatomy SM and  
Department of Nutrition PH  
Ph.D. Purdue University 1961
- HUECKER, ESTHER. Assistant Professor,  
Department of Occupational Therapy AH  
M.A. University of Southern California 1993
- HUENERGARDT, DOUGLAS W. Professor,  
Department of Counseling and Family  
Science ST  
Ph.D. Northwestern University 1967
- HUFFAKER, GARY G. Assistant Clinical  
Professor, Department of Ophthalmology  
SM  
M.D. Loma Linda University SM 1973
- HUFFAKER, SUSAN MATTOON. Assistant  
Professor, Department of Physical Therapy  
AH  
M.P.T. Loma Linda University AH 1996
- HUGHES, W. WILLIAM, III. Associate Professor,  
Division of General Studies SM and  
Department of General Studies ST  
Ph.D. Loma Linda University GS 1978
- HUMPHRIES, VALERIE JEAN. Clinical Instructor,  
Clinical Laboratory Science AH  
M.S. California State University at Dominguez  
Hills 1981
- HUNG, YUAN-LUNG. Instructor, Department of  
Restorative Dentistry SD  
D.M.D. Centro Escobar University 1998
- HUNT, ENACIO G. Assistant Professor,  
Department of Medicine SM  
M.D. State University of New York, Downstate  
1984
- HURLBUTT, MICHELLE THERESIA. Instructor,  
Department of Dental Hygiene SD  
B.S. University of Nebraska 1979
- HURLEY, MARY E. Assistant Clinical Professor,  
Department of Orthopedic Surgery SM  
M.D. University of Colorado Health Science  
Center 1990
- HURT, THOMAS L. Assistant Professor,  
Department of Emergency Medicine SM  
M.D. West Virginia University School of  
Medicine 1983
- HUSSAIN, FARABI M. Assistant Clinical  
Professor, Department of Surgery SM  
M.D. Loma Linda University SM 1994
- HUSSEIN, GAMAL I. Associate Professor,  
Department of Pharmacy Practice SP  
Pharm.D. University of Texas at Austin and  
San Antonio 1991
- HUSTON, RONALD GEORGE. Adjunct Professor,  
Department of Counseling and Family  
Science ST  
Ph.D. United States International University  
1981
- HUYNH, VU Q. Instructor, Department of  
Restorative Dentistry SD  
D.M.D. Boston University Dental School 2003
- HWANG, BESSIE L. Assistant Clinical Professor,  
Department of Epidemiology and  
Biostatistics PH and Department of  
Preventive Medicine SM  
M.D. Loma Linda University SM 1968
- HYMAN, CHARLES J. Clinical Professor,  
Department of Pediatrics SM  
M.D. University of Pittsburgh School of  
Medicine 1967
- IBRAHIM, RAOUF A. Associate Clinical Professor,  
Department of Pediatrics SM  
M.B.Ch.B. Faculty of Medicine at Alexandria  
(Egypt) 1954
- IBRAHIM, WALEED A. Assistant Professor,  
Department of Medicine SM  
M.D. St. Georges University School of  
Medicine 1998
- IHDE, JANET K. Associate Clinical Professor,  
Department of Surgery SM  
M.D. Loma Linda University SM 1977
- IM, CAROL Y. Instructor, Department of  
Pediatrics SM  
M.D. Loma Linda University SM 2001
- IMES, CHERYL L. Assistant Clinical Professor,  
Department of Physical Medicine SM  
Ph.D. Indiana University-Purdue University  
1990
- IMPERIO, JOSHUA A. Assistant Professor,  
Department of Medicine SM  
M.D. University of the Philippines 1989
- ING, JEFFREY J. Assistant Clinical Professor,  
Department of Ophthalmology SM  
M.D. Loma Linda University SM 1992
- ING, MICHAEL B. Assistant Professor,  
Department of Medicine SM  
M.D. Loma Linda University SM 1990

- INGERSOLL, LEE R. Associate Clinical Professor,  
Department of Endodontics SD  
D.D.S. Loma Linda University SD 1970
- INGRAM, KATHIE M. Assistant Professor, School  
of Nursing SN  
M.S.N. Loma Linda University GS 1970
- IRWIN, BERNADINE L. Associate Professor,  
School of Nursing SN  
Ph.D. United States International University  
1984
- ISAAC, GEORGE M. Associate Professor,  
Department of Medicine SM  
M.D. Loma Linda University SM 1989
- ISAAC, IZABELLA. Assistant Clinical Professor,  
Department of Neurology SM  
M.D. Loma Linda University SM 1995
- ISAEFF, DALE M. Professor, Department of  
Medicine SM  
M.D. Loma Linda University SM 1965
- ISAEFF, WAYNE B. Associate Clinical Professor,  
Department of Ophthalmology SM  
M.D. Loma Linda University SM 1962
- ISHIBASHI, FUSAE. Adjunct Instructor,  
Department of Allied Health Studies AH  
M.O.T. Loma Linda University AH 2002
- ISINHUE, MING C. Assistant Clinical Professor,  
Department of Family Medicine SM  
M.D. University of California San Francisco  
1984
- ITOH, TAKEO. Adjunct Professor, Department of  
Allied Health Studies AH  
Ph.D. Kyushu University 1983
- IWATA, LUKE H. Assistant Professor, Department  
of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1977
- JABOLA, B. RODNEY. Instructor, Department of  
Radiation Medicine SM  
M.D. Loma Linda University SM 1980
- JACELDO-SIEGL, KAREN. Assistant Research  
Professor, Department of Nutrition PH  
Dr.P.H. Loma Linda University PH 2003
- JACKNIK, MICHELE A. Assistant Clinical  
Professor, Department of Health Promotion  
and Education PH  
M.S.Ed. Southern Illinois University at  
Carbondale 1977
- JACKSON, COURTNEY. Assistant Professor,  
Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1991
- JACKSON, CRAIG R. Associate Professor,  
Department of Social Work and Social  
Ecology GS and Department of Allied  
Health Studies AH  
M.S.W. Wayne State University 1976  
J.D. Western State University College of Law  
1993
- JACKSON, G VICTORIA. Assistant Professor,  
Department of Social Work and Social  
Ecology ST  
M.S.W. University of Michigan 1972
- JACKSON, MICHAEL H. Assistant Professor,  
Department of Health Administration PH  
M.P.H. University of California at Los Angeles  
1968
- JACOBS, DURAND F. Clinical Professor,  
Department of Psychiatry SM  
Ph.D. Michigan State University 1953
- JACOBS, RANDOLPH J. Assistant Clinical  
Professor, Department of Cardiopulmonary  
Sciences AH  
M.D. University of Southern California 1986
- JACOBS, RICHARD A. Clinical Instructor,  
Department of Nutrition and Dietetics AH  
Ph.D. University of Michigan 1971
- JACOBSON, ALAN K. Assistant Professor,  
Department of Medicine SM  
M.D. Loma Linda University SM 1981
- JACOBSON, HAROLD L. Assistant Professor,  
Department of Endodontics SD  
D.D.S. University of the Pacific 1980
- JACOBSON, J. PAUL. Assistant Professor,  
Department of Radiology SM  
M.D. University of California School of  
Medicine 1997
- JACOBSON, JOHN D. Associate Professor,  
Department of Gynecology and Obstetrics  
SM  
M.D. Loma Linda University SM 1970
- JAEGER, RICH W. Adjunct Professor,  
Department of Dental Education Services  
SD  
D.D.S. Loma Linda University SD 1980
- JAHROMI, MARJON B. Assistant Professor,  
Department of Dental Anesthesiology SD  
D.D.S. University of Michigan Dental School  
2001
- JAHROMI, MEHDI S. Assistant Clinical Professor,  
Department of Medicine SM  
M.D. Medical College of Ohio 1996

- JAIN, ANKUR. Instructor, Department of  
Medicine SM  
M.D. Northwestern University 2002
- JAKOBSEN, JOELLE L. Assistant Professor,  
Department of Surgery SM  
M.D. Loma Linda University SM 1996
- JAMES, PATRICIA L. Assistant Professor,  
Department of Emergency Medicine SM  
M.D. University of Michigan 1976
- JAMES, SIGRID. Associate Professor, Department  
of Social Work and Social Ecology ST  
Ph.D. University of Southern California 2003
- JAMISON, JUDITH MAY. Adjunct Assistant  
Professor, Department of Nutrition PH  
M.P.H. Loma Linda University PH 1976  
Ph.D. Texas Women's University
- JANG, G. DAVID. Professor, Department of  
Medicine SM  
M.D. Korea University College of Medicine  
1965
- JANNER, DONALD L. Associate Professor,  
Department of Pediatrics SM  
M.D. Georgetown School of Medicine 1986
- JANSEN, CARL. Associate Professor, Department  
of Radiology SM  
M.D. Loma Linda University SM 1963
- JANZ, MARK R. Assistant Clinical Professor,  
Department of Global Health PH  
M.P.S. Cornell University 1989
- JARAMILLO, DAVID E. Assistant Professor,  
Department of Endodontics SD  
D.D.S. Universidad Altonoma Guadalajara  
1989
- JAVOR, GEORGE T. Professor, Department of  
Biochemistry and Microbiology SM  
Ph.D. Columbia University 1967
- JAWOR, RONALD WALTER. Assistant Professor,  
Department of Orthodontics SD  
D.D.S. Loyola University at Chicago 1969
- JAYARAMAN, MADHANGI. Assistant Professor,  
Department of Pediatrics SM  
M.D. University of California at Irvine 2000
- JEFFREY, RONALD LEE. Assistant Professor,  
Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1980
- JEN, TRISHA. Assistant Professor, Department of  
Dental Anesthesiology SD  
D.D.S. Loma Linda University SD 2000
- JENG, LEO C. Assistant Professor, Department of  
Pediatrics SM  
M.D. New York Medical College 2000
- JENG, SHYUN. Assistant Professor, Department  
of Ophthalmology SM  
M.D. National Taiwan University 1979
- JENKINS, LOUIS E. Professor, Department of  
Psychology ST  
Ph.D. Pennsylvania State University 1973
- JENNINGS, JOHN C. Associate Professor,  
Department of Medicine SM  
M.D. Northwestern University 1970
- JESSE, CLARAN H., SR. Associate Clinical  
Professor, Department of Orthopedic  
Surgery SM  
M.D. College of Medical Evangelists 1944
- JESSE, JAMES THOMAS. Assistant Professor,  
Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1973
- JIH, WILLIAM W. Assistant Professor,  
Department of Family Medicine SM  
M.D. Albany Medical College 1999
- JIMENEZ, DANIEL. Adjunct Professor,  
Department of Environmental and  
Occupational Health PH  
M.D. University of Chile School of Medicine  
1972
- JIMENEZ, MARCELA. Adjunct Associate  
Professor, Department of Health Promotion  
and Education PH  
Ph.D. O. Lorand University at Budapest  
(Hungary) 1975
- JIMENEZ, PETER N. Assistant Professor,  
Department of Pediatric Dentistry SD  
D.D.S. Loma Linda University SD 2000
- JO, DAVID JAEKWAN. Assistant Professor,  
Department of Orthodontics SD  
D.D.S. Loma Linda University SD 1982
- JO, PHILIP DAE-HYUN. Instructor, Department  
of Endodontics SD  
D.D.S. Loma Linda University SD 2001
- JOB, ALLEN J. Instructor, Department of  
Pediatric Dentistry SD  
D.D.S. Loma Linda University SD 2003
- JOB, JAYAKARAN S. Associate Professor,  
Department of Preventive Medicine SM,  
Department of Global Health PH, and  
Department of Epidemiology and  
Biostatistics PH  
M.B.B.S. Christian Medical College (India)  
1975  
M.P.H. Loma Linda University PH 1985  
M.D. Christian Medical College Hospital  
Dr.P.H. Johns Hopkins Hospital

- JOB, LEELA. Associate Professor, Department of Pediatrics SM  
M.D. Christian Medical College (India) 1975
- JOBE, CHRISTOPHER MALLORY. Professor, Department of Orthopedic Surgery SM and Department of Pathology and Human Anatomy, SM  
M.D. Baylor College of Medicine 1975
- JOE, VICTOR C. Assistant Professor, Department of Surgery SM  
M.D. Medical College of Virginia 1995
- JOHNA, SAMIR D. Associate Professor, Department of Surgery SM  
M.D. University of Baghdad 1983
- JOHNSON, CAMERON J. Assistant Professor, Department of Psychiatry SM  
M.D. Loma Linda University SM 1989
- JOHNSON, D. ROBERT. Associate Clinical Professor, Department of Orthopedic Surgery SM  
M.D. Loma Linda University SM 1961
- JOHNSON, EBENEZER. Assistant Professor, Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1988
- JOHNSON, JAMES P. Instructor, Department of Psychiatry SM  
Ph.D. California School of Professional Psychology at San Diego 1998
- JOHNSON, JOHN L. Clinical Professor, Department of Pediatrics SM  
M.D. Hahnemann Medical College 1946
- JOHNSON, MARK S. Associate Research Professor, Department of Biochemistry and Microbiology SM  
Ph.D. University of Utah 1984
- JOHNSON, ROBERT LEE. Clinical Professor, Department of Medicine SM  
M.D. University of Minnesota 1960
- JOHNSON, RON SCOTT. Clinical Instructor, Department of Clinical Laboratory Science AH  
B.S. University of California at Riverside 1981
- JOHNSON, RONALD B. Assistant Clinical Professor, Department of Gynecology and Obstetrics SM  
M.D. Loma Linda University SM 1984
- JOHNSON, WALTER D. Associate Professor, Department of Surgery SM  
M.D. Loma Linda University SM 1983
- JOHNSTON, GEORGE E. Associate Professor, Department of Environmental and Occupational Health PH  
Ph.D. Loma Linda University GS 1977
- JOHNSTONE, DALE R. Assistant Professor, Department of Periodontics SD  
D.D.S. University of Southern California 1971
- JONES, ANGELA MARY. Clinical Instructor, School of Nursing SN  
M.A. California State University at San Bernardino 1996
- JONES, BRUCE D. Assistant Professor, Department of Restorative Dentistry SD  
D.D.S. University of California at San Francisco 1972
- JONES, JOHN S. Assistant Professor, Department of Emergency Medicine SM  
M.D. Universidade Autonoma Guadalajara 1972
- JONES, LADONNA M. Assistant Professor, Department of Pharmacy Practice SP  
Pharm.D. Purdue University 2003
- JONES, NANCY E. Clinical Instructor, Department of Preventive Medicine SM  
M.D. Loma Linda University SM 1993
- JONES, PATRICIA SADIE. Professor, School of Nursing SN  
Ph.D. George Peabody College 1977
- JONES, WILLIAM GUY. Assistant Clinical Professor, Department of Radiology SM  
M.D. Loma Linda University SM 1972
- JORETEG, TORBJORN I. Assistant Clinical Professor, Department of Medicine SM  
M.D. University of Kiel (West Germany) 1976  
Ph.D. Karolinska Institute 1986
- JOSEPH, JAMES P. Adjunct Assistant Professor, Department of Dental Education Services SD  
D.D.S. University of Illinois 1967
- JOSEPH, THERESA M. Assistant Professor, Department of Allied Health Studies AH  
M.B.A. California State University at San Bernardino 1993
- JUNG, TIMOTHY T. K. Clinical Professor, Department of Surgery SM  
M.D. Loma Linda University SM 1974
- JUTZY, KENNETH ROY. Associate Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1977
- JUTZY, ROY V. Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1952
- KACHENMEISTER, ROBERT M. Assistant Clinical Professor, Department of Surgery SM  
M.D. Loma Linda University SM 1988

- KAFROUNI, GEORGE I. Assistant Professor,  
Department of Surgery SM  
M.D. Loma Linda University SM 1961
- KAISERSHOT, MONICA CECILIA. Assistant  
Professor, Department of Restorative  
Dentistry SD  
D.D.S. Colombian School of Dentistry 1984
- KALBERMATTER, OLGA R. Instructor,  
Department of Pediatrics SM  
B.S. Loma Linda University 1975
- KALEITA, THOMAS A. Assistant Clinical  
Professor, Department of Pediatrics SM  
Ph.D. California School of Professional  
Psychology 1980
- KALINA, SHARON L. Associate Clinical  
Professor, Department of Surgery SM  
M.D. University Bordeaux II 1982
- KAMDAR, VIKRAM V. Assistant Professor,  
Department of Medicine SM  
M.D. Seth GS Medical College at the  
University of Bombay 1971
- KAN, JOSEPH YUN KWONG. Associate Professor,  
Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1990
- KANACKI, LANA SUE MCLOUTH. Assistant  
Professor, School of Nursing SN  
M.S. Loma Linda University GS 1991
- KAO, CECILIA C. Assistant Professor,  
Department of Pediatric Dentistry SD  
D.D.S. University of California at San  
Francisco 2001
- KARADOTTIR, HILDUR. Instructor, Department  
of Dental Hygiene SD  
Dental Educational College (Sweden) 1988
- KARUNIA, MARTINA I. Assistant Professor,  
Department of Nutrition and Dietetics AH  
M.P.H. Loma Linda University PH 2002
- KASISCHKE, FRED CLARE. Assistant Professor,  
Department of Dental Education Services  
SD  
D.Min. Fuller Theological Seminary 1988
- KATSAROS, EMMANUEL P. Assistant Professor,  
Department of Medicine SM  
D.O. Midwestern University 1995
- KATTADIYIL, MATHEW THOMAS. Associate  
Professor, Department of Restorative  
Dentistry SD  
B.D.S. College of Dental Surgery at Manipal  
1990
- KATZ, JEFFREY M. Assistant Professor,  
Department of Medicine SM  
M.D. University of Minnesota 1967
- KAWAHARA, NANCY E. Associate Professor,  
Department of Pharmacy Practice SP  
Pharm.D. University of Southern California  
1982
- KAY, BRENT W. Assistant Professor, Department  
of Medicine SM  
M.D. Oregon Health Sciences University 1991
- KAYALI, ZEID. Assistant Professor, Department of  
Medicine SM  
M.D. Aleppo University (Syria) 1995
- KEDLAYA, DIVAKARA. Associate Professor,  
Department of Physical Medicine SM  
M.D. Government Medical College at Mysore  
University (India) 1991
- KEENAN, ROBERT S. Instructor, Department of  
Medicine SM  
M.D. University of Chicago 1990
- KEENEY, ELDEN D. Associate Professor,  
Department of Gynecology and Obstetrics  
SM  
M.D. Loma Linda University SM 1960
- KEIDEL, MARK T. Assistant Professor,  
Department of Family Medicine SM  
M.D. Tulane University 2000
- KELLN, KENNETH L. Assistant Professor,  
Department of Medicine SM  
M.D. Loma Linda University SM 1964
- KELLOGG, DONALD R. Adjunct Assistant  
Professor, Department of Dental Education  
Services SD  
D.D.S. Loma Linda University SD 1972
- KELLY, JOHN H., JR. Assistant Research  
Professor, Department of Nutrition PH;  
Assistant Professor, Department of  
Preventive Medicine SM  
M.D. Loma Linda University SM 2000  
M.P.H. Loma Linda University PH 2002
- KENNEDY, CASEY M. C. Assistant Clinical  
Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1990
- KERR, JOHN W., JR. Assistant Professor,  
Department of Occupational Therapy AH  
B.S. Loma Linda University AH 1971
- KERSHNER, JOHN W. Adjunct Assistant  
Professor, Department of Dental Education  
Services SD  
D.D.S. Loma Linda University SD 1970
- KESSLER, TODD S. Instructor, Department of  
Medicine SM  
M.D. Michigan State College of Human  
Medicine 1996

- KETTERING, JAMES D. Professor, Department of Biochemistry and Microbiology SM and Department of Dental Education Services SD; Clinical Professor, Department of Clinical Laboratory Science AH  
Ph.D. Loma Linda University GS 1974
- KEUSHKERIAN, SIMON M. Assistant Clinical Professor, Department of Surgery SM  
M.D. American University of Beirut 1981
- KEVORKIAN, GARY K. Assistant Professor, Department of Orthodontics SD  
D.D.S. Loma Linda University SD 1986
- KHALIL, SHERIF FOUAD. Assistant Clinical Professor, Department of Medicine SM  
M.D. Benha Medical School (Egypt) 1985
- KHAN, AQEEL S. Assistant Professor, Department of Emergency Medicine SM and Department of Pediatrics SM  
M.B.B.S. Bhau Din Zakria University at Ultan (Pakistan) 1986
- KHAN, FAISAL A. Associate Clinical Professor, Department of Surgery SM  
M.D. University of Southern California 1980
- KHAN, REHANA. Instructor, Department of Orthodontics SD  
D.D.S. Loma Linda University SD 2002
- KHEHRA, BALRAM S. Assistant Professor, Department of Medicine SM  
M.B.B.S. Government Medical College at Patiala (India) 1988
- KHIRKHAHI, ELHAM. Assistant Professor, Department of Periodontics SD  
D.D.S. University of Colorado at Denver 1994
- KHERADPOUR, ALBERT. Assistant Professor, Department of Pediatrics SM  
M.D. Tehran University (Iran) 1980
- KHOO, KEIKO INADA. Associate Professor, Department of Speech-Language Pathology and Audiology AH  
M.S. Loma Linda University GS 1979  
M.A. University of California at Los Angeles 1987
- KHUBESRIAN, MARINA. Assistant Clinical Professor, Department of Family Medicine SM  
M.D. University of California at Los Angeles 1992
- KIDDER, MELISSA M. Assistant Professor, Department of Gynecology and Obstetrics SM  
M.D. Loma Linda University SM 1994
- KIDO, DANIEL K. Professor, Department of Radiology SM  
M.D. Loma Linda University SM 1965
- KIEF-GARCIA, MONIKA L. Assistant Clinical Professor, Department of Radiology SM  
M.D. Baylor College of Medicine 1987
- KIGER, ROBERT D. Professor, Department of Periodontics SD  
D.D.S. Loma Linda University SD 1970
- KILBOURNE, BROCK. Associate Clinical Professor, Department of Psychology ST  
Ph.D. University of Nevada at Reno 1983
- KILLEEN, J. DAVID, JR. Professor, Department of Surgery SM  
M.D. Loma Linda University SM 1975
- KIM, DANIEL IL-SUN. Assistant Clinical Professor, Department of Medicine SM  
M.D. Hahnemann University at Philadelphia 1994
- KIM, DANIEL B. S. Clinical Instructor, Department of Surgery SM  
M.D. University of Texas Medical School 1993
- KIM, DENNIS Y. Assistant Clinical Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1997
- KIM, GRACE JEE-EUN. Assistant Professor, Department of Emergency Medicine SM and Department of Pediatrics SM  
M.D. Loma Linda University SM 1990
- KIM, JAY S. Professor, Department of Dental Education Services SD  
Ph.D. Florida State University 1982
- KIM, JIEN SUP. Assistant Clinical Professor, Department of Physical Medicine SM and Department of Anesthesiology SM  
M.D. Loma Linda University SM 1991
- KIM, JOHN J. Instructor, Department of Gynecology and Obstetrics SM  
M.D. Loma Linda University SM 1999
- KIM, JOHN Y. Assistant Professor, Department of Surgery SM  
M.D. University of Michigan 1994
- KIM, MI YE. Assistant Professor, Department of Medicine SM  
D.O. Southeastern University of Health Sciences 1990
- KIM, PILSEONG. Assistant Professor, Department of Periodontics SD  
D.D.S. University of California at San Francisco 1993
- KIM, RICHARD SEONG EUI. Assistant Professor, Department of Family Medicine SM  
M.D. Loma Linda University SM 1983
- KIM, SOO YOUN. Assistant Professor, Department of Pediatrics SM  
M.D. Loma Linda University SM 1995

- KIM, SUSAN J. Instructor, Department of Radiology SM  
M.D. Loma Linda University SM 1998
- KIM, TAE EUNG J. Assistant Professor, Department of Emergency Medicine SM  
M.D. University of Michigan Medical School 2000
- KIM, TOMMY Y.H. Instructor, Department of Emergency Medicine SM and Department of Pediatrics SM  
M.D. Loma Linda University SM 1999
- KIM, Y. WILLIAM. Assistant Professor, Department of Psychiatry SM  
M.D. Korea University Medical Center 1966
- KIM, YANG H. Adjunct Assistant Professor, Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 2001
- KIM, YOON J. Instructor, Department of Periodontics SD  
D.D.S. Seoul National University 1993
- KIMBALL-JONES, PENNY L. Assistant Professor, Department of Anesthesiology SM  
M.D. Loma Linda University SM 1985
- KIMBER, TONIA ANNETTE. Clinical Instructor, Department of Occupational Therapy AH  
B.S. Loma Linda University AH 1992
- KIMURA, MARILYN H. Assistant Clinical Professor, Department of Psychiatry SM  
M.D. Loma Linda University SM 1991
- KINBACK, KEVIN M. Assistant Clinical Professor, Department of Psychiatry SM  
M.D. Loma Linda University SM 1992
- KING, HELEN E. Professor, School of Nursing SN  
Ph.D. Boston University Graduate School 1973
- KINJO, RUTSUKO. Adjunct Assistant Professor, School of Nursing SN  
M.P.H. Loma Linda University PH 2002
- KINSEY, DAVID J. Assistant Professor, Department of Health Administration PH  
M.A. Wright State University 1979
- KINZER, ROBERT L. Professor, Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1958
- KIRBY, MICHAEL A. Professor, Department of Pathology and Human Anatomy SM and Department of Pediatrics SM; Associate Professor, Department of Surgery SM  
Ph.D. University of California at Riverside 1984
- KIRK, GERALD A. Associate Professor, Department of Radiology SM  
M.D. Loma Linda University SM 1967
- KIRK, SHANNON RICHARD. Assistant Professor, Department of Radiology SM  
M.D. Loma Linda University SM 1994
- KIRSCH, WOLFF M. Professor, Department of Surgery SM and Department of Biochemistry and Microbiology SM  
M.D. Washington University at St. Louis 1955
- KISINGER, NORIECE R. Instructor, Department of Radiation Technology AH  
B.S. University of Redlands 1989
- KJELLIN, INGRID B. Associate Professor, Department of Radiology SM  
M.D. Uppsala University (Sweden) 1989
- KLAMUT, HENRY J. Associate Research Professor, Department of Medicine SM  
Ph.D. University of Western Ontario 1986
- KLEIN, ROBERT ALLEN. Assistant Clinical Professor, Department of Neurology SM  
M.D. West Virginia University 1972
- KLEINMAN, S. ALEJANDRO. Associate Professor, Department of Restorative Dentistry SD  
D.D.S. University of Chile 1967
- KLOEFFLER, GALE DAVIS. Assistant Professor, Department of Restorative Dentistry SD  
D.D.S. University of Nebraska 1953
- KLOOSTER, MARQUELLE J. Assistant Professor, Department of Pediatrics SM  
M.D. Loma Linda University SM 1977
- KLOP, WINIFRED J. Assistant Professor, Department of Psychiatry SM  
M.S.W. University of Southern California 1993
- KNECHT, KATHRYN T. Associate Professor, Department of Pharmaceutical Sciences SP  
Ph.D. University of North Carolina at Chapel Hill 1990
- KNUDSON-MARTIN, CARMEN. Professor, Department of Counseling and Family Science ST  
Ph.D. University of Southern California 1987
- KNUTSEN, RAYMOND. Professor, Department of Epidemiology and Biostatistics PH and preventive Medicine SM; Associate Professor, Department of Epidemiology and Biostatistics PH  
M.D. University of Oslo (Norway) 1972
- KNUTSEN, SYNNOVE. Professor, Department of Epidemiology and Biostatistics PH and Department of Preventive Medicine SM  
M.D. University of Oslo (Norway) 1972  
M.P.H. Loma Linda University PH 1977  
Ph.D. University of Torso (Norway) 1991
- KO, EDWARD S. C. Assistant Professor, Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1985
- KOFFMAN, MARTIN. Associate Clinical Professor, Department of Orthopedic Surgery SM  
M.D. University of California at San Francisco 1960

- KOFOED, NANCY A. Assistant Professor, School of Nursing SN  
D.N.Sc. Catholic University of America at Washington D.C. 2004
- KOFOED, TOMMY F. Assistant Clinical Professor, Department of Health Promotion and Education PH  
Dr.P.H. Loma Linda University PH 1977
- KOGA, CLAIRE H. Assistant Clinical Professor, Department of Family Medicine SM  
M.D. University of Southern California 1980
- KOH, ALEXANDER YOO-AHNG. Assistant Professor, Department of Periodontics SD  
D.D.S. University of California at Los Angeles 1992
- KOHLTFARBER, HEIDI B. Assistant Professor, Department of Oral Diagnostic Radiology and Pathology SD  
D.D.S. Loma Linda University SD 2003
- KOIDE, YOSHINORI. Adjunct Instructor, Department of Allied Health Studies AH  
M.S. National Institution for Academics (Japan) 2003
- KONDO, EUNICE K. Adjunct Assistant Professor, School of Nursing SN  
M.S.N. Loma Linda University GS 1992
- KONNO, REIKO L. Adjunct Assistant Professor, School of Nursing SN  
M.S.N. Loma Linda University GS 1998
- KONO, GREGORY M. Assistant Professor, Department of Health Administration PH  
M.H.A. Loma Linda University PH 1998
- KOOTSEY, J. MAILEN. Professor, Department of Physiology and Pharmacology SM and FR  
Ph.D. Brown University 1966
- KOPILOFF, GEORGE. Assistant Professor, Department of Psychiatry SM  
M.D. University of Republic School of Medicine 1969
- KORE, ARPUTHARAJ H. Assistant Professor, Department of Surgery SM  
M.B.B.S. Christian Medical College (India) 1979
- KORE, DORIS R. Assistant Professor, Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 2001
- KORPMAN, RALPH A. Professor, Department of Pathology and Human Anatomy SM  
M.D. Loma Linda University SM 1974
- KOSCH, CINDY LODER. Assistant Professor, Department of Nutrition and Dietetics AH  
M.S. Loma Linda University GS 1986
- KOTEIRA, FAHER ELIAS. Assistant Professor, Department of Medicine SM  
M.D. Medical Academy at Sofia (Bulgaria) 1990
- KOUMJIAN, JACK H. Adjunct Associate Clinical Professor, Department of Restorative Dentistry SD  
D.D.S. Indiana University 1984
- KOUNANG, ROBERTUS HASAN. Assistant Clinical Professor, Department of Physical Medicine SM  
M.D. Airlangga University Medical School (Indonesia) 1977
- KOVACIK, R. DAVID. Assistant Professor, Department of Emergency Medicine SM  
M.D. Loma Linda University SM 1972
- KOZMAN, MAHER SHAWKY. Assistant Clinical Professor, Department of Psychiatry SM  
M.B.B.Ch. Ain Shams University School of Medicine 1980
- KRAFT, MARILYN SUE. Assistant Clinical Professor, Department of Environmental and Occupational Health PH  
M.B.A. Claremont Graduate School 1994
- KRAHN, DOUGLAS M. Assistant Clinical Professor, Department of Surgery SM  
M.D. University of California at Davis 1996
- KRALL, BARRY K. Assistant Professor, Department of Dental Anesthesiology SD  
D.D.S. Loma Linda University SD 1990
- KRAUSE, RENATE RITTER. Assistant Professor, Department of Health Promotion and Education PH  
Ph.D. University of Alberta 1991
- KRICK, EDWIN HARRY, SR. Associate Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1961
- KRIDER, SUSAN JONES. Assistant Clinical Professor, School of Nursing SN  
M.S. Loma Linda University GS 1983
- KRIEGER, ROBERT I. Clinical Professor, Department of Environmental and Occupational Health PH  
Ph.D. Cornell University 1970
- KRIENGPRARTHANA, ROSARIN. Assistant Professor, Department of Family Medicine SM  
M.D. Loma Linda University SM 1998
- KRISHNAN, RAJAGOPAL. Assistant Professor, Department of Medicine SM  
M.B.B.S. Maduvai Medical College, Maduvai, Southern India 1973

- KROETZ, ARTHUR W. Associate Professor,  
Department of Radiation Technology AH  
Ph.D. University of Southern California 1999
- KROETZ, JANET M. Assistant Professor, School  
of Nursing SN  
M.N. University of the Pacific 1993
- KRSTENANSKY, JOHN L. Associate Professor,  
Department of Pharmaceutical Sciences SP  
Ph.D. University of Chicago 1983
- KU, SIN SONG JAMES. Assistant Clinical  
Professor, Department of Family Medicine  
SM  
M.D. Loma Linda University SM 1995
- KUCK, GLEN ROBERT. Assistant Clinical  
Professor, Department of Cardiopulmonary  
Sciences AH  
M.S. University of Southern California 1999
- KUESTER, EVERT E. Assistant Professor,  
Department of Radiology SM  
M.D. Loma Linda University SM 1958
- KUHN, IRVIN N. Professor, Department of  
Medicine SM  
M.D. Loma Linda University SM 1955
- KUHN, MICHAEL ALLAN. Associate Professor,  
Department of Pediatrics SM  
M.D. University of Texas Southwestern  
Medical School 1988
- KUMAR, ASHOK. Associate Research Professor,  
Department of Medicine SM  
Ph.D. University Delhi at Delhi (India) 1996
- KUNIHIRA, DANIEL M. Assistant Professor,  
Department of Periodontics SD  
D.D.S. Loma Linda University SD 1974
- KUNIHIRA, RICHARD Y. Assistant Professor,  
Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1986
- KURIYA, MAMIKO. Assistant Professor,  
Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 2004
- KURTH, DONALD J. Associate Professor,  
Department of Psychiatry SM  
M.D. Columbia University 1979
- KYLE, JAMES L. II. Assistant Professor,  
Department of Health Administration PH  
M.D. University of California at Los Angeles  
School of Medicine 1987
- LACOUNT, ANISSA Y. Instructor, Department of  
Family Medicine SM  
M.D. Loma Linda University SM 2000
- LAI, MEI Y. Instructor, Department of Medicine  
SM  
M.D. Federal Fluminense University 1987
- LAING, SONIA D. Clinical Instructor,  
Department of Clinical Laboratory Science  
AH  
M.S. California State University at Long Beach  
1991
- LAJOM, DOROTHY SEVILLA. Clinical Instructor,  
Department of Clinical Laboratory Science  
AH  
B.S.M.T. University of Santo Tomas  
(Philippines) 1970
- LAL, SATISH K. Assistant Clinical Professor,  
Department of Orthopedic Surgery SM  
M.B.B.S. All India Institute of Medical School  
1963
- LAM, MARY P. Assistant Professor, Department of  
Pediatrics SM  
M.D. John A. Burns School of Medicine 1983
- LAM, TRANG T. Assistant Professor, Department  
of Medicine SM  
M.D. Creighton University SM 1995
- LAMB, DIANA T. Clinical Instructor, Department  
of Nutrition PH  
B.S. California State University at Long Beach  
1993
- LAMBERTON, HENRY H. Associate Professor,  
Faculty of Religion FR; Assistant Professor,  
Department of Psychology SM  
Psy.D. Fuller Theological Seminary 1992
- LAMIN, VICTOR K. Assistant Professor,  
Department of Medicine SM  
M.D. University of California at Los Angeles  
1987
- LAMPKIN, ANDY. Assistant Professor, Faculty of  
Religion FR  
Ph.D. Vanderbilt University 2000
- LANDA, HOWARD M. Associate Professor,  
Department of Surgery SM  
M.D. University of Medicine and Dentistry of  
New Jersey 1983
- LANDEL, ROBERT F. Adjunct Associate  
Professor, Department of Physical Therapy  
AH  
D.P.T. University of Southern California 1996
- LANE, CARTER ALAN. Instructor, Department of  
Orthodontics SD  
D.D.S. Loma Linda University SD 2000
- LANGGA, EULY MAYPA. Assistant Professor,  
Department of Medicine SM  
M.D. Loma Linda University SM 1985
- LANGGA, LEO MAYPA. Clinical Instructor,  
Department of Cardiopulmonary Sciences  
AH  
B.S. Loma Linda University AH 1988

- LANGRIDGE, WILLIAM HENRY RUSSELL.  
Professor, Department of Biochemistry and  
Microbiology SM  
Ph.D. University of Massachusetts at Amherst  
1973
- LANSING, J. DEE. Assistant Clinical Professor,  
Department of Gynecology and Obstetrics  
SM  
M.D. Loma Linda University SM 1944
- LANZISERA, PHILIP J. Clinical Professor,  
Department of Psychology ST  
Ph.D. University of Detroit 1975
- LAO, WILSON D. Instructor, Department of  
Medicine SM  
M.D. Southwestern University (Philippines)  
1984
- LARSEN, JAMES PETER. Assistant Professor,  
Department of Medicine SM  
M.D. Loma Linda University SM 1982
- LARSEN, RANAE L. Associate Professor,  
Department of Pediatrics SM  
M.D. Loma Linda University SM 1982
- LARSON, DAVID R. Professor, Faculty of Religion  
FR  
D.Min. Claremont School of Theology 1973  
Ph.D. Claremont Graduate University 1982
- LARSON, STEVEN EDWIN. Assistant Clinical  
Professor, Department of Medicine SM  
M.D. Medical College of Wisconsin 1975
- LATIMER, SETH D. Clinical Instructor,  
Department of Pediatric Dentistry SD  
D.D.S. Loma Linda University SD 2005
- LAU, ALAN C. K. Assistant Professor, Department  
of Medicine SM  
M.B.B.S. University of Hong Kong 1976
- LAU, CAROL A. Assistant Professor, Department  
of Anesthesiology SM  
M.D. Loma Linda University SM 1979
- LAU, FRANCIS Y. Professor, Department of  
Medicine SM  
M.D. College of Medical Evangelists 1947
- LAU, K. H. WILLIAM. Research Professor,  
Department of Medicine SM  
Ph.D. Iowa State University 1982
- LAU, KATHLEEN M. Assistant Professor,  
Department of Gynecology and Obstetrics  
SM  
M.D. Loma Linda University SM 1982
- LAU, SUSIE HUNG. Assistant Professor,  
Department of Medicine SM  
M.D. Medical College of Georgia 1986
- LAUER, HEATHER H. Instructor, Department of  
Pediatric Dentistry SD  
D.D.S. Loma Linda University SD 2003
- LAWRENCE, LARRY C. Assistant Clinical  
Professor, Department of Psychiatry SM  
M.D. Hahnemann Medical College 1974
- LAWRENCE, WILLIAM A. Assistant Clinical  
Professor, Department of Psychiatry SM  
M.D. American University of the Caribbean  
1982
- LAZAR, SHELLIE R. Instructor, Department of  
Surgery SM  
M.D. Loma Linda University SM 1997
- LE, COLIN T. Assistant Professor, Department of  
Oral and Maxillofacial Surgery SD  
D.D.S. Loma Linda University SD 1993
- LE, TUYHOA THI. Clinical Instructor,  
Department of Clinical Laboratory Science  
AH  
B.S. Philippine Union College 1971
- LE, VU Q. Adjunct Assistant Professor,  
Department of Dental Education Services  
SD  
D.D.S. Loma Linda University SD 2002
- LEBER, STEVEN LAMAR. Instructor, Department  
of Radiation Technology AH  
B.S. Loma Linda University 1985
- LEDOUX, JANINE M. Instructor, Department of  
Nutrition and Dietetics AH  
Dr.P.H. Loma Linda University PH 1991
- LEE, ANN Y. Adjunct Instructor, Department of  
Physical Medicine SM  
M.D. University of Texas Health Science 1998
- LEE, CAROLINE H. Assistant Professor,  
Department of Pediatrics SM  
M.D. University of Texas Southwestern  
Medical School 1991
- LEE, CARY W. Instructor, Department of  
Medicine SM  
M.D. Medical College of Wisconsin at  
Milwaukee 2000
- LEE, CHARLES PETERS. Assistant Professor,  
Department of Oral Diagnostic Radiology  
and Pathology SD  
D.D.S. Loma Linda University SD 1976
- LEE, DANIEL Y. Assistant Professor, Department  
of Periodontics SD  
D.D.S. Columbia University 1991
- LEE, ESTHER CHOUGH. Assistant Professor,  
Department of Physical Medicine SM  
M.D. Loma Linda University SM 1988

- LEE, FRANK H. F. Assistant Professor,  
Department of Restorative Dentistry SD  
D.D.S. Taipei Medical College 1981
- LEE, GILBERT H. Assistant Clinical Professor,  
Department of Family Medicine SM  
M.D. Loma Linda University SM 1988
- LEE, JERRY WINFIELD. Professor, Department of  
Health Promotion and Education PH  
Ph.D. University of North Carolina at Chapel  
Hill 1976
- LEE, JOHN KWANG CHUL. Assistant Clinical  
Professor, Department of Physical Medicine  
SM  
M.D. Loma Linda University SM 1989
- LEE, JOSEPH JYH-CHUNG. Assistant Clinical  
Professor, Department of Medicine SM  
M.D. National Taiwan University School of  
Medicine 1971
- LEE, JULIE Y. Assistant Professor, Department of  
Physician Assistant Sciences AH  
M.P.H. Loma Linda University PH 2001
- LEE, KELLY C. Assistant Professor, Department  
of Pharmacy Practice SP  
Pharm.D. University of California at San  
Francisco 2000
- LEE, MICHAEL BRYAN. Assistant Professor,  
Department of Periodontics SD  
D.D.S. Loma Linda University SD 1983
- LEE, SANDRA H. Instructor, Department of  
Anesthesiology SM  
M.D. Loma Linda University SM 1996
- LEE, SCOTT SANGMOO. Assistant Professor,  
Department of Periodontics SD  
D.D.S. Seoul National University 1994
- LEE, SCOTT W. Associate Professor, Department  
of Medicine SM  
M.D. Northwestern University 1993
- LEE, SHIRLEY ANN. Assistant Professor,  
Department of Dental Hygiene SD  
B.S. Loma Linda University SD 1982
- LEE, SONNY C.Y. Assistant Professor,  
Department of Pediatrics SM and  
Department of Medicine SM  
M.D. New York Medical College 1999
- LEE, SUNG HWA. Assistant Professor,  
Department of Restorative Dentistry SD  
D.D.S. University of California at Los Angeles  
1988
- LEE, TONY B. Assistant Clinical Professor,  
Department of Family Medicine SM  
M.D. Loma Linda University SM 1995
- LEE, WILLIAM B. II. Assistant Professor,  
Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1990
- LEGGITT, VARNER LEROY. Associate Professor,  
Department of Orthodontics SD; Instructor,  
Department of Earth and Biological  
Sciences GS  
D.D.S. Loma Linda University SD 1984
- LEHNHOF, MONICA C. Assistant Professor,  
Department of Restorative Dentistry SD  
D.D.S. Colegio Odontologico Columbrano  
1984
- LEHOCKY, BRETT E. Assistant Professor,  
Department of Surgery SM  
D.D.S. Indiana University 1985  
M.D. Northeast Ohio Universities College of  
Medicine 1993
- LENART, JOHN. Assistant Professor, Department  
of Anesthesiology SM  
M.D. Loma Linda University SM 1996
- LENNAN, PATRICIA MARY. Instructor,  
Department of Dental Hygiene SD  
B.S. University of Southern California 1981
- LENOIR, LETICIA COX. Instructor, Department  
of Periodontics SD  
B.S. Loma Linda University SD 1989
- LENTZ, HILBERT, JR. Assistant Professor,  
Department of Oral Diagnostic Radiology  
and Pathology SD  
D.D.S. College of Medical Evangelists 1957
- LEONORA, CARMELA M. Assistant Clinical  
Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1983
- LEONORA, JOHN. Professor, Department of  
Physiology and Pharmacology SM and  
Department of Medicine SM  
Ph.D. University of Wisconsin 1957
- LESNIAK, KAREN T. Assistant Professor,  
Department of Psychology ST  
Ph.D. University of North Texas at Denton  
2000
- LESSARD, GEORGE M. Professor, Department of  
Biochemistry and Microbiology SM and  
Department of Dental Education Services  
SD  
Ph.D. University of California at Riverside  
1973
- LESTER, MARGARET H. Clinical Instructor,  
Department of Family Medicine SM  
M.S.N. University of Southern California 1995

- LEUNG, DUNCAN. Assistant Clinical Professor,  
Department of Medicine SM  
M.D. Loma Linda University SM 1982
- LEVIN, GARY M. Assistant Clinical Professor,  
Department of Ophthalmology SM  
M.D. George Washington University 1968
- LEVINE, EDWARD F. Assistant Clinical Professor,  
Department of Surgery SM  
M.D. University of California at Los Angeles  
1967
- LEVINE, PAUL ALLEN. Clinical Professor,  
Department of Medicine SM  
M.D. Boston University School of Medicine  
1968
- LEVINE, VICTOR D. Assistant Professor,  
Department of Emergency Medicine SM  
M.D. University of Southern California 1970
- LEVISEN, LINDA L. Assistant Clinical Professor,  
Department of Health Promotion and  
Education PH  
M.S.N. Loma Linda University GS 1972
- LEVY, RICHARD P. Professor, Department of  
Radiation Medicine SM  
M.D. Boston University 1980  
Ph.D. University of California at Berkeley  
1991
- LEWIS, ANDREA R. Assistant Clinical Professor,  
Department of Dental Education Services  
SD  
D.D.S. Loma Linda University SD 2005
- LEWIS, JOHN E. Professor, Department of  
Pathology and Human Anatomy SM,  
Department of Biochemistry and  
Microbiology SM and Department of  
Clinical Laboratory Science AH  
Ph.D. Loma Linda University GS 1969
- LEWIS, SUSAN K. Assistant Clinical Professor,  
Department of Nutrition PH; Clinical  
Instructor, Department of Nutrition and  
Dietetics AH  
M.P.H. Loma Linda University PH 1983
- LEWIS, TERENCE D. Associate Professor,  
Department of Medicine SM  
M.B.B.S. University of Sydney 1967
- LEYMAN, JOHN WILLIAM. Associate Professor,  
Department of Dental Anesthesiology SD  
and Department of Oral Diagnostic  
Radiology and Pathology  
D.D.S. University of the Pacific 1978
- LEYMAN, PAULA M. Assistant Professor,  
Department of Pediatric Dentistry SD  
D.D.S. Loma Linda University SD 1986
- LI, KAMING. Assistant Clinical Professor,  
Department of Surgery SM  
M.D. University of California at Los Angeles  
1987
- LI, YIMING. Professor, Department of Restorative  
Dentistry SD and Department of  
Biochemistry and Microbiology SM  
D.D.S. Shanghai Second Medical University  
(China) 1977
- LIANG, PHILLIP. Clinical Instructor, Department  
of Clinical Laboratory Science AH  
M.B.A. University of Redlands 1993
- LIAO, KUO-YANG. Assistant Professor,  
Department of Restorative Dentistry SD  
D.D.S. Kaohsiung Medical University School of  
Dentistry at Taiwan 1994
- LIBANATI, CESAR R. Associate Professor,  
Department of Medicine SM  
M.D. University of Buenos Aires 1981
- LIBBY, STEPHEN R. Adjunct Assistant Professor,  
Department of Dental Education Services  
SD  
D.D.S. Loma Linda University SD 1982
- LICCIARDO, BETTY SLESINGER. Clinical  
Instructor, Department of Nutrition and  
Dietetics AH  
M.P.H. Loma Linda University PH 1991
- LIDNER, CARLA RENEE. Assistant Professor,  
Department of Dental Education Services  
SD  
D.D.S. Loma Linda University SD 1990
- LIER, ANTHONY B. Assistant Professor,  
Department of Orthodontics SD  
D.D.S. Loma Linda University SD 1975
- LILLY, MICHAEL B. Professor, Department of  
Medicine SM and Department of  
Biochemistry and Microbiology SM  
M.D. Loma Linda University SM 1975
- LIM, GERALD THA HTOO. Instructor,  
Department of Neurology SM  
M.D. Institute of Medicine at Rangoon (Burma)  
1976
- LIM, HERBERT H. Clinical Instructor,  
Department of Family Medicine SM  
M.D. Loma Linda University SM 1990
- LIM, NELSON HYOCHUNG. Instructor,  
Department of Medicine SM  
M.B.B.S. University College of Medicine at New  
Delhi (India) 1990
- LIN, JU-AN. Assistant Professor, Department of  
Medicine SM  
M.D. Shanghai Medical University 1992  
Ph.D. Loma Linda University GS 1996

- LIN, REN-JANG. Adjunct Research Professor,  
Department of Biochemistry and  
Microbiology SM  
Ph.D. Pennsylvania State University at  
Hershey 1983
- LINDLEY, ELISA M. Clinical Instructor,  
Department of Gynecology and Obstetrics  
SM  
M.D. Loma Linda University SM 1998
- LINDSTED, KRISTIAN DAVID. Professor,  
Department of Environmental and  
Occupational Health, PH; Department of  
Epidemiology and Biostatistics PH  
Ph.D. Michigan State University 1982
- LINKHART, THOMAS A. Research Professor,  
Department of Pediatrics SM and  
Department of Biochemistry and  
Microbiology SM  
Ph.D. University of California at Davis 1975
- LINTON, ANNE E. Assistant Clinical Professor,  
Department of Psychiatry SM  
M.D. Case Western Reserve University 1989
- LITVINOFF, GREGORY PAUL. Assistant  
Professor, Department of Oral and  
Maxillofacial Surgery SD  
D.D.S. University of California at Los Angeles  
1975
- LIU, ANTONIO K. Assistant Clinical Professor,  
Department of Neurology SM  
M.D. University of Southern California 1995
- LIU, JOHN RICHARD. Adjunct Assistant  
Professor, Department of Pediatric  
Dentistry SD  
D.D.S. Loma Linda University SD 1986
- LIU, KELLY C. Clinical Instructor, Department of  
Clinical Laboratory Science AH  
B.S. Loma Linda University AH 2002
- LIU, MARINA J. Assistant Professor, Department  
of Anesthesiology SM  
M.D. University of California at Irvine 1998
- LIU, PAUL CHI-WAY. Assistant Clinical Professor,  
Department of Orthopedic Surgery SM  
M.D. University of Nevada 1988
- LIU, YONG. Assistant Professor, Department of  
Periodontics SD  
D.D.S. West China University of Medical  
Sciences 1992
- LIWNICZ, REGINA G. Assistant Professor,  
Department of Psychiatry SM  
M.D. University of Cincinnati 1989
- LLAURADO, JOSEP G. Professor, Department of  
Radiology SM  
M.D. University of Barcelona 1950
- LLERANDI-PHIPPS, CARMEN G. Clinical  
Instructor, Department of Nutrition and  
Dietetics AH and Department of Nutrition  
PH  
M.P.H. Loma Linda University PH 2001
- LO, TAKKIN. Assistant Professor, Department of  
Medicine SM and Department of Surgery  
SM  
M.D. Loma Linda University SM 1986
- LOEW, GUILLERMO E. Assistant Professor,  
Department of Pediatrics SM  
M.D. University of Buenos Aires 1968
- LOFTHOUSE, GERALD A. Assistant Clinical  
Professor, Department of Family Medicine  
SM  
M.D. Loma Linda University SM 1977
- LOH, MICHELLE H. Assistant Professor,  
Department of Pediatrics SM  
M.D. Loma Linda University SM 1992
- LOH, SAMUEL. Instructor, Department of  
Anesthesiology SM  
M.D. Howard University 1971
- LOHMAN, EVERETT BERNELL III. Associate  
Professor, Department of Physical Therapy  
AH  
D.P.T.Sc. Loma Linda University PH 1998
- LOHR, JASON LEE. Assistant Professor,  
Department of Family Medicine SM  
M.D. Loma Linda University SM 2001
- LOHR, MARIA BELEN. Assistant Professor,  
Department of Family Medicine SM  
M.D. Loma Linda University SM 2001
- LOIS-WENZEL, MELIANA. Associate Professor,  
Department of Pediatrics SM  
M.D. University of Chile 1973
- LONGO, LAWRENCE D. Distinguished Professor,  
Department of Physiology and  
Pharmacology SM and Department of  
Pediatrics SM  
M.D. College of Medical Evangelists 1954
- LONSER, EWALD R. Associate Clinical Professor,  
Department of Pathology and Human  
Anatomy SM  
M.D. Loma Linda University SM 1945
- LOO, CHERISSE S. Assistant Clinical Professor,  
Department of Dental Education Services  
SD  
D.D.S. Loma Linda University SD 2001
- LOO, LAWRENCE K. Associate Professor,  
Department of Medicine SM  
M.D. University of California at San Diego 1981

- LOPEZ, DAVID. Associate Professor, Department of Cardiopulmonary Sciences AH  
Ed.D. La Sierra University 2001
- LOPEZ, EDUARDO. Instructor, Department of Pediatric Dentistry SD  
D.D.S. Loma Linda University SD 2002  
M.D. Washington University (St. Louis) 1955
- LOREDO, LILIA N. Assistant Professor, Department of Radiation Medicine SM  
M.D. Loma Linda University SM 1984
- LORIEZO, JON ALDEN. Clinical Instructor, Department of Clinical Laboratory Science AH  
B.S. Loma Linda University AH 1981
- LOUGHMAN, BARBARA E. Associate Research Professor, Department of Medicine SM  
Ph.D. University of Notre Dame 1972
- LOVELESS, EDNA M. Professor, Department of Dental Education Services SD  
Ph.D. University of Maryland 1969
- LOVELESS, WILLIAM A. Professor, Department of Dental Education Services SD  
Ed.D. University of Maryland 1964
- LOWE, OARIONA. Assistant Professor, Department of Pediatric Dentistry SD  
D.D.S. Howard University 1981
- LOWRY, H. MAYNARD. Professor, Department of Dental Education Services SD  
Ph.D. State University of New York at Buffalo 1988
- LOWRY, JEAN B. Professor, Department of Speech-Language Pathology and Audiology AH  
Ph.D. Kent State University 1973
- LOZADA, JAIME L. Professor, Department of Restorative Dentistry SD and Department of Periodontics SD  
D.D.S. Universidade Autonoma de Puebla 1982
- LUBISICH, ERINNE. Assistant Professor, Department of Restorative Dentistry SD  
D.M.D. Oregon Health and Science University 2004
- LUBISICH, JOSEF W. Instructor, Department of Pediatric Dentistry SD  
D.M.D. Oregon Health and Science University 2004
- LUDI, H. DANIEL. Assistant Professor, Department of Surgery SM  
M.D. Cordoma University 1979
- LUH, GEORGE YU-CHIEN. Assistant Professor, Department of Radiology SM  
M.D. Loma Linda University SM 1992
- LUI, PAUL D. Associate Professor, Department of Surgery SM  
M.D. Loma Linda University SM 1984
- LUKE, CHINTANA V. Assistant Clinical Professor, Department of Dental Education Services SD  
D.D.S. Loma Linda University SD 1980
- LUM, SHARON S. J. Assistant Professor, Department of Surgery SM  
M.D. Washington University 1992
- LUNDGREN, TORD MIKAEL. Professor, Department of Periodontics SD  
D.D.S. University of Umea 1975
- LUTHER, R. DANIEL II. Assistant Professor, Department of Emergency Medicine SM  
M.D. Loma Linda University SM 1981
- LUU, QUOC T. A. Instructor, Department of Radiation Medicine SM  
M.D. Oregon Health Sciences University 1999
- LY, ANH-VUONG NGOC. Assistant Professor, Department of Pharmacy Practice SP  
Pharm.D. University of the Pacific 2001
- LYKO, ADAM A. Instructor, Department of Medicine SM  
M.D. Loma Linda University SM 2001
- LYNCH, ELIZABETH LEA. Assistant Professor, Department of Emergency Medicine SM  
M.D. Loma Linda University SM 1994
- MAASKANT, TRUDI LYNN. Assistant Professor, Department of Physical Therapy AH  
M.P.T. Loma Linda University AH 1996
- MACKENZIE, D. ALLAN. Clinical Professor, Department of Orthopedic Surgery SM  
M.D. McGill University 1964
- MACE, JOHN W. Professor, Department of Pediatrics SM and Department of Pediatric Dentistry SD  
M.D. Loma Linda University SM 1964
- MACK, ERIC J. Associate Professor, Department of Pharmaceutical Sciences SP  
Ph.D. University of Utah 1988
- MACKETT, M.C. THEODORE. Clinical Professor, Department of Surgery SM  
M.D. Loma Linda University SM 1968
- MACKNET, KENNETH D., JR. Assistant Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1996
- MAGIE, KARLA D. Assistant Clinical Professor, Department of Nutrition PH  
M.P.H. Loma Linda University PH

- MAHDI, TAREK Z. Assistant Clinical Professor,  
Department of Family Medicine SM  
M.D. Academy of Medicine at Sofia (Bulgaria)  
1983
- MAHMOUD, GUISSOU. Assistant Professor,  
Department of Emergency Medicine SM  
M.D. St. George's University School of  
Medicine 1998
- MAINESS, KAREN JOANNE. Assistant Professor,  
Department of Speech-Language Pathology  
and Audiology AH  
Ph.D. Columbia University 2002
- MAJLESSIPOUR, FATANEH. Assistant Professor,  
Department of Pediatrics SM  
M.D. Isfahan Medical School 1990
- MAKEN, KANWALJEET. Assistant Professor,  
Department of Medicine SM  
M.B.B.S. New Delhi India 1990
- MALIK, IMTIAZ AKRAM. Professor, Department  
of Medicine SM  
M.B.B.S. King Edward Medical College 1977
- MALIK, PRIYA. Assistant Professor, Department  
of Medicine SM  
M.D. University of Madras (India) 1988
- MALLARI, JOCELYN A. Assistant Professor,  
Department of Pharmacy Practice SP  
Pharm.D. University of Southern California  
2004
- MALLERY, SUZANNE T. Assistant Professor,  
Department of Psychology GS  
Ph.D. Fuller Theological Seminary 1998
- MALOUIN, MERIJANE TALLEY. Clinical  
Instructor, Department of Nutrition PH and  
Department of Nutrition and Dietetics AH  
B.S. California State Polytechnic University at  
Pomona 1975
- MANCHANDA, RAMESH K. Assistant Professor,  
Department of Medicine SM  
M.B.B.S. Delhi University (India) 1968
- MANCHANDIA, KRISH J. Instructor, Department  
of Medicine SM  
M.D. Ohio State University 2000
- MANDAPATI, RAVI. Assistant Professor,  
Department of Pediatrics SM and  
Department of Medicine SM  
M.D. Maulana Azad Medical College at New  
Delhi (India) 1985
- MANN, JULIE PATRICIA. Assistant Clinical  
Professor, Department of Pediatrics SM  
M.D. Loma Linda University SM 1977
- MANOUCHERI, MANOUCHER. Assistant  
Professor, Department of Family Medicine  
SM  
M.D. Loma Linda University SM 1976
- MANQUILEF, OSCAR A. Adjunct Assistant  
Professor, Department of Health Promotion  
and Education PH  
M.A. Laval University (Canada) 1989
- MANSOUR, MARIE C. Instructor, Department of  
Orthodontics SD  
D.M.D. Nova Southeastern University 2001
- MANTIK, DAVID W. Assistant Professor,  
Department of Radiation Medicine SM  
Ph.D. University of Wisconsin 1967  
M.D. University of Michigan 1976
- MAO, XIAO WEN. Instructor, Department of  
Radiation Medicine SM  
M.D. Shanghai Second Medical University  
1991
- MAR, JEFFREY N. Instructor, Department of  
Psychiatry and Department of Pediatrics  
SM  
M.D. Dartmouth Medical School 1999
- MARAIS, GARY E. Associate Clinical Professor,  
Department of Medicine SM and  
Department of Family Medicine SM  
M.B.Ch.B. Stellenbosch University Medical  
School 1973
- MARAIS, H. JOHN. Associate Clinical Professor,  
Department of Medicine SM  
M.B.Ch.B. Stellenbosch University Medical  
School 1972
- MARCH, GLENNVILLE A. Assistant Professor,  
Department of Ophthalmology SM  
M.D. University of Rochester at New York  
1990
- MARCKS, KURT O. Assistant Professor,  
Department of Endodontics SD  
D.D.S. Loma Linda University SD 1994
- MARILAO, HILARIO A. Assistant Clinical  
Professor, Department of Pediatrics SM  
M.D. University of Guadalajara 1982
- MARLOW, HAROLD, JR. Assistant Professor,  
Department of Environmental and  
Occupational Health PH  
M.S. Rice University 1991
- MAROCCHO-CASEY, ANNE M. Assistant Professor,  
Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 2000
- MAROHN, ROBERT K. Adjunct Professor,  
Department of Surgery SM  
B.B.A. University of Toledo 1958
- MARSA, ROBERT J. Associate Professor,  
Department of Medicine SM  
M.D. Loma Linda University SM 1970

- MARSHAK, ARTHUR BOHDAN. Instructor,  
Department of Cardiopulmonary Sciences  
AH  
M.S. University of Southern California at Los  
Angeles 2005
- MARSHAK, HELEN HOPP. Associate Professor,  
Department of Health Promotion and  
Education PH and Department of  
Psychology GS and Department of Physical  
Therapy AH  
Ph.D. University of Washington 1991
- MARSHALL, EDWARD CHARLES. Assistant  
Professor, Department of Oral and  
Maxillofacial Surgery SD  
D.D.S. University of the Pacific at San  
Francisco 1974
- MARTELL, AXA I. Assistant Professor,  
Department of Medicine SM  
M.D. Montemorelos University 1989
- MARTELL, J LYNN. Assistant Professor, Faculty  
of Religion FR  
D.Min. McCormick Theological Seminary 1990
- MARTELL, J. TODD. Assistant Professor,  
Department of Medicine SM  
M.D. Loma Linda University SM 1990
- MARTIN, ARTEMIO ROBERT. Assistant  
Professor, Department of Physical Medicine  
SM  
M.D. Loma Linda University SM 1997
- MARTIN, BRADFORD DOUGLAS. Associate  
Professor, Department of Physical Therapy  
AH  
Ph.D. Loma Linda University GS 1984
- MARTIN, FERMIN. Clinical Instructor,  
Department of Restorative Dentistry SD  
D.D.S. Universidade Autonoma de Baja  
California 2000
- MARTIN, FREDERICK J. Associate Clinical  
Professor, Department of Pediatrics SM  
M.D. University of Rochester Medical School  
1943
- MARTIN, LESLIE R. Adjunct Assistant Professor,  
Department of Psychology ST  
Ph.D. University of California Riverside 1996
- MARTIN, ROBERT DOUGLAS. Professor,  
Department of Anesthesiology SM  
M.D. Loma Linda University SM 1976
- MASANGCAY, CLARO YAMBABO. Clinical  
Instructor, Department of Clinical  
Laboratory Science AH  
B.A. University of California at Santa Barbara  
1989
- MASHNI, MICHAEL. Associate Professor,  
Department of Dental Anesthesiology SD  
and Department of Physiology and  
Pharmacology SM  
D.D.S. Loma Linda University SD 1992
- MASINDE, GODFRED L. Assistant Research  
Professor, Department of Medicine SM  
Ph.D. Tulane University 1996
- MASKIN, MICHAEL B. Assistant Professor,  
Department of Psychiatry SM  
Ph.D. Fordham University 1973
- MASON, LINDA JO. Professor, Department of  
Anesthesiology SM and Department of  
Pediatrics SM  
M.D. Loma Linda University SM 1974
- MASSEY, EVELYN L. Clinical Instructor,  
Department of Cardiopulmonary Sciences  
AH  
M.D. UTESA University (Dominican Republic)  
1982
- MATAMALA, TOMAS P. Assistant Professor,  
Department of Epidemiology and  
Biostatistics PH  
M.A. Universidade de Concepcion 2000
- MATEJA, SHARON B. Assistant Professor,  
Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1982
- MATHIAS, LIESL A. Assistant Professor,  
Department of Pediatrics SM  
M.B.B.S. St. Johns Medical College 1990
- MATHUR, MUDIT. Assistant Professor,  
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M.B.B.S. University of Delhi 1990
- MATIKO, JAMES D. Assistant Clinical Professor,  
Department of Orthopedic Surgery SM  
M.D. Loma Linda University SM 1977
- MAURER, JAMES S. Assistant Clinical Professor,  
Department of Psychiatry SM  
M.D. Loma Linda University SM 1991
- MAXWELL, A. GRAHAM. Emeritus Professor,  
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1959
- MAXWELL, KENNETH L. II. Assistant Professor,  
Department of Medicine SM  
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2000
- MAYR, EDELWEISS. Assistant Professor,  
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1973

- MAZLUMIAN, JORGE R. Assistant Clinical Professor, Department of Pediatrics SM  
M.D. University of Buenos Aires 1971
- MCAFEE, MOLLY K. Assistant Professor, Department of Surgery SM  
M.D. Mayo Graduate School of Medicine 1984
- MCCBRIDE, DUANE C. Adjunct Professor, Department of Psychology ST  
Ph.D. University of Kentucky 1976
- MCCARTY, KENNETH D. Assistant Professor, Department of Family Medicine SM  
M.S. Loma Linda University GS 1998
- MCCLEARY, KARL J. Assistant Professor, Department of Health Administration PH  
Ph.D. University of Alabama at Birmingham 1998
- MCCLURE, CHALMER D. Assistant Professor, Department of Pediatrics SM and Department of Neurology SM  
M.D. Loma Linda University SM 1989  
Ph.D. Loma Linda University GS 1992
- MCCLURE, FAITH H. Adjunct Associate Professor, Department of Psychology ST  
Ph.D. University of California at Los Angeles 1989
- MCCRACKEN, JOHN D. Associate Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1985
- MCDONALD, PEARL Z. Instructor, Department of Dental Hygiene SD  
B.S. Loma Linda University SD 1971
- MCFADDEN, DAVID DEAN. Adjunct Assistant Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1973
- MCFARLAND, JAN R. Assistant Professor, Department of Speech-Language Pathology and Audiology AH  
M.S. Loma Linda University GS 1995
- MCGANN, DAVID G. Instructor, Department of Surgery SM  
M.S. Colorado State University 1972
- MCGHEE, WILLIAM H. Professor, Department of Psychiatry SM  
M.D. Loma Linda University SM 1972
- MCGILL, KENNETH JAMES. Associate Professor, Department of Gynecology and Obstetrics SM  
M.D. College of Medical Evangelists 1951
- MCGREGOR, SAMAR S. Assistant Clinical Professor, Department of Nutrition PH  
M.P.H. Loma Linda University PH 1986
- MCGREW, DAVID R. Assistant Clinical Professor, Department of Ophthalmology SM  
M.D. Loma Linda University SM 1976
- MCINDOE, THOMAS WINFIELD. Assistant Professor, Department of Orthopedic Surgery SM  
M.D. Baylor University at Houston 1963
- MCIVOR, DEBORAH W. Assistant Professor, Department of Anesthesiology SM  
M.D. University of Guadalajara 1983
- MCKNIGHT, BROOKE. Assistant Clinical Professor, Department of Environmental and Occupational Health PH  
Dr.P.H. Loma Linda University PH 2002
- MCLAUGHLIN, RICHARD P. Adjunct Assistant Professor, Department of Orthodontics SD  
D.D.S. Georgetown University 1970
- MCMILLAN, JAMES IRA. Associate Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1986
- MCMILLAN, PAUL J. Professor, Department of Pathology and Human Anatomy SM  
Ph.D. College of Medical Evangelists 1960
- MCNAUGHTON, LAURIE A. Assistant Professor, Department of Family Medicine SM  
M.D. University of Pennsylvania School of Medicine 1995
- MCNAUGHTON, TIMOTHY G. Instructor, Department of Emergency Medicine SM  
Ph.D. University of Utah 1996  
M.D. University of California at Los Angeles 2000
- MCNEILL, JAMES I. Clinical Professor, Department of Ophthalmology SM  
M.D. Loma Linda University SM 1972
- MCNEILL, JEANINE A. Assistant Clinical Professor, Department of Radiology SM  
M.D. Loma Linda University SM 1983
- MEDAL, DIANA STEED. Assistant Professor, Department of Health Information Management AH  
M.A. California State University at San Bernardino 2001
- MEDINA, ERNEST PAUL SARNO. Assistant Clinical Professor, Department of Health Promotion and Education PH  
Dr.P.H. Loma Linda University PH 1993
- MEDINA, KERI KUNIYOSHI. Assistant Professor, School of Nursing SN  
D.N.S. University of San Diego Philip Y. Hahn SN 1996
- MEGLIO, DANIELLE JOSEPHINE. Clinical Instructor, Department of Occupational Therapy AH  
A.S. Loma Linda University AH 1993

- MEGO, MIGUEL E. Assistant Professor,  
Department of Endodontics SD  
D.D.S. Federico Villareal National University  
(Peru) 1991
- MEHARRY, MICHAEL R. Assistant Professor,  
Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1980
- MEHTA, CHANDRAKANT VIRJI. Assistant  
Clinical Professor, Department of Medicine  
SM  
M.B.B.S. Grant Medical School at Bombay  
1974
- MEHTA, SUKH Sampat RAJ. Associate Professor,  
Department of Medicine SM  
M.D. SMS Medical College 1968
- MEJIA, MAXIMINO A. Assistant Professor,  
Department of Nutrition PH  
Dr.P.H. Loma Linda University PH 2000
- MELCHER, CAROLYN LOPEZ. Assistant Clinical  
Professor, Department of Health Promotion  
and Education PH  
B.S.N Loma Linda University SN 1980
- MELTZER, ELLIOTT A. Assistant Clinical  
Professor, Department of Family Medicine  
SM  
M.D. Louisiana State University Medical  
Center 1979
- MENDES, JEANNINE STUART. Assistant  
Professor, Department of Physical Therapy  
AH  
M.P.T. Loma Linda University AH 1995
- MERCADO, CONCHITA O. Adjunct Assistant  
Professor, Department of Dental Education  
Services SD  
D.D.S. Loma Linda University SD 2003
- MERCADO, RENEE N. S. Instructor, Department  
of Radiation Technology AH  
B.S. University of Redlands 2002
- MERIDETH, CHARLES H. Clinical Professor,  
Department of Psychiatry SM  
M.D. Washington School of Medicine 1965
- MERKEL, CLIFFORD DARA. Assistant Clinical  
Professor, Department of Orthopedic  
Surgery SM  
M.D. Loma Linda University SM 1980
- MESSINA, MARK JOHN. Adjunct Associate  
Professor, Department of Nutrition PH  
Ph.D. Michigan State University 1987
- MESSINA, VIRGINIA LOUISE. Adjunct Assistant  
Professor, Department of Nutrition PH  
M.P.H. University of Michigan 1981
- MEYER, BONNIE LEE. Assistant Professor,  
School of Nursing SN  
M.S. Loma Linda University GS 1972
- MEYER, JAMES A. Clinical Professor, Department  
of Anesthesiology SM  
M.D. Loma Linda University SM 1958
- MEYER, ROBERT EDWIN, JR. Assistant Clinical  
Professor, Department of Pediatrics SM  
M.D. University of California at Los Angeles  
1969
- MICHELSON, DAVID J. Assistant Professor,  
Department of Pediatrics SM  
M.D. University of California at Los Angeles  
1998
- MIKHAEL, MAGDI S. Assistant Clinical Professor,  
Department of Psychiatry SM  
M.B.B.Ch. Aim Shams Medical School at Cairo  
1975
- MIKHAIL, WAGIH E. Assistant Professor,  
Department of Clinical Laboratory Science  
AH  
M.B.A. California State University at San  
Bernardino 1985
- MILES, DUNCAN A. Associate Professor,  
Department of Surgery SM  
M.D. University of Saskatchewan 1990
- MILHOLM, RICHARD L. Assistant Professor,  
Department of Family Medicine SM  
M.D. Loma Linda University SM 1963
- MILLEDDGE, J. TODD. Associate Professor,  
Department of Pediatric Dentistry SD  
D.D.S. Loma Linda University SD 1988
- MILLER, DANIEL WILLIAM. Professor,  
Department of Radiation Medicine SM  
Ph.D. North Carolina State University at  
Raleigh 1971
- MILLER, DONALD WAYNE. Clinical Instructor,  
Department of Clinical Laboratory Science  
AH  
B.S. Pacific Union College 1978
- MILLER, DONALD R. Professor, Department of  
Neurology SM  
M.D. Loma Linda University SM 1964
- MILLER, EVA J. Associate Professor, School of  
Nursing SN  
M.S. Loma Linda University GS 1975
- MILLER, F. PENELOPE. Associate Professor,  
School of Nursing SN  
Ph.D. University of California at Riverside  
1985
- MILLER, KAREN S. Instructor, Department of  
Medicine SM  
M.D. Wayne State University 2001

- MILLS, DANIEL C. II. Assistant Clinical Professor, Department of Surgery SM  
M.D. Loma Linda University SM 1982
- MINEAR-MORTON, ALISA LYNN. Assistant Clinical Professor, Department of Nutrition PH  
M.S. Loma Linda University PH 1980
- MIRZA, FARRUKH. Assistant Professor, Department of Pediatrics SM  
M.D. Dow Medical College 1989
- MISCH, CARL ERWIN. Associate Professor, Department of Restorative Dentistry SD  
D.D.S. Detroit Dental School 1973
- MISHRA, RANU MAHAVIR. Assistant Professor, Department of Restorative Dentistry SD  
B.D.S. S.M.S. Medical College at Jaipur (India) 1998
- MITCHELL, ROBERT DAVID. Assistant Professor, Department of Orthodontics SD  
D.D.S. Loma Linda University SD 1978
- MITTAL, RENU. Assistant Clinical Professor, Department of Family Medicine SM  
M.B.B.S. University of London (England) 1982
- MOBILIA, ADRIAN. Assistant Professor, Department of Periodontics SD  
D.D.S. University of Buenos Aires School of Dentistry 1991
- MODESTE, NAOMI NOREEN. Professor, Department of Health Promotion and Education PH  
Dr.P.H. Loma Linda University PH 1984
- MOHAN, SUBBURAMAN. Research Professor, Department of Medicine SM  
Ph.D. Bangalore University 1978
- MOHEIMANI, ASSAD. Instructor, Department of Orthopedic Surgery and Rehabilitation SM
- MOHR, GINA M. J. Assistant Professor, Department of Family Medicine SM  
M.D. Loma Linda University SM 1996
- MOHR, LESTER L. Assistant Professor, Department of Surgery SM  
M.D. Loma Linda University SM 1966
- MOLDOVAN, IOANA. Assistant Professor, Department of Medicine SM  
M.D. University of Medicine and Pharmacy Carol Davila (Romania) 1996
- MOLINE, MARY VOGEL. Professor, Department of Counseling and Family Science ST  
M.P.H. Loma Linda University PH 1975  
Dr.P.H. Loma Linda University PH 1975  
Ph.D. Brigham Young University 1979
- MOLKARA, AFSHIN M. Assistant Professor, Department of Surgery SM  
M.D. Howard University 1996
- MOLONEY, PATRICK M. Assistant Clinical Professor, Department of Medicine SM  
M.B.Ch.B. University College Galway (Ireland) 1968
- MONTGOMERY, SUSANNE B. Professor, Department of Health Promotion and Education PH, Department of Preventive Medicine SM, and Department of Global Health PH  
Ph.D. University of Michigan 1987
- MONTI, BEVERLY ANN. Clinical Instructor, SN  
M.S.N. University of San Diego 1995
- MOORE, KATHLEEN LOU. Assistant Professor, Department of Dental Education Services SD  
M.S. University of Southern California 1999
- MOORES, DONALD C. Associate Professor, Department of Surgery SM and Assistant Professor, Department of Pediatrics SM  
M.D. Loma Linda University SM 1987
- MOORHEAD, J. DAVID. Associate Professor, Department of Surgery SM  
M.D. Loma Linda University SM 1973
- MORAN, ALICE P. Adjunct Assistant Professor, Department of Dental Hygiene SD  
D.M.D. Medical University of South Carolina 1982
- MORETTA, CARLOS MANUEL. Instructor, Department of Oral and Maxillofacial Surgery SD  
D.D.S. Loma Linda University SD 2001
- MOREY, JANETTE L. Clinical Instructor, Department of Occupational Therapy AH  
B.S. University of North Dakota 1978
- MORGAN, DOREE L. Assistant Clinical Professor, Department of Nutrition PH  
M.P.H. Loma Linda University PH 1978
- MORGAN, JOHN W. Professor, Department of Epidemiology and Biostatistics PH  
Dr.P.H. Loma Linda University PH 1984
- MORGAN, WALTER C. Assistant Clinical Professor, Department of Family Medicine  
M.D. University of Washington 1981
- MORIKAWA, WESLEY MIKJO. Assistant Professor, Department of Pediatric Dentistry SD  
D.D.S. University of Southern California 1981
- MORRIS, CHRISTOPHER LEE. Professor, Department of Pediatrics SM  
M.D. University of Minnesota 1980
- MORRIS, JOAN D. Associate Professor, Department of Pediatrics SM  
M.D. University of Florida 1986

- MORRIS, JOHN PRESTON. Clinical Professor,  
Department of Pediatrics SM  
M.D. Yale University 1948
- MORROW, STEVEN GALE. Associate Professor,  
Department of Endodontics SD  
D.D.S. Loma Linda University SD 1960
- MORTON, KELLY R. Associate Research  
Professor, Department of Family Medicine  
SM and Department of Psychology ST  
Ph.D. Bowling Green State University 1992
- MOSAAD, PHEBE FAWZI. Assistant Professor,  
Department of Anesthesiology SM  
M.B.Ch.B. Kasr El Aini School of Medicine  
(Egypt) 1967
- MOSAVIN, RASHID. Associate Professor,  
Department of Social and Administrative  
Sciences SP  
Ph.D. University of Wisconsin at Madison 1996
- MOSES, KENNETH P. Assistant Professor,  
Department of Pathology and Human  
Anatomy SM  
M.D. Loma Linda University SM 1998
- MOSS, JENNIFER DAWN. Assistant Professor,  
Department of Dental Hygiene SD  
B.S. Loma Linda University SD 2003
- MOYERS, MICHAEL F. Professor, Department of  
Radiation Medicine SM  
Ph.D. University of Texas Health Science  
Center 1991
- MOYNIHAN, JAMES A. Instructor, Department of  
Emergency Medicine SM and Department  
of Pediatrics SM  
D.O. College of Osteopathic Medicine of the  
Pacific 1996
- MTHOMBENI, JONATHAN J. Assistant Clinical  
Professor, Department of Pediatrics SM  
M.D. Technical University of Santiago 1985
- MUDGE, M. KENNETH. Clinical Professor,  
Department of Orthopedic Surgery SM  
M.B.Ch.B. University of Birmingham (United  
Kingdom) 1970
- MUIR, CRAIG A. Assistant Clinical Professor,  
Department of Physical Medicine SM and  
Adjunct Professor, Department of  
Psychology GS  
Ph.D. University of Southern California 1976
- MUKHERJEE, ASHIS. Assistant Clinical Professor,  
Department of Medicine SM  
M.D. Cornell University Medical College 1985
- MULLA, NEDA F. Associate Professor,  
Department of Pediatrics SM  
M.B.B.S. Kuwait University Health Sciences  
Center Medical School 1986
- MULTANI, MALWINDER KAUR. Assistant  
Professor, Department of Medicine SM  
M.B.B.S. Medical College at Amrisar (India)  
1979
- MUNCE, C. JOHN. Assistant Professor,  
Department of Endodontics SD  
D.D.S. Loma Linda University SD 1978
- MUNGUIA, FERNANDO MOISES. Assistant  
Professor, Department of Restorative  
Dentistry SD  
D.D.S. Cayetano Heredia Peruvian University  
1985
- MUNOZ-VIVEROS, CARLOS ALBERTO. Adjunct  
Professor, Department of Restorative  
Dentistry SD  
D.D.S. University Nacional Pr Henriquez  
Urena School of Dentistry 1979
- MUNSON, JAMES L. Assistant Clinical Professor,  
Department of Pediatrics SM  
M.D. Loma Linda University SM 1977
- MUNSON, LAUREL JONES. Assistant Clinical  
Professor, Department of Gynecology and  
Obstetrics SM  
M.D. Loma Linda University SM 1978
- MURASE, MIYAKO. Adjunct Instructor,  
Department of Allied Health Studies AH  
B.A. Japanese Social Welfare University 1978
- MURDOCH, J. LAMONT. Professor, Department  
of Medicine SM  
M.D. Loma Linda University SM 1963
- MURDOCH, WILLIAM GORDON C., JR.  
Associate Professor, Department of  
Psychiatry SM  
M.D. Loma Linda University SM 1973
- MURRAY, RICK D. Associate Clinical Professor,  
Department of Gynecology and Obstetrics  
SM  
M.D. Loma Linda University SM 1975
- MUTINGA, MUENI L. Adjunct Assistant Professor,  
Department of Dental Education Services  
SD  
D.D.S. Loma Linda University SD 2001
- NAFTEL, JOHN C. Assistant Professor,  
Department of Emergency Medicine SM  
M.D. University of California at Los Angeles  
1972
- NAHOUM, HENRY ISSAC. Professor, Department  
of Orthodontics SD  
D.D.S. Columbia University 1943
- NAKAMOTO, MASAO. Associate Clinical  
Professor, Department of Gynecology and  
Obstetrics SM  
M.D. Loma Linda University SM 1955

- NAKAMURA, DEANNA D. Clinical Instructor,  
Department of Nutrition and Dietetics AH  
M.S.N. Oakland Alameda Community Hospital  
1962
- NAKANO, JONATHAN K. Instructor, Department  
of Oral and Maxillofacial Surgery SD  
D.M.D. Boston University Dental School 2003
- NAMIHAS, IVAN C., JR. Assistant Professor,  
Department of Radiation Medicine SM  
M.D. Loma Linda University SM 1984
- NARULA, MINAKSHI. Assistant Professor,  
Department of Orthodontics SD  
B.D.S. RA Dental College at Calcutta (India)  
1985
- NARVAEZ, JULIO. Assistant Professor,  
Department of Ophthalmology SM  
M.D. Loma Linda University SM 1992
- NASH, SANDRA B. Assistant Professor,  
Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1980
- NASH, WALTER C. Associate Clinical Professor,  
Department of Orthopedic Surgery SM  
M.D. Loma Linda University SM 1955
- NATION, N. JARED. Assistant Professor,  
Department of Pediatric Dentistry SD  
D.D.S. Loma Linda University SD 2002
- NAUERTZ, CINDA L. Instructor, Department of  
Pediatrics SM  
M.D. Loma Linda University SM 1999
- NAVA, P. BEN, JR. Associate Professor,  
Department of Pathology and Human  
Anatomy SM  
Ph.D. Loma Linda University GS 1973
- NAYLOR, W. PATRICK. Adjunct Professor,  
Department of Restorative Dentistry SD  
D.D.S. Georgetown University 1978
- NAZARI, MOSTAFA. Assistant Professor,  
Department of Restorative Dentistry SD  
D.D.S. Espahan University (Iran) 1986
- NAZAROFF, LESLIE JOANN. Assistant Professor,  
Department of Dental Hygiene SD  
Dr.P.H. Loma Linda University PH 1998
- NEGERIE, MEKEBEB. Adjunct Assistant  
Professor, Department of Global Health PH  
Dr.P.H. Loma Linda University PH 1994
- NEGLIO, MICHAEL J. Assistant Clinical  
Professor, Department of Radiology SM  
M.D. University Autonomous of Guadalajara  
1974
- NEIDIGH, JONATHAN W. Assistant Professor,  
Department of Biochemistry and  
Microbiology SM  
Ph.D. University of Washington 1999
- NEISH, CHRISTINE GERKEN. Associate  
Professor, Department of Health Promotion  
and Education PH  
Ph.D. Claremont Graduate University 1988
- NELSON, ALAN A. Associate Professor,  
Department of Psychiatry SM  
M.D. Loma Linda University SM 1979
- NELSON, BONNIE ANN. Assistant Professor,  
Department of Pediatric Dentistry SD  
D.D.S. Loma Linda University SD 1988
- NELSON, DEBORAH K. Clinical Instructor,  
Department of Clinical Laboratory Science  
AH  
B.S. Quincy University 1978
- NELSON, GREGORY A. Associate Professor,  
Department of Radiation Medicine SM  
Ph.D. Harvard University 1979
- NELSON, JERALD C. Professor, Department of  
Medicine SM and Department of Pathology  
and Human Anatomy SM  
M.D. College of Medical Evangelists 1957
- NELSON, LAURIE E. Clinical Instructor,  
Department of Occupational Therapy AH  
M.A. University of Southern California 1995
- NELSON, PETER C. Assistant Professor,  
Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1970
- NELSON, RICHARD DEANE. Assistant Clinical  
Professor, Department of Cardiopulmonary  
Sciences AH  
M.D. Angeles University 1995
- NELSON, RICHARD R. Adjunct Assistant  
Professor, Department of Dental Education  
Services SD  
D.M.D. University of Oregon Dental School  
1972
- NELSON, SCOTT C. Clinical Instructor,  
Department of Orthopedic Surgery SM  
M.D. Loma Linda University SM 1996
- NESPER, TIMOTHY P. Assistant Professor,  
Department of Emergency Medicine SM  
M.D. University of Southern California 1983
- NETHERY, W. JAMES. Assistant Professor,  
Department of Radiation Medicine SM  
D.D.S. Loma Linda University SD 1965
- NEUENDORFF, HAROLD THOMAS. Clinical  
Instructor, Department of Occupational  
Therapy AH  
B.S. Loma Linda University AH 1992
- NEUFELD, ROLAND DELMER WARREN.  
Assistant Professor, Department of  
Orthodontics SD  
D.D.S. Loma Linda University SD 1974

- NEUFELD, TIMOTHY E. Associate Clinical Professor, Department of Family Medicine SM  
M.D. Loma Linda University SM 1970
- NEUFELD-TRUJILLO, JENNIFER L. Assistant Professor, Department of Pediatrics SM  
M.D. Loma Linda University SM 2000
- NEUMANN, MONICA M. Associate Professor, Department of Anesthesiology SM  
M.D. Loma Linda University SM 1974
- NEWTON, FREDERICK A. Adjunct Professor, Department of Psychology GS  
Ph.D. University of Houston 1975
- NEWTON, STEVEN DOUGLAS. Assistant Clinical Professor, Department of Physical Therapy AH  
M.B.A. University of Redlands 1992
- NG, SHERALENE H. C. Assistant Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1990
- NGO, EHREN BRENT. Assistant Professor, Department of Cardiopulmonary Sciences AH  
M.S. University of Maryland 1999
- NGO, ERIC. Associate Clinical Professor, Department of Preventive Medicine SM and Department of Health Promotion and Education PH  
M.D. Loma Linda University SM 1963
- NGO, MADELEINE N. Assistant Clinical Professor, Department of Pediatrics SM  
M.D. Saigon Medical University 1975
- NGUYEN, H. BRYANT. Assistant Professor, Department of Emergency Medicine SM  
M.D. University of California at Irvine 1998
- NGUYEN, SON C. Assistant Professor, Department of Radiology SM  
M.D. University of California at Los Angeles 1997
- NGUYEN, THUAN HUU. Instructor, Department of Clinical Laboratory Science AH  
M.P.H. Loma Linda University PH 1975
- NICHOLS, RICK JASON. Assistant Professor, Department of Pediatric Dentistry SD  
D.D.S. Loma Linda University SD 1993
- NICK, DOYLE R. Associate Professor, Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1978
- NICK, JAN M. Associate Professor, School of Nursing SN  
Ph.D. Texas Women's University 1997
- NICK, KEVIN E. Assistant Professor, Department of Earth and Biological Sciences ST  
Ph.D. University of Oklahoma at Norman 1990
- NICOLA, DENNIS C. Adjunct Assistant Professor, Department of Dental Education Services SD  
D.D.S. Loma Linda University SD 1973
- NICOLA, QUINTES PERRY. Assistant Professor, Department of Dental Education Services SD  
D.D.S. Loma Linda University SD 1969
- NIEMEYER, AGNIESZKA J. Clinical Instructor, Department of Medicine SM  
M.D. Loma Linda University SM 1999
- NINNIS, JANET. Associate Professor, Department of Pediatrics SM  
M.D. 1977
- NIST, LAURA DAWN HENRICHSEN. Assistant Professor, Department of Neurology SM  
M.D. Loma Linda University SM 1995
- NITTA, ANNETTE TSUGIE. Assistant Clinical Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1985
- NOGUCHI, THOMAS T. Clinical Professor, Department of Pathology and Human Anatomy SM  
M.D. Nippon Medical School (Japan) 1951
- NOORVASH, SHAHAB. Assistant Professor, Department of Endodontics SD  
D.D.S. Northwestern University 1987
- NORDLAND, W PETER. Adjunct Assistant Professor, Department of Periodontics SD  
D.M.D. Temple University 1979
- NOVAL, JERL JEAN. Clinical Instructor, Department of Nutrition PH  
B.S. Loma Linda University PH 1993
- NOWRANGI, PUSHPA. Associate Professor, Department of Pediatrics SM and Department of Medicine SM  
M.B.B.S. Darbhanga Medical College 1978
- NYIRADY, LAURA F. Assistant Professor, School of Nursing SN  
M.S.N. Boston University 1977
- NYIRADY, STEPHEN A. Associate Professor, Department of Biochemistry and Microbiology SM  
Ph.D. Loma Linda University GS 1972
- NYKAZA, JOSEPH STANLEY. Assistant Professor, Department of Restorative Dentistry SD  
D.D.S. Marquette University 1961

- O'CONNOR, LINDA K. Clinical Instructor,  
Department of Clinical Laboratory Science  
AH  
B.S. Beaumont Army Medical Center 1976
- OAKLEY, ERIC. Adjunct Assistant Professor,  
Department of Dental Education Services  
SD  
D.D.S. Loma Linda University SD 1995
- OAKLEY, NANCY T. Clinical Instructor, School of  
Nursing SN  
M.S.N. Western University of Health Scientists  
at Pomona 2001
- OBENAUS, ANDRE. Assistant Research Professor,  
Department of Radiation Medicine SM and  
Department of Radiology SM  
Ph.D. University of British Columbia at  
Vancouver 1989
- OBERG, KERBY C. Assistant Professor,  
Department of Pathology and Human  
Anatomy SM  
Ph.D. Loma Linda University GS 1989  
M.D. Loma Linda University SM 1991
- OCHOA, HUMBERTO R. Assistant Professor,  
Department of Emergency Medicine SM  
M.D. University of Utah 1983
- ODABASHIAN, NISHAN M. Assistant Professor,  
Department of Endodontics SD  
D.M.D. Tufts University School of Dental  
Medicine 1991
- OH, SANG-DUK. Assistant Professor, Department  
of Periodontics SD  
D.D.S. Kyungpook National University (Korea)  
1981
- OH, YOUNG-HYUN. Associate Clinical Professor,  
Department of Ophthalmology SM  
M.D. University of Michigan 1986
- OJANO, MAC-REY L. Assistant Professor,  
Department of Restorative Dentistry SD  
D.M.D. Manila Central University (Philippines)  
1990
- JOGHO, OKECHUKWU N. Associate Professor,  
Department of Surgery SM  
M.D. University of California at San Francisco  
1986
- OKADA, GEOFFREY TOSHIO. Assistant  
Professor, Department of Endodontics SD  
D.D.S. Loyola University 1983
- OKUMURA, WESLEY KENT. Assistant Professor,  
Department of Pediatric Dentistry SD  
D.D.S. Loma Linda University SD 1994
- OLAFSSON, SNORRI. Assistant Professor,  
Department of Medicine SM  
M.D. University of Iceland 1978
- OLIVERIO, MICHAEL R., JR. Assistant Clinical  
Professor, Department of Family Medicine  
SM  
M.D. University of Montemorelos 1984
- OLSEN, NANCY. Clinical Instructor, Department  
of Occupational Therapy AH  
M.A. California State University at Northridge  
1974
- OLSON, INGER L. Associate Professor,  
Department of Pediatrics SM  
M.D. University of Kansas Medical School  
1991
- OLSON, MARK W. Assistant Professor,  
Department of Family Medicine SM  
M.D. Loma Linda University SM 1987
- OOMMEN, SUMA. Assistant Professor,  
Department of Medicine SM  
M.B.B.S. Christian Medical College at Vellore  
1992
- OOSTERWAL, GOTTFRIED. Adjunct Professor,  
Department of Global Health PH  
D.Litt. University of Utrecht 1956
- OPAI-TETTEH, DAVID. Assistant Professor,  
Department of Medicine SM  
M.B.Ch.B. University of Science and  
Technology 1984
- OPSAHL, MICHELLE T. Assistant Professor,  
Department of Family Medicine SM  
M.D. Loma Linda University SM 1996
- ORR, BARBARA J. Associate Professor,  
Department of Family Medicine SM  
M.D. Loma Linda University SM 1970
- ORR, ROBERT D. Adjunct Professor, Department  
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M.D. McGill University (Canada) 1966
- ORTIZ-CAMPOS, CESAR. Assistant Professor,  
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D.D.S. Universidad Nacional Autonoma de  
Mexico 1972
- OSBORN, JAMIE S. Assistant Professor,  
Department of Family Medicine SM  
M.D. Loma Linda University SM 1993
- OSHIRO, KAREN N. Assistant Clinical Professor,  
Department of Gynecology and Obstetrics  
SM  
M.D. Loma Linda University SM 1978
- OSHITA, PATRICK S. Assistant Professor,  
Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1996
- OSTERDOCK, RENATTA J. Assistant Professor,  
Department of Surgery SM  
M.D. Northwestern University Medical School  
1994

- OTA, LEH C. Assistant Clinical Professor,  
Department of Nutrition PH; Clinical  
Instructor, Department of Nutrition and  
Dietetics AH  
M.P.H. Loma Linda University PH 1978
- OTA, MARLENE M. Assistant Professor,  
Department of Clinical Laboratory Science  
AH  
B.S. University of Redlands 1981
- OTERO, JAY M. Assistant Professor, Department  
of Psychiatry SM  
M.D. Medical College of Virginia 1989
- OWEN, FAYE DENISE. Assistant Clinical  
Professor, Department of Psychiatry SM  
M.D. University of Texas Southwestern  
Medical School 1989
- OWEN, JASON E. Assistant Professor,  
Department of Psychology ST  
Ph.D. University of Alabama at Birmingham  
2003  
M.P.H. University of Alabama at Birmingham
- OYAMA, KOTARO. Clinical Instructor,  
Department of Restorative Dentistry SD  
D.D.S. Nippon Dental University 1997
- OYEMADE, OLUSOLA A. Assistant Clinical  
Professor, Department of Pediatrics SM  
M.B.B.S. University of Edinburgh (Scotland)  
1967
- PADGETT, JAMES R., JR. Assistant Professor,  
Department of Dental Education Services  
SD  
D.D.S. Loma Linda University SD 1982
- PAGE, GRETCHEN ANNE. Clinical Instructor,  
Department of Health Promotion and  
Education PH  
B.S. Chapman University 1981
- PAI, ANITA M. Instructor, Department of Physical  
Medicine SM  
M.D. Loma Linda University SM 1999
- PAI, SHANTHARAM R. Assistant Professor,  
Department of Family Medicine SM and  
Department of Medicine SM  
M.B.B.S. Kasturba Medical College (India)  
1981
- PAIK, STEPHEN H. Instructor, Department of  
Endodontics SD  
D.D.S. Columbia Dental School 1999
- PAINTER, NATHAN A. Assistant Professor,  
Department of Pharmacy Practice SP  
Pharm.D. Virginia Commonwealth University  
2003
- PALLADINO, JUDITH CLARK. Assistant  
Professor, Department of Occupational  
Therapy AH  
M.A. California State University at Long Beach  
1984
- PALMER, LINDA MARGARET. Clinical Instructor,  
Department of Health Information  
Management AH  
B.S. Loma Linda University AH 1979
- PANT, KESHAB DUTT. Associate Professor,  
Department of Medicine SM  
Ph.D. Thomas Jefferson University 1964
- PAPPAS, JAMES M. Associate Professor,  
Department of Pathology and Human  
Anatomy SM; Assistant Clinical Professor,  
Department of Clinical Laboratory Science  
AH  
M.D. Loma Linda University SM 1985
- PARK, HYOUNG J. Instructor, Department of  
Periodontics SD  
D.D.S. Yonsei University Dental School 1992
- PARK, PAULINE A. Clinical Instructor, School of  
Nursing SN  
B.S.N Loma Linda University SN 1969
- PARK, SEEKOOK. Assistant Clinical Professor,  
Department of Medicine SM  
M.D. University of Minnesota 1985
- PARK, SUNGJIN. Assistant Professor, Department  
of Dental Anesthesiology SD  
D.M.D. University of Pennsylvania 1992
- PARK, YONG JUN DAVID. Instructor, Department  
of Oral and Maxillofacial Surgery SD  
D.D.S. Loma Linda University SD 2004
- PARKES, KEVIN J. Assistant Professor,  
Department of Emergency Medicine SM  
M.D. University of California at Irvine 1998
- PARRIS, RICHARD K. Assistant Professor,  
Department of Periodontics SD  
D.D.S. University of California at Los Angeles  
1979
- PATCHIN, REBECCA J. Assistant Professor,  
Department of Anesthesiology SM  
M.D. Loma Linda University SM 1989
- PATEL, BIPIN L. Assistant Clinical Professor,  
Department of Psychiatry SM  
M.B.B.S. BJ Medical College (India) 1979
- PATEL, JIGAR D. Assistant Professor,  
Department of Medicine SM  
D.O. University of North Texas Health  
Sciences Center 1998
- PATEL, MATILAL C. Assistant Professor,  
Department of Orthopedic Surgery SM  
M.B.B.S. MS University at Baroda (India) 1966

- PATEL, RISHI. Clinical Instructor, Department of Restorative Dentistry SD  
D.D.S. University of Bristol (England) 2002
- PATEL, SHASHANK. Clinical Instructor, Department of Clinical Laboratory Science AH  
B.S. Long Beach State University 1984
- PATTON, WILLIAM C. Associate Professor, Department of Gynecology and Obstetrics SM  
M.D. Loma Linda University SM 1969
- PATYAL, BALDEV RAJ. Associate Professor, Department of Radiation Medicine SM  
Ph.D. Washington State 1988
- PAULO, CYNTHIA ANN. Clinical Instructor, Department of Environmental and Occupational Health PH  
M.S. California State University at San Bernardino 1992
- PAVLOVICH, SHARON. Instructor, Department of Occupational Therapy AH  
A.A. Loma Linda University 1992
- PEARCE, RONALD G. Assistant Clinical Professor, Department of Pediatrics SM  
M.D. University of Washington 1965
- PEARCE, WILLIAM. Professor, Department of Physiology and Pharmacology SM and Department of Biochemistry and Microbiology SM  
Ph.D. University of Michigan 1979
- PECAUT, MICHAEL JAMES. Assistant Research Professor, Department of Radiation Medicine SM and Department of Biochemistry and Microbiology SM  
Ph.D. University of Colorado at Boulder 1999
- PECKHAM, NORMAN H. Associate Professor, Department of Pathology and Human Anatomy SM  
M.D. Loma Linda University SM 1962
- PENA, DULCE L. Assistant Professor, Department of Allied Health Studies AH  
J.D. Pepperdine University 1990
- PENDLETON, KAREN S. Assistant Professor, Department of Occupational Therapy AH  
M.A. La Sierra University 1997
- PENG, WEI-PING PENNY. Assistant Professor, Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1999
- PEPPERS, TIMOTHY A. Assistant Clinical Professor, Department of Orthopedic Surgery SM  
M.D. Loma Linda University SM 1992
- PEREIRA, CARLINDO DA REITZ. Clinical Instructor, Department of Ophthalmology SM  
M.D. University of Stellenbosch (South Africa) 1995
- PEREIRA, VALERIA R. S. Assistant Professor, Department of Pediatric Dentistry SD  
D.D.S. Universidade Federal de Santa Catarina 1985
- PEREYRA-SUAREZ, ROBERT. Assistant Clinical Professor, Department of Surgery SM  
M.D. Loma Linda University SM 1976
- PEREZ, DONALD U. Instructor, Department of Surgery SM  
M.D. Loma Linda University SM 1998
- PEREZ, MIA C. Assistant Professor, Department of Pathology and Human Anatomy SM  
M.D. University of the Philippines 1992
- PERROTTE, JUDITH P. Clinical Instructor, School of Nursing SN  
M.S. Loma Linda University GS 1997
- PESAVENTO, RICHARD D. Assistant Clinical Professor, Department of Ophthalmology SM  
M.D. University of California at Irvine 1980
- PESH, SHAWN P. Instructor, Department of Orthodontics SD  
D.D.S. Loma Linda University SD 2001
- PETER, MARLON C. Adjunct Assistant Professor, Department of Dental Education Services SD  
D.D.S. Loma Linda University SD 2003
- PETERS, DONALD L. Professor, Department of Endodontics SD  
D.D.S. Loma Linda University SD 1961
- PETERS, JUDITH MILLER. Associate Professor, School of Nursing SN  
Ed.D. Loma Linda University SE 1968
- PETERS, WARREN R. Assistant Professor, Department of Preventive Medicine SM and Department of Epidemiology and Biostatistics PH  
M.D. Loma Linda University SM 1969
- PETERSEN, DARRELL K. Instructor, Department of Pathology and Human Anatomy SM  
B.Arch. Andrews University 1997
- PETERSEN, FLOYD R. Assistant Professor, Department of Epidemiology and Biostatistics PH and Department of Preventive Medicine SM and School of Nursing SN  
M.P.H. Loma Linda University PH 1977

- PETERSON, DONALD I. Clinical Professor,  
Department of Neurology SM  
M.D. College of Medical Evangelists 1947
- PETERSON, GORDON WILLARD. Professor,  
Department of Neurology SM and  
Department of Physical Medicine SM  
M.D. Loma Linda University SM 1974
- PETERSON, JOHN ERIC, JR. Professor,  
Department of Pediatric Dentistry SD  
D.D.S. Loma Linda University SD 1970
- PETROFSKY, JERROLD S. Professor, Department  
of Physical Therapy AH  
Ph.D. St. Louis University 1976
- PETTI, GEORGE HYACINTH, JR. Professor,  
Department of Surgery SM  
M.D. Loma Linda University SM 1962
- PEVERINI, RICARDO L. Associate Professor,  
Department of Pediatrics SM  
M.D. Loma Linda University SM 1984
- PFEIFFER, TERESE RENE. Instructor,  
Department of Radiation Technology AH  
B.S. Loma Linda University AH 1983
- PHAM, LIEN TRAN. Assistant Clinical Professor,  
Department of Family Medicine SM  
M.D. University of Saigon 1978
- PHATAK, PRASHANT V. Assistant Professor,  
Department of Medicine SM  
M.D. University of California at Los Angeles  
School of Medicine 1999
- PHILIP, SHAILENDRI E. Assistant Professor,  
Department of Radiology SM  
M.D. University of Maryland 1996
- PHILLIPS, BARRATT L. Assistant Clinical  
Professor, Department of Ophthalmology  
SM  
M.D. University of Utah 1995
- PHILLIPS, GORDON D. Clinical Instructor,  
Department of Family Medicine SM  
M.D. Loma Linda University SM 1981
- PHIPATANAKUL, WESLEY P. Instructor,  
Department of Orthopedic Surgery SM  
M.D. Loma Linda University SM 1998
- PIANTINI, REBECA E. Assistant Professor,  
Department of Pediatrics SM  
M.D. Loma Linda University SM 1989
- PICKART, MICHAEL C. Assistant Professor,  
Department of Surgery SM  
M.D. University of California at San Francisco  
1997
- PIEDRA-MUNOZ, ISABELLA. Assistant Professor,  
Department of Pediatric Dentistry SD  
D.D.S. Universidad del Valle 1990
- PIERSON, CRYSTAL E. Assistant Professor,  
Department of Restorative Dentistry SD  
D.D.S. Loma Linda University 2005
- PIERSON, KENNETH D. Assistant Professor,  
Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 2000
- PINK, MARILYN M. Associate Research Professor,  
Department of Orthopedic Surgery SM  
Ph.D. Union Institute and University 1995
- POLLARD, LESLIE N. Associate Professor,  
Faculty of Religion FR  
D.Min. School of Theology at Claremont 1992
- POLVOORDE, GAIL ANN. Assistant Professor,  
Department of Physical Therapy AH  
D.P.T. Loma Linda University 2003
- POLYCARPE, MARTINE Y. Instructor,  
Department of Global Health PH  
M.P.H. Loma Linda University PH 2001
- POMEROY, JONNEL. Instructor, Department of  
Pediatrics SM  
B.S.N. Loma Linda University SN 1977
- POTHIER, PATRICIA KATHLEEN. Assistant  
Professor, Department of SN  
Ph.D. University of San Diego 2001
- POURESMAIL, MANOUCHEHR. Instructor,  
Department of Endodontics SD  
D.D.S. Loma Linda University SD 2003
- POURSHAHMIR, MOHAMMAD A. P. Assistant  
Professor, Department of Surgery SM  
M.D. Georgetown University School of  
Medicine 1996
- POWELL, LEWIS REED, JR. Assistant Professor,  
Department of Restorative Dentistry SD  
D.M.D. University of Oregon Dental School  
1973
- POWER, GORDON. Professor, Department of  
Physiology and Pharmacology SM  
M.D. University of Pennsylvania School of  
Medicine 1961
- PRAKASH, VED. Assistant Professor, Department  
of Radiology SM  
M.D. MA Medical College of Delhi University  
1971
- PRENDERGAST, THOMAS J., JR. Associate  
Clinical Professor, Department of  
Preventive Medicine SM and Department of  
Epidemiology and Biostatistics PH  
M.D. Washington University School of  
Medicine 1966
- PRESTON, WILLIAM. Associate Professor,  
Department of Radiation Medicine SM  
Ed.D. University of Rochester 1974

- PRICE, J. EDSON, JR. Assistant Clinical Professor, Department of Surgery SM  
M.D. Loma Linda University SM 1965
- PRIETO, CLAUDIA V. Assistant Professor, Department of Endodontics SD  
D.D.S. Colombian School of Dentistry (Colombia) 1989
- PROCHAZKA, ERNEST J. Assistant Clinical Professor, Department of Preventive Medicine SM  
M.D. University of Vienna (Austria) 1983
- PROCTOR, DARYL LYNDEN. Assistant Professor, Department of Orthodontics SD  
D.D.S. Loma Linda University SD 1994  
M.S. Loma Linda University 2001
- PROCTOR, GEORGE JASON. Assistant Clinical Professor, Department of Psychiatry SM  
M.D. University of Virginia 1993
- PROCTOR, STOY E. Adjunct Assistant Professor, Department of Health Promotion and Education PH  
M.P.H. Loma Linda University PH 1971
- PROUSSAEFS, PERIKLIS THEODORE. Assistant Professor, Department of Restorative Dentistry SD  
D.D.S. University of Athens School of Dentistry 1993
- PUERTO, SOFIA. Assistant Clinical Professor, School of Nursing SN  
Ph.D. Columbia Pacific University 1993
- PUFFER, KATHLEEN M. Associate Clinical Librarian, Library Faculty  
M.S.L.S. University of North Carolina 1963
- PULIDO, EMMELINE R. Assistant Professor, Department of Pediatrics SM  
M.D. Loma Linda University SM 1988
- PULSIPHER, DAVID ALLEN. Assistant Professor, Department of Oral and Maxillofacial Surgery SD  
D.D.S. Baylor College of Dentistry 1993  
M.D. University of Texas Southwestern Medical Center at Dallas 1997
- PULVERMAN, R. STEVEN. Assistant Clinical Professor, Department of Family Medicine SM  
D.O. College of Osteopathic Medicine 1978
- PUMPHREY, CHARLES D. Assistant Clinical Professor, Department of Pediatrics SM  
M.D. Loma Linda University SM 1985
- PUNJABI, ANIL P. Associate Clinical Professor, Department of Surgery SM; Associate Professor, Department of Oral and Maxillofacial Surgery SD  
D.D.S. University of Southern California Dental School 1990  
M.D. Case Western Reserve University School of Medicine 1993
- PUNJABI, BINDOO. Assistant Professor, Department of Restorative Dentistry SD  
B.D.S. Bombay University Nair Dental College 1984
- PURSLEY, DONALD G. Adjunct Associate Professor, Department of Health Administration PH  
D.B.A. George Washington University 1978
- PUTERMAN, ISRAEL. Clinical Instructor, Department of Restorative Dentistry SD  
D.M.D. Boston University 2002
- PUTNOKY, GILBERT JOHN. Associate Clinical Professor, Department of Medicine SM  
M.D. St. Louis University School of Medicine 1973
- QIN, XUE ZHONG. Associate Research Professor, Department of Medicine SM  
Ph.D. West Virginia University 1992
- QUIGLEY, M. ELIZABETH. Clinical Instructor, Department of Nutrition PH and Department of Nutrition and Dietetics  
M.S. Tufts University 1977
- QUIJADA, EARL B. Assistant Clinical Professor, Department of Family Medicine SM  
M.D. Loma Linda University SM 1995
- QUINTON, BONNIE SUE. Assistant Clinical Professor, Department of Psychiatry SM  
M.S.W. University of Southern California 1979
- QUISHENBERRY, MARY CLAIRE. Instructor, Department of Dental Hygiene SD  
B.S. Loma Linda University SD 1962
- RACINE, HAROLD V. Assistant Clinical Professor, Department of Gynecology and Obstetrics SM  
M.D. Loma Linda University SM 1968
- RACINE, MICHAEL S. Assistant Professor, Department of Pediatrics SM  
M.D. Loma Linda University SM 1995

- RADCLIFFE, ANTHONY B. Associate Clinical Professor, Department of Preventive Medicine SM  
M.D. Creighton Medical School of Omaha 1971
- RADER, JENNIFER ANN. Assistant Professor, Department of Dental Hygiene SD  
B.S. Loma Linda University SD 2000
- RADICE, JENNIFER LEE. Clinical Instructor, Department of Nutrition and Dietetics AH  
B.S. California State University at Los Angeles 1986
- RADOVICH, PATRICIA ANN. Assistant Clinical Professor, School of Nursing SN  
M.S.N. California State University at Long Beach 1995
- RAGHAVAN, RAVI. Associate Professor, Department of Pathology and Human Anatomy SM  
M.B.B.S. Calicut Medical College (India) 1980
- RAINS, VICTORIA S. Assistant Clinical Professor, Department of Medicine SM  
M.D. Creighton University School of Medicine 1978
- RAIS, SHIRLEY MARIE. Assistant Librarian, Library Faculty  
M.L.S. San Jose State University 1992
- RAISZADEH, MOUSSA. Assistant Professor, Department of Radiology SM  
Pharm.D. University of Tabriz 1971
- RAJARAM, SUJATHA. Assistant Professor, Department of Nutrition PH  
Ph.D. Purdue University 1993
- RAJPOOT, DEEPAK K. Assistant Clinical Professor, Department of Pediatrics SM  
M.B.B.S. MGM Medical College (India) 1977
- RAMAL, EDELWEISS R. Adjunct Assistant Professor, School of Nursing SN  
Ph.D. Andrews University 2002
- RAMBHAROSE, JOHN ANTHONY. Assistant Clinical Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1989
- RAMIREZ, CLARA M. Assistant Professor, Division of General Studies ST  
Ph.D. American University of Asturias (Spain) 2000
- RAMIREZ, JOHNNY. Professor, Faculty of Religion FR  
Ed.D. Harvard University 1993
- RAO, RAVINDRA. Professor, Department of Pediatrics SM  
M.B.B.S. Karnataka University MR Medical College (India) 1975
- RASI, ALFREDO. Associate Professor, Department of Surgery SM  
M.D. Buenos Aires Medical School 1961
- RASMUSSEN, THOMAS. Assistant Professor, Department of Anesthesiology SM  
M.D. Loma Linda University SM 1974
- RATHBUN, W. EUGENE. Professor, Department of Periodontics SD  
D.D.S. Loma Linda University SD 1965  
Ph.D. University of California at Los Angeles 1970
- RAUSER, MICHAEL EDWARD. Assistant Professor, Department of Ophthalmology SM  
M.D. University of Maryland 1990
- RAWSON, RICK J. Instructor, Department of Oral and Maxillofacial Surgery SD  
D.D.S. University of the Pacific Dental School 2002
- RAY, ANDREA O. Assistant Professor, Department of Surgery SM  
M.D. Hahnemann School of Medicine 1994
- RAZA, ANWAR S. Adjunct Assistant Professor, Department of Pathology and Human Anatomy SM  
M.B.B.S. SIND Medical College 1983
- RAZA, SYED J. Assistant Clinical Professor, Department of Medicine SM  
M.B.B.S. Dow Medical College 1989
- RAZZOUK, ANEES J. Professor, Department of Surgery SM  
M.D. Loma Linda University SM 1982
- REA, BRENDA L. Assistant Professor, Department of Health Promotion and Education PH  
M.P.T. Loma Linda University AH 1995
- REA, RONALD MILTON. Assistant Professor, Department of Physical Therapy AH  
M.P.T. Loma Linda University AH 1994
- REDELL, MARK A. Adjunct Associate Professor, Department of Pharmacy Practice SP  
Pharm.D. University of Southern California 1985
- REESE, LEROY A. Assistant Professor, Department of Gynecology and Obstetrics SM  
M.D. Loma Linda University SM 1972
- REEVE, IVAN L. Assistant Professor, Department of Family Medicine SM  
M.D. Loma Linda University SM 1961
- REEVES, CLIFTON D. Professor, Department of Surgery SM  
M.D. Loma Linda University SM 1960

- REEVES, MARK E. Assistant Professor,  
Department of Surgery SM  
Ph.D. University of California at Los Angeles  
1990  
M.D. Loma Linda University SM 1992
- REEVES, MICHELLE E. Assistant Professor,  
Department of Family Medicine SM  
M.D. Loma Linda University SM 1986
- REHNGREN-MCCOY, CHRISTINA SUE. Clinical  
Instructor, Department of Nutrition PH  
B.S. Loma Linda University PH 1980
- REILEY, DAVID G. Instructor, Department of  
Emergency Medicine SM  
M.D. University of Arizona 2001
- REINHOLD, ESKILD A. Associate Clinical  
Professor, Department of Orthopedic  
Surgery SM  
M.D. Loma Linda University SM 1968
- REISCHE, SUSAN E. Assistant Clinical Professor,  
Department of Health Promotion and  
Education PH  
Dr.P.H. Loma Linda University PH 1989
- REISWIG, PHILIP H. Associate Professor,  
Department of Orthopedic Surgery SM  
M.D. Loma Linda University SM 1961
- RENTSCHLER, ROBERT E. Associate Clinical  
Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1970
- RESCH, CHARLOTTE SUSANNA. Assistant  
Clinical Professor, Department of Surgery  
SM  
M.D. Dalhousie University Medical School  
1980
- RETAMOZO, BONNIE J. Assistant Professor,  
Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 2005
- REYNOLDS, LOWELL W. Associate Professor,  
Department of Anesthesiology SM and  
Department of Physical Medicine SM  
M.D. Loma Linda University SM 1991
- REZKALLA, MAHER A. Assistant Professor,  
Department of Medicine SM  
M.B.B.Ch. Zagazig University Hospital School  
of Medicine (Egypt) 1978
- RHEE, JOON W. Assistant Professor, Department  
of Health Promotion and Education PH and  
Department of Environmental and  
Occupational Health PH; Instructor,  
Department of Preventive Medicine SM  
M.D. Loma Linda University SM 1998  
Ph.D. Loma Linda University GS 1998
- RIBEIRO, PAULO ALVARES. Professor,  
Department of Medicine SM  
M.D. Faculdade de Medicina De Porto  
(Portugal) 1977
- RICE, GAIL TAYLOR. Professor, Department of  
Allied Health Studies AH  
Ed.D. Loma Linda University SE 1983
- RICE, T. RICHARD. Professor, Faculty of  
Religion FR  
Ph.D. University of Chicago Divinity School  
1974
- RICH, DARLA LEANNE. Instructor, Department  
of Dental Hygiene SD  
B.S. Loma Linda University SD 1995
- RICHARDS, DOUGLAS C. Assistant Clinical  
Professor, Department of Preventive  
Medicine SM and Department of Health  
Promotion and Education PH  
M.D. Oral Roberts University 1989
- RICHARDS, SUSAN CLONINGER. Associate  
Professor, Department of Oral Diagnostic  
Radiology and Pathology SD  
D.D.S. Loma Linda University SD 1984
- RICHARDSON, PAUL L. Associate Professor,  
Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1972
- RICHARDSON, RAYMOND G. Assistant Clinical  
Professor, Department of Surgery SM  
M.D. Washington University 1960
- RICK, GORDON M. Adjunct Associate Professor,  
Department of Oral Diagnostic Radiology  
and Pathology SD  
D.D.S. Loma Linda University SD 1968
- RICKETTS, HERMAN H. L. Associate Clinical  
Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1962
- RIESEN, SHARON K. Associate Professor,  
Department of Pediatrics SM  
M.D. Loma Linda University SM 1982
- RIESENMAN, JOHN P. Associate Clinical  
Professor, Department of Psychiatry SM  
M.D. Loma Linda University SM 1981
- RIFFEL, SERGIO R. Assistant Clinical Professor,  
Department of Medicine SM  
M.D. Autonomous University of Montemorelos  
1980
- RIGGS, MATT L. Adjunct Professor, Department  
of Psychology ST  
Ph.D. Kansas State University 1989
- RIGSBY, RHODES LANE. Assistant Professor,  
Department of Medicine SM  
M.D. Loma Linda University SM 1987

- RIMMER, STEVEN O. Assistant Clinical Professor, Department of Ophthalmology SM  
M.D. University of California at San Diego 1989
- RINGER, JACK. Assistant Professor, Department of Restorative Dentistry SD  
D.D.S. University of the Witwatersrand (South Africa) 1978  
Ph.D. Case Western Reserve University 1969
- RIRIE, CRAIG M. Associate Professor, Department of Periodontics SD  
D.D.S. Creighton University Dental School 1972
- RITCHIE, LOIS A. Assistant Clinical Professor, Department of Family Medicine SM  
M.D. Loma Linda University SM 1963
- RITER, HOLLI C. Assistant Professor, Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1998
- RITTENBACH, GAILE TAMANO. Clinical Instructor, Department of Clinical Laboratory Science AH  
B.S. Loma Linda University AH 1996
- RIVERA, INHERLA H. Assistant Clinical Professor, Department of Nutrition PH; Clinical Instructor, Department of Nutrition and Dietetics AH  
D.H.Sc. Loma Linda University PH 1987
- RIVERA, JORGE L. Assistant Professor, Department of Surgery SM and Department of Family Medicine SM  
M.D. Loma Linda University SM 1979
- RIVERA, MARTHA E. Assistant Professor, Department of Pediatrics SM  
M.D. University of California at Irvine 1985
- RIZKALLA, SUZANNE S. Assistant Professor, Department of Medicine SM  
M.D. Ain Shams University (Egypt) 1985
- ROATH, RODNEY MARK. Instructor, Department of Clinical Laboratory Science AH  
M.B.A. California State University at San Bernardino 1991
- ROBERSON, B. BUD. Assistant Clinical Professor, Department of Anesthesiology SM  
M.D. Loma Linda University SM 1945
- ROBERTS, DOUGLASS B. Professor, Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1966
- ROBERTS, GLYNIS. Clinical Instructor, Department of Health Information Administration AH  
B.S. 1982
- ROBERTS, RANDALL LEE. Adjunct Associate Professor, Faculty of Religion FR  
D.Min. Fuller Theological Seminary 1996
- ROBERTS, WENDY EILEEN. Assistant Clinical Professor, Department of Medicine SM  
M.D. Stanford Medical School 1984
- ROBERTSON, THOMAS L. Assistant Professor, Department of Orthodontics SD  
D.D.S. Marquette University 1959
- ROBINSON, JEFFREY GLENN. Assistant Professor, Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 2004
- ROBINSON, LIA MARGARET. Clinical Instructor, Department of Nutrition PH and Department of Nutrition and Dietetics AH  
B.S. California State University at Los Angeles 1976
- ROBINSON, MAGDA L. Assistant Clinical Professor, Department of Family Medicine SM  
M.D. Universidad de Montemorelos 1973
- ROBLES, ANTONIO E. Professor, Department of Surgery SM  
M.D. Buenos Aires University 1972
- ROCHE, SUSAN. Associate Professor, Department of Oral Diagnostic Radiology and Pathology SD  
D.D.S. Loma Linda University SD 1993
- RODDY, SARAH M. Associate Professor, Department of Pediatrics SM  
M.D. Loma Linda University SM 1980
- RODDY, SARAH M. Associate Professor, Department of Neurology SM  
M.D. Loma Linda University SM 1980
- RODRIGUEZ, MIGUEL A. Assistant Professor, Department of Health Promotion and Education PH  
M.P.H. Chile Adventist University/Bio Bio University 1995
- ROE, PHILLIP. Instructor, Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 2003
- ROGERS, FRANK ROBERT. Associate Professor, Department of Surgery SM  
M.D. Loma Linda University SM 1974
- ROGERS, MARK. Clinical Instructor, Department of Cardiopulmonary Sciences AH  
B.S. Loma Linda University AH 1988
- ROGERS, THOMAS CHARLES. Assistant Professor, Department of Dental Education Services SD  
D.D.S. Loma Linda University SD 1983

- ROGGENKAMP, CLYDE L. Associate Professor,  
Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1970
- ROGHAIR, GARRY DARRELL. Assistant Clinical  
Professor, Department of Radiology SM  
M.D. State University of Iowa 1964
- ROLAND, DAVID DARYL. Adjunct Assistant  
Professor, Department of Endodontics SD  
D.D.S. Loma Linda University SD 1978
- ROMAN, MAHER ABDELSAYED. Assistant  
Professor, Department of Medicine SM  
M.D. Cairo University 1984
- RONAN, ANN M. Clinical Instructor, Department  
of Family Medicine SM  
M.A. University of Rhode Island 1995
- ROOS, PHILIP J. Associate Professor,  
Department of Medicine SM and  
Department of Physiology and  
Pharmacology SM  
M.D. Loma Linda University SM 1976
- ROPACKI, MICHAEL T. Adjunct Assistant  
Professor, Department of Neurology SM  
Ph.D. Texas Technical University 2000
- ROPACKI, SUSAN A. Assistant Professor,  
Department of Psychology ST  
Ph.D. University of Rhode Island 2003
- ROSARIO, CAROLAN R. Assistant Professor,  
Department of Medicine SM  
M.D. Loma Linda University SM 1988
- ROSENQUIST, ROBERT C., JR. Assistant Clinical  
Professor, Department of Ophthalmology  
SM  
M.D. Loma Linda University SM 1977
- ROSS, TERI HAINES. Instructor, Department of  
Clinical Laboratory Science AH  
B.S. Loma Linda University AH 1982
- ROSSI, CARL J., JR. Associate Professor,  
Department of Radiation Medicine SM  
M.D. Loyola University Stritch School of  
Medicine 1988
- ROSSI, JOHN JOSEPH. Adjunct Professor,  
Department of Biochemistry and  
Microbiology SM  
Ph.D. University of Connecticut 1976
- ROTH, ARIEL A. Adjunct Professor, Department  
of Earth and Biological Sciences ST  
Ph.D. University of Michigan 1955
- ROTH, KENNETH. Associate Clinical Professor,  
Department of Orthopedic Surgery SM  
M.D. Marquette Medical School 1963
- ROTH, PATRICIA J. Assistant Clinical Professor,  
Department of Psychiatry SM  
Ph.D. Trinity School of Graduate Studies 2000
- ROTH, WILLIAM G. Associate Professor,  
Department of Psychiatry SM  
Psy.D. Biola University 1986
- ROUSE, GLENN ALLEN. Associate Professor,  
Department of Radiology SM; Associate  
Clinical Professor, Department of Radiation  
Technology AH  
M.D. Loma Linda University SM 1976
- ROUSE, TERRI LYNNE. Instructor, Department  
of Health Information Management AH  
B.S. Loma Linda University 1994
- ROWE, MARK ROBERT. Assistant Professor,  
Department of Surgery SM and Department  
of Pediatrics SM; Associate Professor,  
Department of Surgery SM  
M.D. Loma Linda University SM 1994
- ROWSELL, EDWARD H. Assistant Professor,  
Department of Pathology and Human  
Anatomy SM  
M.D. Loma Linda University SM 1994  
Ph.D. Loma Linda University GS 1994
- RUBENSTEIN, ISRAEL. Associate Clinical  
Professor, Department of Pediatrics SM  
Ph.D. California School of Professional  
Psychology at Fresno 1981
- RUCKLE, HERBERT C. Professor, Department of  
Surgery SM  
M.D. Loma Linda University SM 1986
- RUDATSIKIRA, EMMANUEL MITSINDO.  
Assistant Professor, Department of  
Epidemiology and Biostatistics PH  
M.D. Kinshasa University 1978
- RUDICH, MARC D. Assistant Clinical Professor,  
Department of Surgery SM  
M.D. Albany Medical College 1971
- RUH, KATJA. Assistant Professor, Department of  
Medicine SM  
M.D. Loma Linda University SM 1991
- RUIZ, CYNTHIA CHAVEZ. Assistant Clinical  
Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1981
- RUNGCHARASSAENG, KITICHAJ. Associate  
Professor, Department of Orthodontics SD  
D.D.S. Chulalongkorn University 1991
- RUNYON, BRUCE A. Professor, Department of  
Medicine SM  
M.D. University of Iowa 1976
- RUSCH, ROY M. Assistant Clinical Professor,  
Department of Orthopedic Surgery SM  
M.D. Loma Linda University SM 1965

- RUSSELL, FINDLAY E. Research Professor,  
Department of Surgery SM  
M.D. College of Medical Evangelists 1950  
Ph.D. Laurence University 1974
- RUSSO, MARISA. Instructor, Department of  
Dental Hygiene SD  
B.S. Loma Linda University SD 1993
- RUTEBUKA, OBED BASHORA. Assistant  
Professor, Department of Environmental  
and Occupational Health PH  
Ph.D. Loma Linda University GS 1996
- RYNEARSON, R. DAVID. Associate Professor,  
Department of Orthodontics SD  
D.D.S. Loma Linda University SD 1971
- RYU, JUNICHI. Associate Professor, Department  
of Biochemistry and Microbiology SM  
Ph.D. Tokyo Metropolitan University 1978
- SAATY, HANS P. Assistant Professor, Department  
of Radiology SM  
M.D. Loma Linda University SM 1982
- SABATE, JOAN. Professor, Department of  
Epidemiology and Biostatistics PH and  
Department of Nutrition PH  
M.D. Autonomous Universidad Barcelona 1978
- SADJADI, SEYED-ALI. Associate Professor,  
Department of Medicine SM  
M.D. University of Tehran Medical School  
1972
- SAHNEY, SHOBHA. Associate Professor,  
Department of Pediatrics SM  
M.B.B.S. Lady Hardine Medical College of  
Delhi University (India) 1969
- SAKALA, ELMAR P. Professor, Department of  
Gynecology and Obstetrics SM  
M.D. Loma Linda University SM 1973
- SAKS, GERALD. Clinical Professor, Department  
of Pediatrics SM  
M.D. New York University at Buffalo 1960
- SALARY, TISHA L. Instructor, Department of  
Medicine SM  
M.D. Loma Linda University SM 2001
- SALCEDO, LORENA D. Instructor, Department  
of Pediatric Dentistry SD  
D.D.S. University of Texas Health Science  
Center 2002
- SALEMI, CHARLES S. Assistant Clinical  
Professor, Department of Epidemiology and  
Biostatistics PH  
M.D. Tufts University School of Medicine 1965
- SALIH, W. AHMAD. Assistant Professor,  
Department of Emergency Medicine SM  
M.D. University of California at Irvine 1985
- SALVADOR, HERMINIA S. Associate Professor,  
Department of Gynecology and Obstetrics  
SM  
M.D. Far Eastern University 1961
- SALZMAN, STEVE. Assistant Clinical Professor,  
Department of Family Medicine SM  
M.D. Autonomous University of Guadalajara  
1982
- SAMADY, ABDUL R. Assistant Professor,  
Department of Anesthesiology SM  
M.D. Kabul University Medical School  
(Afghanistan) 1965
- SAMARZA, ALANE M. Assistant Professor,  
Department of Family Medicine SM and  
Department of Psychiatry SM  
Ph.D. California School of Professional  
Psychology 1986
- SAMPLES, JOHN W. Assistant Professor,  
Department of Medicine SM  
M.D. Loma Linda University SM 1997
- SAMSKY, CAROL BETH. Clinical Instructor,  
Department of Clinical Laboratory Science  
AH  
M.A. New York University 1970
- SANCHEZ, ALBERT S. Adjunct Professor,  
Department of Nutrition PH  
Dr.P.H. University of California at Los Angeles  
1968
- SANDBERG, LAWRENCE. Clinical Research  
Professor, Department of Pathology and  
Human Anatomy SM and Department of  
Medicine SM  
M.D. University of Illinois 1957  
Ph.D. University of Oregon School of Health  
Sciences 1966
- SANDERS, ISAAC. Professor, Department of  
Radiology SM  
M.D. State University College of Medicine at  
New York 1955
- SANDERS, JOYCE HYUNA. Assistant Professor,  
Department of Dental Hygiene SD  
B.S. Loma Linda University SD 2003
- SANDLIN, CONSTANCE P. Associate Clinical  
Professor, Department of Pediatrics SM  
M.D. Loma Linda University SM 1971
- SANDO, MARVIN M. Assistant Clinical Professor,  
Department of Gynecology and Obstetrics  
SM  
M.D. University of Colorado School of  
Medicine 1955
- SANDRO, JACQUELIN S. Clinical Instructor,  
Department of Clinical Laboratory Science  
AH  
B.S. University of California at Los Angeles  
1967

- SANFORD, MICHAEL A. Assistant Clinical Professor, Department of Surgery SM  
M.D. New York Medical College 1994
- SANTA MARIA, DAISY. Clinical Instructor, Department of Clinical Laboratory Science AH  
B.S. Loma Linda University AH 1983
- SANTIMALAPONG, AMY. Assistant Professor, Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1990
- SANTOS-KHO, DELFIN TAN. Clinical Instructor, Department of Clinical Laboratory Science AH  
B.S. Centro Escolar University 1968
- SAPHYAKHAJON, PHISIT. Associate Clinical Professor, Department of Pediatrics SM  
M.D. Chiang Mai Medical School (Thailand) 1964
- SARPY, NANCY LOUISE. Assistant Professor, School of Nursing SN  
M.S. Loma Linda University GS
- SASAKI, GORDON H. Clinical Professor, Department of Surgery SM  
M.D. Yale University 1968
- SATTERFIELD, CAROL L. Clinical Instructor, Department of Clinical Laboratory Science AH  
B.S. Loma Linda University 1971
- SAUKEL, G. WILLIAM. Associate Professor, Department of Pathology and Human Anatomy SM  
M.D. Medical University of South Carolina 1980
- SAVEDRA, MARILYN K. Adjunct Professor, School of Nursing SN  
D.N.S. University of California at San Francisco 1973
- SAYED, S. JON. Assistant Professor, Department of Pediatric Dentistry SD  
D.D.S. Loma Linda University SD 1996
- SCAFIDI, DAVID E. Assistant Clinical Professor, Department of Radiology SM  
M.D. University of Health Sciences/Chicago Medical School 1993
- SCEVILLE, JODI LYNN. Assistant Professor, Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1999
- SCHAEPPER, MARY A. Associate Professor, Department of Psychiatry SM  
M.D. Loma Linda University SM 1996
- SCHANTZ, BORGE. Professor, Department of Allied Health Studies AH  
Ph.D. Fuller Theological Seminary 1983
- SCHARFFENBERG, JOHN A. Adjunct Professor, Department of Nutrition PH  
M.D. Loma Linda University SM 1948
- SCHEER, PETER MATTHIAS. Assistant Professor, Department of Oral and Maxillofacial Surgery SD  
D.D.S. Loma Linda University SD 1984
- SCHIFRIN, BARRY S. Clinical Professor, Department of Gynecology and Obstetrics SM  
M.D. Chicago Medical School 1963
- SCHILLING, LAURA J. Instructor, Department of Pediatrics SM  
M.D. Loma Linda University SM 2001
- SCHLAERTH, KATHERINE R. Associate Professor, Department of Family Medicine SM  
M.D. State University of New York at Buffalo School of Medicine 1968
- SCHLENKER, WILLIS LLOYD. Associate Professor, Department of Orthodontics SD  
D.D.S. Loma Linda University SD 1957
- SCHMIDT, MERRILL E. Associate Clinical Professor, Department of Endodontics SD  
D.D.S. Loma Linda University SD 1962
- SCHNEIDER, KIMBER L. Assistant Clinical Professor, Department of Ophthalmology SM  
M.D. Loma Linda University SM 1971
- SCHNEIDER, LOUISE E. Assistant Clinical Professor, Department of Nutrition PH and Department of Nutrition and Dietetics AH  
Dr.P.H. Loma Linda University PH
- SCHNEIDER, STUART BENJAMIN. Clinical Instructor, Department of Clinical Laboratory Science AH  
M.B.A. University of Laverne 1991
- SCHNEPPER, GRETCHEN M. Instructor, Department of Orthodontics SD  
D.D.S. Loma Linda University SD 2003
- SCHNEPPER, HAROLD. Emeritus Professor, Department of Restorative Dentistry SD
- SCHOENE, HERMAN R. Associate Clinical Professor, Department of Orthopedic Surgery SM  
M.D. University of Buffalo 1956
- SCHOEPFLIN, LEEANN H. Assistant Professor, Department of Dental Hygiene SD  
B.S. Loma Linda University SD 1975
- SCHROETLIN, ROBERT GENE. Assistant Professor, Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 2005

- SCHULTE, REINHARD W. Assistant Professor,  
Department of Radiation Medicine SM  
M.D. Cologne University (Germany) 1984
- SCHULTZ, DAVID E. Assistant Clinical Professor,  
Department of Psychiatry SM  
M.D. Loma Linda University SM 1991
- SCHULTZ, GERALD. Assistant Clinical Professor,  
Department of Ophthalmology SM  
M.D. New York Medical College 1963
- SCHULTZ, ROBERT L. Professor, Department of  
Pathology and Human Anatomy SM  
Ph.D. University of California at Los Angeles  
1957
- SCHULZ, ELOY E. Professor, Department of  
Radiology SM  
M.D. National University at Cordoba  
(Argentina) 1966
- SCHUMACHER, MARY ANN. Instructor,  
Department of Dental Hygiene SD  
B.S. Loma Linda University SD 1994
- SCHWAB, ERNEST ROE III. Associate Professor,  
Department of Allied Health Studies AH  
Ph.D. Loma Linda University GS 1989
- SCHWANDT, ALLEN L. Associate Professor,  
Department of Medicine SM  
M.D. Loma Linda University SM 1954
- SCHWARTZ, ELAINE BENAKSAS. Assistant  
Research Professor, Department of  
Medicine SM  
Ph.D. University of California at Los Angeles  
1989
- SCOTT, J. RANDALL. Clinical Instructor,  
Department of Cardiopulmonary Sciences  
AH  
B.S. Loma Linda University AH 1988
- SCOTT, KENDALL G. Assistant Clinical  
Professor, Department of Family Medicine  
SM  
M.D. University of Southern California 1979
- SCOTT, LOREEN KAY. Clinical Instructor,  
Department of Cardiopulmonary Sciences  
AH  
B.A. California State University at San  
Bernardino 1996
- SECHRIST, CHRISTOPHER M. Instructor,  
Department of Endodontics SD  
D.D.S. Loma Linda University SD 2000
- SECOR, RONALD J. Assistant Professor,  
Department of Dental Education Services  
SD  
M.B.A. University of LaVerne 1997
- SEGAL, LAWRENCE J. Assistant Professor,  
Department of Medicine SM  
M.D. University of California at Los Angeles  
1963
- SEGURA, GEORGE A. Assistant Professor,  
Department of Pediatrics SM  
M.D. Universidad de Montemorelos (Mexico)  
1981
- SEHDEV, MOHAN K. Assistant Professor,  
Department of Surgery SM  
M.D. University of Bombay 1963
- SEHEULT, ROGER D. Instructor, Department of  
Medicine SM  
M.D. Loma Linda University SM 2000
- SEHRA, RUCHIR. Associate Clinical Professor,  
Department of Pediatrics SM; Associate  
Professor, Department of Medicine SM  
M.D. Indiana University School of Medicine  
1992
- SEIBLY, WILLIAM S. Professor, Department of  
Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1959  
Ph.D. Loma Linda University GS 1981
- SENTENN, GREGG A. Assistant Clinical  
Professor, Department of Psychiatry SM  
M.D. Loma Linda University SM 1972
- SERABYN, CYNTHIA L. Assistant Professor,  
Department of Medicine SM  
D.O. College of Osteopathic Medicine of the  
Pacific 1991
- SERAJ, IBRAHIM M. Associate Clinical Professor,  
Department of Gynecology and Obstetrics  
SM  
M.D. Kabul Medical School (Afghanistan) 1954
- SEVILLA, CONRADO C. Assistant Clinical  
Professor, Department of Psychiatry SM  
M.D. De La Salle University College of  
Medicine 1987
- SHABAHANG, SHAHROKH. Associate Professor,  
Department of Endodontics SD  
D.D.S. University of the Pacific 1987
- SHAFFER, AUDREY JEANNE. Assistant Clinical  
Professor, Department of Health  
Information Management AH  
M.A. Central Michigan University 1982
- SHAH, MANOJ C. Associate Professor,  
Department of Pediatrics SM  
M.B.B.S. University of Baroda (India) 1978
- SHAH, PRAFUL C. Assistant Clinical Professor,  
Department of Pediatrics SM  
M.B.B.S. Grant Medical College 1976

- SHAIN, LINDA J. Clinical Instructor, Department of Clinical Laboratory Science AH  
B.S. Loma Linda University AH 1981
- SHANK, AUDREY CHAPIN FISHER. Assistant Professor, Department of Family Medicine SM  
M.D. Loma Linda University SM 2001
- SHANK, GREGORY SCOTT. Assistant Professor, Department of Surgery SM  
M.D. Loma Linda University SM 1999
- SHANKEL, TAMARA MICHELLE. Assistant Professor, Department of Pediatrics SM and Department of Medicine SM  
M.D. Loma Linda University SM 1988
- SHAREEF, TAHSEEN N. Assistant Professor, Department of Medicine SM  
M.D. Medical College of Pennsylvania 1993
- SHARP, BRIAN D. Assistant Professor, Department of Speech-Language Pathology and Audiology AH  
M.S. University of Redlands 1995
- SHARPE, LAWRENCE D. Assistant Clinical Professor, Department of Pediatrics SM  
M.D. Marquette School of Medicine 1970
- SHAUGHNESSY, PAIGE HINERMAN. Associate Professor, Department of Speech-Language Pathology and Audiology AH  
Ph.D. University of Utah 1985
- SHAVLIK, DAVID JOSEPH. Assistant Professor, Department of Epidemiology and Biostatistics PH  
M.P.H. Loma Linda University PH 1997
- SHAVLIK, GERALD W. Adjunct Assistant Professor, Department of Epidemiology and Biostatistics PH  
M.P.H. Loma Linda University 1971
- SHAW, KATHRYN J. Assistant Clinical Professor, Department of Gynecology and Obstetrics SM  
M.D. University of Southern California 1983
- SHEHATA, MARIANNE. Assistant Professor, Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 2003
- SHELDON, RICHARD L. Clinical Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1968
- SHELLARD, EDWARD R. Adjunct Associate Professor, Department of Restorative Dentistry SD  
D.D.S. Case Western Reserve University 1987
- SHEPARD, ANDREW. Instructor, Department of Radiation Technology, AH  
B.S. Loma Linda University AH 1998
- SHEPHERD, MICHAEL D. Assistant Clinical Professor, Department of Family Medicine SM  
M.D. Loma Linda University SM 1980
- SHEPPARD, ASHER R. Adjunct Assistant Research Professor, Department of Physiology and Pharmacology SM  
Ph.D. State University of New York at Buffalo 1975
- SHERIDAN, ALLAN. Assistant Professor, Department of Orthodontics SD  
D.D.S. Case Western Reserve University 1964
- SHERIDAN, CLARE M. Associate Professor, Department of Pediatrics SM and Department of Emergency Medicine SM  
M.B.Ch.B. University College at Dublin (Ireland) 1973
- SHERIDAN, FRANK P. Assistant Clinical Professor, Department of Pathology and Human Anatomy SM  
M.B.Ch.B. University College at Dublin (Ireland) 1971
- SHERMAN, MARK D. Assistant Clinical Professor, Department of Ophthalmology SM  
M.D. Albert Einstein Medical College 1985
- SHERWIN, THOMAS S. Associate Professor, Department of Emergency Medicine SM; Assistant Professor, Department of Pediatrics SM  
M.D. Loma Linda University SM 1989
- SHEU, AUDREY T. Assistant Professor, Department of Pediatric Dentistry SD  
D.D.S. Loma Linda University SD 2003
- SHEU, MARIA MIAO-YIN. Assistant Professor, Department of Pediatric Dentistry SD  
D.D.S. Loma Linda University SD 1994
- SHIN, ANTHONY S. Assistant Professor, Department of Psychiatry SM  
M.D. Seoul National University 1983
- SHINGU, NAOHITO. Adjunct Instructor, Department of Allied Health Studies AH  
M.S. Hiroshima University-Japan 2000
- SHIOKARI, PATRICIA. Clinical Instructor, Department of Occupational Therapy AH  
A.A. West Los Angeles College 2005
- SHIU, WILFRED W. Assistant Clinical Professor, Department of Preventive Medicine SM  
M.D. Loma Linda University SM 1990
- SHOJI, HIROMU. Clinical Professor, Department of Orthopedic Surgery SM  
M.D. University of Tokyo Faculty of Medicine 1964

- SHOOK, JAMES E. Associate Professor,  
Department of Orthopedic Surgery SM  
M.D. Loma Linda University SM 1977
- SHRYOCK, EDWIN FORREST. Professor,  
Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1962
- SHU, STANFORD K. Instructor, Department of  
Pediatrics SM  
M.D. Loma Linda University SM 1992
- SHUM, TERENCE HOKCHAM. Assistant Clinical  
Professor, Department of Medicine SM  
M.D. University of California at Davis 1985
- SHUTTER, LORI A. Associate Clinical Professor,  
Department of Neurology SM, Department  
of Anesthesiology SM, and Department of  
Physical Medicine SM  
M.D. Emory University 1990
- SHVARTSMAN, HYUN S. Assistant Professor,  
Department of Gynecology and Obstetrics  
SM  
M.D. New York Medical College 1996
- SIAPCO, BENJAMIN J. Clinical Instructor,  
Department of Clinical Laboratory Science  
AH  
M.S. Los Angeles County/University of  
Southern California Medical College 1971
- SIDDIQUI, KHWAJA A. Clinical Instructor,  
Department of Family Medicine SM  
M.D. Kabal University School of Medicine  
1962
- SILBERSTEIN, JEANNE F. Assistant Clinical  
Professor, Department of Nutrition PH  
M.S. University of Hawaii 1984
- SILSTON, STEPHEN MICHAEL. Assistant  
Professor, Department of Periodontics SD  
D.D.S. Indiana University 1971
- SILVA, VASTHI VIVIAN. Assistant Professor,  
Department of Medicine SM  
M.D. Loma Linda University SM 1979
- SIMENTAL, ALFRED A., JR. Assistant Professor,  
Department of Surgery SM; Assistant  
Professor, Department of Pediatrics SM  
M.D. Loma Linda University SM 1995
- SIMENTAL, MAIRA E. Assistant Professor,  
Department of Radiation Medicine SM  
M.D. Loma Linda University SM 1997
- SIMMS, PAUL B. Adjunct Assistant Professor,  
Department of Health Administration PH  
M.P.H. University of Michigan 1993
- SIMMS, RICHARD A. Professor, Department of  
Orthodontics SD  
D.D.S. Howard University 1953
- SIMON, DIANNA J. Associate Professor,  
Department of Social Work and Social  
Ecology ST and Department of Psychiatry  
SM  
Ph.D. University of Southern California 1993
- SIMON, JAMES H. Lecturer, Department of  
Endodontics SD  
D.D.S. Temple University 1961
- SIMON, LAUREN MERYL. Associate Professor,  
Department of Family Medicine SM  
M.D. Hahnemann University 1990
- SIMPSON, CHERYL J. Professor, Department of  
Counseling and Family Science ST  
Ph.D. University of Oregon 1980
- SIMPSON, KAREN ANN. Associate Professor,  
Department of Dental Hygiene SD  
M.P.H. Loma Linda University GS 1978
- SIMPSON, WILLIAM ROBERT. Assistant  
Professor, Department of Psychiatry SM  
M.A. University of Maryland 1974
- SINGH, PRAMIL N. Associate Professor,  
Department of Epidemiology and  
Biostatistics PH; Assistant Professor,  
Department of Preventive Medicine SM  
Dr.P.H. Loma Linda University PH 1999
- SINGHVI, AJEET RAJ. Assistant Clinical  
Professor, Department of Medicine SM  
M.B.B.S. SMS Medical School, University of  
Rajasthan 1973
- SKENDERIAN, DANIEL. Assistant Clinical  
Professor, Department of Psychiatry SM  
Ph.D. North Texas State University 1981
- SKORETZ, LYNNETTA E.S. Assistant Professor,  
Department of Medicine SM  
M.D. Loma Linda University SM 1995
- SKORETZ, RANDALL WAYNE DANIEL. Adjunct  
Assistant Professor, Faculty of Religion FR  
M.Div. Andrews University 1984  
D.Min. School of Theology at Claremont 1956
- SLATER, JAMES M. Professor, Department of  
Radiation Medicine SM  
M.D. Loma Linda University SM 1963
- SLATER, JAMES B. Assistant Clinical Professor,  
Department of Radiology SM and  
Department of Radiation Medicine  
Ph.D. University of Southern California 1983
- SLATER, JERRY D. Professor, Department of  
Radiation Medicine SM  
M.D. Loma Linda University SM 1982
- SLATER, SHELLEY K. Instructor, Department of  
Dental Hygiene SD  
B.S. Loma Linda University SD 1980

- SLAYBACK, JOHN B. Assistant Clinical Professor,  
Department of Surgery SM  
M.D. Loma Linda University SM 1964
- SLJUKA, KATHERINE E. Clinical Instructor,  
Department of Preventive Medicine SM  
M.D. Loma Linda University SM 2000
- SLOOP, R. RICHARD. Adjunct Associate Clinical  
Professor, Department of Neurology SM  
M.D. Loma Linda University SM 1986
- SMALL, MARY L. Associate Professor,  
Department of Gynecology and Obstetrics  
SM  
M.D. Loma Linda University SM 1966
- SMITH, AIDA MARISSA. Assistant Librarian,  
Library Faculty  
M.L.S. San Jose State University School of  
Library and Information at Fullerton 1995
- SMITH, BRIAN D. Assistant Professor,  
Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1998
- SMITH, BRUCE E. Assistant Clinical Professor,  
Department of Preventive Medicine SM and  
Department of Global Health PH  
M.D. University of Texas at San Antonio 1975
- SMITH, CHAUNCEY L. Emeritus Associate  
Clinical Professor, Department of Medicine  
SM  
M.D. College of Medical Evangelists 1947
- SMITH, DOUGLAS C. Professor, Department of  
Radiology SM  
M.D. Loma Linda University SM 1966
- SMITH, DUSTIN DAVID. Assistant Professor,  
Department of Emergency Medicine SM  
M.D. Texas Technical University Health  
Sciences Center 1998
- SMITH, JASON C. Assistant Professor,  
Department of Radiology SM  
M.D. Loma Linda University SM 1996
- SMITH, JODI O. Assistant Clinical Professor,  
Department of Ophthalmology SM  
M.D. Loma Linda University SM 1994
- SNIDER, DOUGLAS H. Assistant Professor,  
Department of Endodontics SD  
D.D.S. Loma Linda University SD 1983
- SODERBLOM, ROBERT E. Associate Professor,  
Department of Medicine SM  
M.D. Loma Linda University SM 1963
- SOEPRONO, FRED F. Assistant Professor,  
Department of Medicine SM  
M.D. Loma Linda University SM 1973
- SOGIOKA, NORMAN Y. Assistant Clinical  
Professor, Department of Surgery SM  
M.D. Loma Linda University SM 1973
- SOJI, TSUYOSHI. Adjunct Professor, Department  
of Allied Health Studies AH  
Ph.D. Jikei University 1978
- SOLANKY, O'NEILL SIDNEY. Adjunct Assistant  
Professor, Department of Dental Education  
Services SD  
D.D.S. Loma Linda University SD 2003
- SOLONIUK, VICTOR J. Assistant Clinical  
Professor, Department of Anesthesiology  
SM  
M.D. College of Medical Evangelists 1952
- SOMALI, LIAN L. Instructor, Department of  
Health Information Management PH  
B.S. Loma Linda University AH 2004
- SONAWALA, MEHUL S. Instructor, Department  
of Medicine SM  
M.B.B.S. Grant Medical College 1992
- SONG, GRACE E. Clinical Instructor,  
Department of Family Medicine SM  
M.D. Loma Linda University SM 1999
- SONNE, JANET L. Clinical Professor, Department  
of Psychology ST  
Ph.D. University of California at Los Angeles  
1981
- SOOD, SATISH M. Assistant Research Professor,  
Department of Biochemistry and  
Microbiology SM  
Ph.D. Punjabi University (India) 1978
- SORAJJAKOOL, SIROJ. Professor, Faculty of  
Religion FR  
M.A. Andrews University 1987  
M.A.T.S. Claremont School of Theology 1998  
Ph.D. Claremont School of Theology 1999
- SORENSEN, PATRICIA M. Assistant Professor,  
School of Nursing SN  
M.S.N. University of California at Los Angeles  
1982
- SORET, SAMUEL. Associate Professor,  
Department of Environmental and  
Occupation Health PH  
Ph.D. Loma Linda University GS 1993
- SOTO-WEGNER, UBALDO A. Assistant Research  
Professor, Department of Biochemistry and  
Microbiology SM  
Ph.D. Catholic University of Chile 1994
- SOWERS, LAWRENCE C. Professor, Department  
of Biochemistry and Microbiology SM and  
Department of Medicine SM  
Ph.D. Duke University 1983
- SPARKS, DALE B. Clinical Professor, Department  
of Medicine SM  
M.D. St. Louis University 1955

- SPARKS, STEPHEN T. Assistant Professor,  
Department of Physical Medicine SM  
M. P. H. University of Arizona 1993  
M.D. Loma Linda University SM 1984
- SPEARMAN, CHARLES B. Assistant Professor,  
Department of Cardiopulmonary Sciences  
AH  
M.S. University of Southern California 1994
- SPECHT, NORMAN L. Assistant Professor,  
Department of Medicine SM and  
Department of Cardiopulmonary Sciences  
AH  
M.D. Loma Linda University SM 1983  
M.D. Autonomous Universidad Barcelona 1978  
Delhi University (India) 1969  
Dr.P.H. University of California at Los Angeles  
1968
- SPENCER-SMITH, E. LAURENCE. Assistant  
Clinical Professor, Department of  
Gynecology and Obstetrics SM  
M.D. Loma Linda University SM 1982
- SPINT, KENNETH RILEY. Assistant Professor,  
Department of Oral and Maxillofacial  
Surgery SD  
D.M.D. University of Oregon Dental School  
1962
- SPITLER, JAMES E. Assistant Professor,  
Department of Anesthesiology SM  
M.D. New Jersey Medical School 1983
- SPRENGEL, JEAN E. Assistant Clinical Professor,  
Department of Anesthesiology SM  
M.D. Loma Linda University SM 1981
- SRIVASTAVA, APURVA K. Assistant Research  
Professor, Department of Medicine SM  
Ph.D. Lucknow University at Lucknow (India)  
1992
- STACEY, DESMOND GRAHAM CHARLES.  
Adjunct Assistant Professor, Faculty of  
Religion FR  
Ph.D. Loma Linda University GS 1999
- STANHISER, RUTH S. Assistant Clinical  
Professor, Department of Family Medicine  
SM  
M.D. Loma Linda University SM 1975
- STANISAI, KHUSHAL A. Assistant Clinical  
Professor, Department of Medicine SM  
M.D. Faculty of Medicine (Afghanistan) 1967
- STANLEY, AILEEN N. Clinical Instructor,  
Department of Nutrition and Dietetics AH  
B.S. Loma Linda University AH 1982
- STANTON, DAVID MORGAN. Assistant Professor,  
Department of Cardiopulmonary Sciences  
AH  
M.S. Loma Linda University GS 1991
- STAPLES-EVANS, HELEN MURIEL. Assistant  
Clinical Professor, School of Nursing SN  
M.S. Loma Linda University GS 1984
- STEELE, ROBERT. Assistant Professor,  
Department of Emergency Medicine SM  
M.D. Wayne State University 1996
- STEINBRUNN, COREY MICHELE. Instructor,  
Department of Dental Hygiene SD  
B.S. Loma Linda University SD 1997
- STEINER, ANN LESLIE. Assistant Professor,  
Department of Dental Education Services  
SD  
D.M.D. University of Florida 1980
- STEINMANN, JOHN C. Assistant Clinical  
Professor, Department of Orthopedic  
Surgery SM  
D.O. College of Osteopathic Medicine of the  
Pacific 1986
- STELMACH, DEBRA JEANNE. Clinical Instructor,  
School of Nursing SN  
M.S.N University of California at Los Angeles  
1997
- STEPHENS, JONELLE ANN. Professor,  
Department of Dental Hygiene SD  
Ed.S. Loma Linda University SE 1982  
M.S. Columbia University 1971
- STEPHENSON, CHARLES M., SR. Clinical  
Professor, Department of Ophthalmology  
SM  
M.D. Loma Linda University SM 1956
- STEPIEN, BETTY. Assistant Professor,  
Department of Medicine SM  
M.D. University of California at Los Angeles  
Medical School 1999
- STEVENSON, VALERIE MARIE T. Clinical  
Instructor, Department of Clinical  
Laboratory Science AH  
B.S. University of California at Riverside 1977
- STEWART, CHARLES EUGENE III, III. Associate  
Professor, Department of Surgery SM  
M.D. Loma Linda University SM 1970
- STEWART, GAIL MARIE. Associate Professor,  
Department of Emergency Medicine SM  
and Department of Pediatrics  
D.O. Michigan State University 1980
- STEWART, GAIL MARIE. Associate Professor,  
Department of Pediatrics SM  
D.O. Michigan State University 1980
- STEWART, STEVEN C. Professor, Department of  
Surgery SM  
M.D. Loma Linda University SM 1971

- STEWART, SYLVIA DIANNE. Assistant Professor,  
School of Nursing SN  
Ph.D. Claremont Graduate School 1993
- STIER, GARY R. Associate Professor, Department  
of Anesthesiology SM  
M.D. Loma Linda University SM 1983
- STIFFLER, RITA M. Instructor, Department of  
Health Information Management, AH  
B.S. Loma Linda University AH 1966
- STILSON, DONALD L. Assistant Clinical  
Professor, Department of Anesthesiology  
SM  
M.D. College of Medical Evangelists 1945
- STIREWALT-BOGGS, SHARON A. Instructor,  
Department of Dental Hygiene SD  
B.S. Loma Linda University SD 1993
- STOCKDALE, JOHN C. Assistant Clinical  
Professor, Department of Psychiatry SM  
M.D. Loma Linda University SM 1958
- STOLETNIY, LISET N. Assistant Professor,  
Department of Medicine SM  
M.D. Facultad de Medicina Montevideo  
(Uruguay) 1985
- STONE, CORA (PENNY) WEISE. Assistant  
Clinical Professor, School of Nursing SN  
M.P.H. Loma Linda University PH 1988
- STORKERSEN, KRIS J. Assistant Professor,  
Department of Ophthalmology SM  
M.D. University of California at Davis 1989
- STOTTLEMYER, DEBRA D. Assistant Professor,  
Department of Medicine SM  
M.D. Loma Linda University SM 1986
- STRAND, PETER F. Assistant Clinical Professor,  
Department of Orthodontics SD  
D.D.S. University of California at Los Angeles  
1972
- STRAW, JASON A. Instructor, Department of  
Oral and Maxillofacial Surgery SD  
D.D.S. Virginia Commonwealth University  
2004
- STRINGER, DALE E. Associate Professor,  
Department of Oral and Maxillofacial  
Surgery SD  
D.D.S. University of Iowa at Iowa City 1972
- STRONG, DONNA DEE. Research Professor,  
Department of Medicine SM  
Ph.D. University of California at Los Angeles  
1977
- STRONG, RICHARD MERLE. Associate Clinical  
Professor, Department of Medicine SM  
M.D. University of California at Irvine 1975
- STRUM, SCOTT RUSSELL. Assistant Professor,  
Department of Physical Medicine SM  
M.D. Loma Linda University SM 1990
- STRUTZ, JUDITH M. Associate Professor,  
Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1985
- STURZ, KURT W. Instructor, Department of  
Pediatric Dentistry SD  
D.M.D. Oregon Health Science University  
2004
- SU-ERICKSON, DIANA B. Clinical Instructor,  
Department of Occupational Therapy AH  
B.S. Loma Linda University AH 1978
- SUGIYAMA, RAYMOND. Assistant Professor,  
Department of Orthodontics SD  
D.D.S. Case Western Reserve University 1964
- SULZLE, HOWARD W. Assistant Professor,  
Department of Physical Therapy AH  
Ed.D. Loma Linda University SE 1995
- SUN, CHAO HUANG. Assistant Clinical Professor,  
Department of Medicine SM  
M.D. Kaosuing Medical College at Taiwan 1979
- SUN, JENNY C. Adjunct Assistant Professor,  
Department of Restorative Dentistry SD  
D.D.S. University of California at Los Angeles  
1985
- SUN, WEIYONG. Assistant Research Professor,  
Department of Medicine SM  
Ph.D. University of Rochester at New York  
1998
- SUZUKI, SHIGEYUKI. Adjunct Professor,  
Department of Allied Health Studies AH  
Ph.D. Nagoya University 1996
- SWABB, RICHARD JOHN. Assistant Professor,  
Department of Medicine SM  
M.D. College of Medicine and Dentistry at New  
Jersey 1978
- SWEN, R. WESLEY. Clinical Instructor,  
Department of Physical Therapy AH  
M.P.T. Loma Linda University AH 1966
- SWENSON, TERRY R. Assistant Professor,  
Faculty of Religion FR  
M.Div. Andrews University 1987
- SWIFT, JAMES DALE. Assistant Clinical  
Professor, Department of Pediatrics SM  
M.D. Chicago Medical School 1988
- SWISHER, LARRY G. Assistant Professor,  
Department of Oral and Maxillofacial  
Surgery SD  
D.D.S. Loma Linda University SD 1975
- SWOPE, DAVID M. Associate Professor,  
Department of Neurology SM  
M.D. Loma Linda University SM 1989

- SYMS, JAMES M. Assistant Professor, Department of Physical Therapy AH  
M.P.T. Loma Linda University 1995
- TABUENCA, ARNOLD D. Associate Professor, Department of Surgery SM  
M.D. Rosario National University (Argentina) 1981
- TAHERI, S. REZA. Assistant Clinical Professor, Department of Pharmacy Practice SP  
Pharm.D. University of Minnesota College of Pharmacy 1998
- TAMAYOSE, TERI S. Assistant Professor, Department of Health Administration PH  
Ed.D. Pepperdine University 2003
- TAN, CATHERINE A. Assistant Professor, Department of Pediatrics SM  
M.D. Loma Linda University SM 1992
- TAN, DANIEL E., JR. Professor, Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1975
- TAN, KENNETH C. Assistant Professor, Department of Pediatrics SM  
M.D. University of California at San Diego 1998
- TAN, LINDA G. Assistant Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1973
- TAN, S. C. MATTHEW. Assistant Clinical Professor, Department of Surgery SM  
M.D. Loma Linda University SM 1969
- TAN, SHIRLEY M. Assistant Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1988
- TAN, SHIRLEY L. Assistant Professor, Department of Anesthesiology SM  
M.D. Loma Linda University SM 1971
- TAN, STANLEY A. Assistant Clinical Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1971
- TANAKA, CHIHARU. Adjunct Instructor, Department of Allied Health Studies AH  
B.H.S. National Institution Academics Japan 2003
- TANAKA, WAYNE K. Associate Professor, Department of Oral and Maxillofacial Surgery SD  
D.D.S. University of Washington 1976
- TANG, DAVID H. Assistant Professor, Department of Emergency Medicine SM  
M.D. University of California at Los Angeles Medical School 1979
- TANG, HONG-MING. Assistant Professor, Department of Endodontics SD  
D.D.S. Yang-Ming University 1985
- TANG, JIPING. Assistant Professor, Department of Physiology and Pharmacology SM  
M.D. Chongqing University of Medical Science (China) 1988
- TAPPEN, PATRICIA GILDEA. Instructor, Department of Dental Hygiene SD  
B.S. Loma Linda University SD 1997
- TARAR, AHMAD K. Assistant Professor, Department of Psychiatry SM  
M.D. University of California at British West Indies 1981
- TAY, TERENCE BOON HONG. Clinical Instructor, Department of Clinical Laboratory Science AH  
M.S. California State University at Dominguez Hills 1982
- TAYLOR, BARRY L. Professor, Department of Biochemistry and Microbiology SM  
Ph.D. Case Western Reserve University 1973
- TAYLOR, BERNARD A. Adjunct Professor, Faculty of Religion FR  
Ph.D. Hebrew Union College 1989
- TAYLOR, DAVID LAWSON. Professor, Faculty of Religion FR  
D.Min. Vanderbilt University 1977
- TAYLOR, DESMYRNA RUTH. Assistant Clinical Professor, Department of Physical Therapy AH  
M.P.T. Loma Linda University AH 1995
- TAYLOR, ELIZABETH ANN. Associate Professor, School of Nursing SN  
Ph.D. University of Pennsylvania 1992
- TAYLOR, GUY D. Assistant Professor, Department of Orthodontics SD  
D.D.S. West Virginia University 1967
- TAYLOR, MAXINE CLARK. Assistant Professor, Department of Nutrition and Dietetics AH  
ED.D. La Sierra University GS 2005
- TAYLOR, THOMAS W., JR. Clinical Instructor, Department of Cardiopulmonary Sciences AH  
B.S. University of Redlands 1993
- TEEL, CHARLES W., JR. Adjunct Professor, Faculty of Religion FR  
Ph.D. Boston University 1972
- TEEL, DEVANIE S. Instructor, Department of Pediatrics SM  
M.D. Loma Linda University SM 2001

- TEEL, ROBERT W. Professor, Department of Physiology and Pharmacology SM  
Ph.D. Loma Linda University GS 1972
- TEICHMAN, SIEGMUND. Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1968
- TELLEFSEN, GEORG. Adjunct Associate Professor, Department of Periodontics SD  
D.D.S. Karolinska University 1976
- TELLEFSEN, MONICA. Adjunct Assistant Professor, Department of Dental Hygiene SD  
B.S. Grantoopsscool 1976
- TELLER, DOUGLAS W. Assistant Clinical Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1981
- TERUYA, THEODORE H. Assistant Professor, Department of Surgery SM  
M.D. University of Hawaii 1985
- TESTERMAN, JOHN K. Associate Professor, Department of Family Medicine SM  
M.D. Loma Linda University SM 1980  
Ph.D. University of California at Irvine 1971
- TESTERMAN, NANCY S. Instructor, Department of Family Medicine SM  
M.S. Loma Linda University 1971
- TEYBER, EDWARD. Adjunct Professor, Department of Psychology ST  
Ph.D. Michigan State University 1977
- THEODOROU, ANTHONY G. Assistant Professor, Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1964
- THIEL, BONNIE L. Assistant Professor, School of Nursing SN  
M.S.N Loma Linda University GS 2001
- THIEL, JOHN T. Assistant Clinical Professor, Department of Psychiatry SM  
M.D. Loma Linda University SM 1971
- THOMAS, HEATHER J. Assistant Professor, Department of Occupational Therapy AH  
M.A. University of Southern California 1998
- THOMAS, KIM M. Assistant Professor, Department of Medicine SM  
D.O. College of Osteopathic Medicine of the Pacific 1995
- THOMAS, LARRY L. Assistant Clinical Professor, Department of Global Health PH and Department of Preventive Medicine SM  
M.D. Loma Linda University SM 1974
- THOMAS, MARK E. Assistant Professor, Department of Emergency Medicine SM  
D.O. College of Osteopathic Medicine of the Pacific 1989
- THOMAS, SONY. Assistant Professor, Department of Endodontics SD  
B.D.S. College of Dental Surgery at Manipal (India) 1991
- THOMAS, TAMARA LYNN. Associate Professor, Department of Emergency Medicine SM and Department of Cardiopulmonary Sciences AH  
M.D. Loma Linda University SM 1987
- THOMAS, TERESA CASHEEN. Instructor, Department of Dental Hygiene SD  
B.S. Loma Linda University SD 1995
- THOMPSON, DAVID CARL. Assistant Professor, Department of Surgery SM  
M.D. University of Pittsburgh 1973
- THOMPSON, GARY J. Instructor, Department of Medicine SM  
D.O. Western University of Health Sciences 2001
- THOMPSON, GORDON W. Assistant Clinical Professor, Department of Medicine SM  
M.D. College of Medical Evangelists 1948
- THOMPSON, JOSEPH R. Professor, Department of Radiology SM  
M.D. Loma Linda University SM 1964
- THOMPSON, KEVIN STUART. Assistant Professor, Department of Pathology and Human Anatomy SM  
M.D. Loma Linda University SM 1987
- THOMPSON-RAZZOUK, TERESA L. Assistant Professor, Department of Anesthesiology SM  
M.D. Loma Linda University SM 1990
- THOMSEN, C. TORBEN. Professor, Department of Health Administration PH  
Ph.D. Michigan State University 1973
- THOMSEN, LANE C. Professor, Department of Oral Diagnostic Radiology and Pathology SD  
D.D.S. Loma Linda University SD 1965
- THORINGTON, GLYNE UNDINE. Assistant Research Professor, Department of Physiology and Pharmacology SM  
Ph.D. Boston University 1980
- THORNTON, SHEILA M. Instructor, Department of Dental Hygiene SD  
B.S. Loma Linda University 1994
- THORP, ANDREA W. Instructor, Department of Pediatrics SM  
M.D. Loma Linda University SM 2001
- THORPE, DONNA G. Assistant Professor, Department of Physical Therapy AH  
M.P.H. Loma Linda University PH 1992

- THORWARD, SUL R. Assistant Clinical Professor,  
Department of Psychiatry SM  
M.D. University of Texas at San Antonio 1973
- THYAGARAJAN, SRINIVASAN. Associate  
Professor, Department of Pathology and  
Human Anatomy SM  
Ph.D. Kansas State University 1993
- TIDWELL, DENNIS D. Assistant Clinical  
Professor, Department of Global Health PH  
M.P.H. Mahidol University 1989
- TIDWELL, LILA M. Assistant Clinical Professor,  
Department of Global Health PH  
M.P.H. Mahidol University 1989
- TINSLEY, CYNTHIA H. Assistant Professor,  
Department of Pediatrics SM  
M.D. John A. Burns School of Medicine 1985
- TIWARI, BHOODEV. Assistant Clinical Professor,  
Department of Medicine SM  
M.B.B.S. Sardar Patel Medical College (India)  
1988
- TOLEDO, GERARDO ALBERTO MANELLI.  
Instructor, Department of Endodontics SD  
D.D.S. Universidad Nacional de Cordoba 1993
- TOLEDO, MARCELO G. Assistant Professor,  
Department of Restorative Dentistry SD  
D.D.S. Universidad Nacional de Cordoba 1990
- TOLEDO, YANINA C. Assistant Professor,  
Department of Dental Education Services  
SD  
D.D.S. Loma Linda University SD 2004
- TONG, KAREN ANGELA. Assistant Professor,  
Department of Radiology SM  
M.D. University of British Columbia (Canada)  
1990
- TOOMA, TOM SAEED. Assistant Clinical  
Professor, Department of Ophthalmology  
SM  
M.D. Loma Linda University SM 1979
- TORABINEJAD, MAHMOUD. Professor,  
Department of Endodontics SD  
D.M.D. Dental School University of Tehran  
1971  
M.S.D. University of Washington 1976  
Ph.D. University of London 1995
- TORRES, ABEL. Professor, Department of  
Medicine SM; Associate Professor,  
Department of Health Administration PH  
M.D. Mt. Sinai 1979
- TORRES, EVELYN TURLA. Clinical Instructor,  
Department of Clinical Laboratory Science  
AH  
B.S.M.T. University of Santo Tomas  
(Philippines) 1969
- TORRES, F. JOSE. Assistant Professor,  
Department of Restorative Dentistry SD  
D.D.S. Javieriana University 1990
- TORRES, SIDNEY EUGENE. Assistant Professor,  
Department of Anesthesiology SM  
M.D. Loma Linda University SM 1983
- TORRES, VILMA I. Associate Professor,  
Department of Medicine SM  
M.D. State University of New York at  
Stonybrook 1979
- TORREY, ROBERT R., JR. Assistant Clinical  
Professor, Department of Surgery SM  
M.D. Loma Linda University SM 1971
- TOURTELLOTTE, CHARLES R. Professor,  
Department of Medicine SM  
M.D. University of Southern California 1949
- TOWNSEND, DENISE J. Assistant Professor,  
Department of Medicine SM  
M.D. University of Florida 1987
- TOWNSEND, PATRICIA PETERSON. Assistant  
Clinical Professor, School of Nursing SN  
M.S. Loma Linda University GS 1986
- TRAN, LOUIS P. Assistant Professor, Department  
of Emergency Medicine SM  
M.D. Loma Linda University SM 1997
- TRAPP, LARRY DALE. Associate Professor,  
Department of Dental Anesthesiology SD  
D.D.S. University of California at San  
Francisco 1975
- TREIMAN, STEPHEN. Assistant Professor,  
Department of Pediatrics SM  
M.D. University of Texas at Houston Medical  
School 1997
- TRENKLE, INGRID K. Assistant Clinical  
Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1973
- TRENKLE, STEVEN J. Assistant Clinical  
Professor, Department of Pathology and  
Human Anatomy SM  
M.D. Loma Linda University SM 1973
- TROUSDALE, YVONNE CORLIS. Clinical  
Instructor, Department of Occupational  
Therapy AH  
A.A. Loma Linda University AH 1997
- TRUPP, DIANA L. Assistant Professor,  
Department of Pediatrics SM  
M.D. Loma Linda University SM 1982
- TSAI, CHRISTOPHER K.L. Assistant Professor,  
Department of Surgery SM  
M.D. Loma Linda University SM 1994
- TSAI, HSIU-CHIN. Adjunct Assistant Professor,  
Department of Restorative Dentistry SD  
D.D.S. National Yang-Ming University 1979

- TSAI, JULIAN C. Assistant Professor, Department of Restorative Dentistry SD  
 D.D.S. Loma Linda University SD 1969
- TSUSHIMA, AKIRA. Adjunct Instructor, Department of Allied Health Studies AH  
 B.S. Loma Linda University AH 2003
- TUDTUD-HANS, LEAH ANGELICA. Assistant Professor, Department of Medicine SM  
 M.D. University of the Philippines 1979
- TULLY, RICHARD J. Associate Professor, Department of Radiology SM  
 M.D. University of Chicago 1968
- TULYATHAN, PRANEE. Assistant Clinical Professor, Department of Pediatrics SM  
 M.D. Loma Linda University SM 1985
- TURNER, RODNEY L. Adjunct Assistant Professor, Department of Dental Education Services SD  
 D.D.S. Loma Linda University SD 1984
- TYLER, RICHARD PAUL. Associate Clinical Professor, Department of Pediatrics SM
- TYSOR-TETLEY, MARY E. Instructor, Department of Psychiatry SM  
 M.S.W. University of Maryland at Baltimore 1980
- UBER-ZAK, LORI D. Assistant Professor, Department of Neurology SM  
 D.O. UMDNJ School of Osteopathic Medicine 1995
- UFFINDELL, SARAH H. Instructor, Department of Neurology SM  
 M.D. Loma Linda University SM 1997
- ULLOA-MICHAELIS, JULIE A. Assistant Professor, Department of Medicine SM  
 M.D. Loma Linda University SM 2000
- UMAKANTHAN, BRANAVAN. Instructor, Department of Medicine SM  
 D.O. Western University of Health 2000
- UMEZU, KIYOTAKA. Adjunct Assistant Professor, Department of Restorative Dentistry SD  
 D.D.S. Nippon Dental University 1997
- UNGER, JEFFREY R. Assistant Clinical Professor, Department of Family Medicine SM  
 M.D. Northwestern University 1980
- UNIS, JOSEPH S. Assistant Clinical Professor, Department of Radiology SM  
 M.D. University of Nebraska 1970
- UNWALLA, KHUSHRO B. Assistant Clinical Professor, Department of Psychiatry SM  
 M.D. Kasturba Medical College (India) 1977
- UPPAL, GURVINDER S. Clinical Instructor, Department of Orthopedic Surgery SM  
 M.D. Albany Medical College 1986
- UPPALA, PADMA P. Assistant Professor, Department of Environmental and Occupational Health PH  
 Ph.D. Loma Linda University GS 1991
- URBAN, ISTVAN. Adjunct Assistant Professor, Department of Restorative Dentistry SD  
 M.D. SOTE School of Medicine (Hungary) 1996  
 D.M.D. SOTE School of Dentistry (Hungary) 1991
- VAEZAZIZI, REZA. Assistant Professor, Department of Emergency Medicine SM  
 M.D. Chicago Medical School 1997
- VALADEZ, BARBARA H. Instructor, Department of Periodontics SD  
 A.S. University of California at Los Angeles 1980
- VALENTINI, PASCAL. Adjunct Associate Professor, Department of Restorative Dentistry SD  
 D.D.S. University of Paris 1981
- VALENZUELA, ANTONIO. Assistant Professor, Department of Physical Therapy AH  
 Ed.D. Loma Linda University SE 1990
- VAN CLEVE, LOIS H. Professor, School of Nursing SN  
 Ph.D. Claremont Graduate School 1986
- VAN NIEUWENHUYSEN, NICHOLAAS-JOHN. Assistant Professor, Department of Psychiatry SM  
 M.D. University of Stellenbosch (South Africa) 1992
- VANNIX, DAVID L. Assistant Clinical Professor, Department of Surgery SM  
 M.D. Loma Linda University SM 1986
- VANNIX, ROBERT S. Assistant Clinical Professor, Department of Surgery SM  
 M.D. Loma Linda University SM 1953
- VAN STRALEN, DAVED W. Assistant Professor, Department of Pediatrics SM  
 M.D. University of California at Irvine 1984
- VATNITSKY, STANISLAV. Professor, Department of Radiation Medicine SM  
 Ph.D. Leningrad Polytechnical University 1981
- VAUGHAN, DARRELL L. Assistant Clinical Professor, Department of Gynecology and Obstetrics SM  
 M.D. Loma Linda University SM 1973

- VENDEN, LOUIS Emeritus Professor, Faculty of Religion FR  
Ph.D. Princeton Theological Seminary 1979
- VERDE, E. RAY. Associate Professor, Department of Psychiatry SM  
M.D. Loma Linda University SM 1988
- VERDE, EDWARD W. Assistant Professor, Department of Anesthesiology SM  
M.D. Loma Linda University SM 1997
- VERMEERSCH, DAVID. Assistant Professor, Department of Psychology ST  
Ph.D. Brigham Young University 1998
- VILLALOBOS, RICARDO E. Assistant Professor, Department of Epidemiology and Biostatistics PH  
M.S. Universidad de Chile 1991
- VINCENT, ALIX. Assistant Clinical Professor, Department of Radiology SM  
M.D. Loma Linda University SM 1985
- VIPOND, BERTRAND H. Assistant Clinical Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1982
- VO, HUU DINH. Assistant Clinical Professor, Department of Pediatrics SM  
M.D. Saigon Medical School 1975
- VOGEL KATHERINE. Clinical Instructor, Department of Clinical Laboratory Science AH.  
M.A. University of Redlands 1984
- VYHMEISTER, NIDIA R. Professor, Department of Pediatrics SM  
M.D. Universidad de Montevideo (Uruguay) 1968
- WACKER, CHRISTOPHER ERIC. Assistant Professor, Department of Pediatric Dentistry SD  
D.D.S. Loma Linda University SD 1995
- WAGEMAN, ROBERT C. Adjunct Assistant Professor, Department of Dental Education Services SD  
D.D.S. Loma Linda University SD 1977
- WAGNER, BETTY ANN. Clinical Instructor, Department of Health Information Management AH  
B.S. Loma Linda University AH 1985
- WAGNER, ROBERT J., JR. Associate Professor, Department of Gynecology and Obstetrics SM  
M.D. Loma Linda University SM 1969
- WAGNER, WILLIAM. Assistant Professor, Department of Pathology and Human Anatomy SM  
M.D. Loma Linda University SM 1944
- WALL, NATHAN R. Assistant Professor, Department of Biochemistry and Microbiology SM  
Ph.D. Wayne State University 2000
- WALLACE, DESIREE R. Assistant Professor, Department of Pharmacy Practice SP  
Pharm.D. University of Southern California 1996
- WALLACE, G. CARLETON. Associate Clinical Professor, Department of Orthopedic Surgery SM  
M.D. Loma Linda University SM 1956
- WALLACE, THOMAS C. Associate Clinical Professor, Department of Psychology ST  
Ph.D. Andrews University 1989
- WALLAR, P. HAROLD. Associate Clinical Professor, Department of Ophthalmology SM  
M.D. Loma Linda University SM 1969
- WALLSTROM, HOLLY N. Assistant Clinical Professor, Department of Dental Education Services SD  
D.D.S. Loma Linda University SD 2005
- WALSH, ERIC G. Instructor, Department of Family Medicine SM  
M.D. University of Miami 1997
- WALTER, MICHAEL H. Associate Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1973
- WALTER, R. BRUCE. Associate Professor, Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1973
- WALTER, ROBERT D. Assistant Professor, Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1999
- WALTERS, CLIFFORD A. Associate Clinical Professor, Department of Gynecology and Obstetrics SM  
M.D. Loma Linda University SM 1974
- WALTERS, JAMES W. Professor, Faculty of Religion  
Ph.D. Claremont Graduate School 1979
- WALTHALL, WILLIAM E. Assistant Clinical Professor, Department of Physical Therapy AH  
M.Div. Biola University, Talbot School of Theology 1983

- WANG, HANSEN S. Assistant Clinical Professor,  
Department of Surgery SM  
M.D. Loma Linda University SM 1970
- WANG, JUN. Associate Professor, Department of  
Pathology and Human Anatomy SM  
M.D. Wannan Medical College 1982
- WANG, NAN. Associate Professor, Department of  
Surgery SM  
M.D. Loma Linda University SM 1983
- WANWIMOLRUK, SOMPON. Professor,  
Department of Pharmaceutical Sciences SP  
Ph.D. Flinders University of South Australia  
1983
- WARD, WAYNE E. Adjunct Assistant Professor,  
Department of Dental Education Services  
SD  
D.D.S. Loma Linda University SD 1990
- WARNELL, RONALD L. Associate Professor,  
Department of Psychiatry SM  
M.D. Loma Linda University SM 1972
- WARNER, KIM. Assistant Clinical Professor,  
Department of Gynecology and Obstetrics  
SM  
M.D. University of California at Los Angeles  
1990
- WASEMILLER, MICHAEL. Assistant Professor,  
Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 2005
- WAT, BO YING. Professor, Department of  
Pathology and Human Anatomy SM  
M.D. College of Medical Evangelists 1948
- WAT, LINDA IRENE. Associate Professor,  
Department of Anesthesiology SM  
M.D. Loma Linda University SM 1982
- WAT, PAMELA J. Assistant Professor, Department  
of Pathology and Human Anatomy SM;  
Assistant Clinical Professor, Department of  
Clinical Laboratory Science AH  
M.D. Loma Linda University SM 1986
- WATKINS, BARRY E. Assistant Professor,  
Department of Orthopedic Surgery SM  
M.D. Loma Linda University SM 1993
- WATKINS, GREGORY EUGENE. Associate  
Professor, Department of Radiology SM  
M.D. Loma Linda University SM 1987
- WATKINS, HUBERT C. Associate Clinical  
Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1962
- WATSON, JAMES R. Clinical Instructor,  
Department of Orthopedic Surgery SM  
M.D. Hahnemann Medical College 1971
- WAZDATSKY, ARDIS RUSSELL. Assistant  
Professor, Department of Allied Health  
Studies AH  
M.A. La Sierra University 1998
- WEBER, BARRY K. Assistant Professor,  
Department of Oral and Maxillofacial  
Surgery SD  
D.D.S. Loma Linda University SD 1983
- WEBSTER, DEBORAH LYNN. Instructor,  
Department of Dental Hygiene SD  
B.S. Ohio State University 1988
- WEIDMAN, JAMES M. Clinical Professor,  
Department of Global Health PH  
Ph.D. College of Tropical Agriculture of the  
University of Hawaii 1985
- WELEBIR, DOUGLAS F. Clinical Instructor,  
Department of Health Information  
Management AH  
J.D. University of Southern California 1965
- WELSH, DAVID B. Assistant Clinical Professor,  
Department of Surgery SM  
M.D. Tufts University 1966
- WERGEDAL, JON E. Research Professor,  
Department of Medicine SM  
Ph.D. University of Wisconsin 1963
- WERNER, LEONARD S. Professor, Department of  
Medicine SM; Associate Professor,  
Department of Family Medicine SM and  
Department of Physiology and  
Pharmacology SM  
M.D. University of Oklahoma 1978
- WESSELS, IZAK F. Associate Clinical Professor,  
Department of Ophthalmology SM  
M.D. University Witwatersand (South Africa)  
1973
- WEST, J. ROBERT. Assistant Clinical Professor,  
Department of Medicine SM  
M.D. Stanford University 1955
- WEST, STEPHEN S. Assistant Clinical Professor,  
Department of Surgery SM  
M.D. Loma Linda University SM 1992
- WESTCOTT, KELLI J. D. Instructor, Department  
of Emergency Medicine SM  
M.D. Loma Linda University SM 1997
- WESTRICK, C. WILLIAM. Assistant Professor,  
Department of Restorative Dentistry SD  
Ph.D. Golden State University 1981
- WHITEHOUSE, JERALD WAYNE. Assistant  
Clinical Professor, Department of Global  
Health PH  
Dr.P.H. Loma Linda University PH 1977

- WHITING, LINDA J. Clinical Instructor,  
Department of Nutrition and Dietetics AH  
B.S. Loma Linda University AH 1985
- WHITTAKER, JOHN M. Professor, Department of  
Restorative Dentistry SD  
B.D.S. University of Otago 1967
- WHITTEN, CRYSTAL G. Assistant Clinical  
Professor, Department of Nutrition and  
Dietetics AH  
M.S. Loma Linda University GS 1988
- WIAFE, SETH A. Instructor, Department of  
Environmental and Occupation Health PH  
M.P.H. Loma Linda University PH 2004
- WIESSEMAN, GEORGE J. Associate Clinical  
Professor, Department of Orthopedic  
Surgery SM  
M.D. Loma Linda University SM 1947
- WIETLISBACH, CHRISTINE M. Clinical  
Instructor, Department of Occupational  
Therapy AH  
M.P.A. California State University at San  
Bernardino 2000
- WILBER, LORETTA J. Assistant Professor,  
Department of Epidemiology and  
Biostatistics PH  
M.D. Loma Linda University SM 1999
- WILBUR, DAVID W. Associate Professor,  
Department of Medicine SM  
Ph.D. University of California at Berkeley  
1965
- WILCOX, R. BRUCE. Professor, Department of  
Biochemistry and Microbiology SM  
Ph.D. University of Utah 1962
- WILDER-SMITH, PETRA EEB. Lecturer,  
Department of Endodontics SD  
L.D.S. Guy's Hospital at London University  
(United Kingdom) 1983
- WILEY, THOMAS E. Assistant Professor,  
Department of Radiology SM  
M.D. University of Texas Southwest Medical  
School 1991
- WILKINS, DAVID L. Associate Clinical Professor,  
Department of Ophthalmology SM  
M.D. Loma Linda University SM 1970
- WILKINS, KRISTI JEAN. Assistant Professor,  
Department of Dental Hygiene SD  
M.A. Loma Linda University GS 2002
- WILKINS, ROBERT L. Professor, Department of  
Cardiopulmonary Sciences AH  
Ph.D. University of Southern California 1996
- WILLARDBSEN, JOHN E. Assistant Clinical  
Professor, Department of Restorative  
Dentistry SD  
D.D.S. Loma Linda University SD 1997
- WILLIAMS, LINDA. Instructor, Department of  
Social and Administrative Sciences SP  
B.S. Loma Linda University SN 1971
- WILLIAMS, HYVETH B. Adjunct Assistant  
Professor, Faculty of Religion FR  
D.Min. Boston University
- WILLIAMS, JERRY R. Professor, Department of  
Radiation Medicine SM  
D.Sc. Harvard University 1972
- WILLIAMS, PATRICIA ANN. Clinical Instructor,  
Department of Clinical Laboratory Science  
AH  
B.S. Staten Island Community College 1971
- WILLIAMS, PAUL ALLEN. Research Instructor,  
Department of Orthopedic Surgery SM  
M.S. Louisiana Technical University 1993
- WILLIAMS, ROLAND PAUL. Instructor,  
Department of Oral and Maxillofacial  
Surgery SD  
D.D.S. Loma Linda University SD 2004
- WILLIAMS, TRACI A. Assistant Professor,  
Department of Pediatrics SM  
M.D. Loma Linda University SM 1997
- WILSON, COLWICK M. Associate Professor,  
Department of Counseling and Family  
Science ST  
M.A. University of Michigan at Ann Arbor  
1997
- WILSON, DELEISE S. Assistant Professor, School  
of Nursing SN  
M.A. Columbia University Teachers College  
1994
- WILSON, GARY T. Assistant Professor,  
Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1963
- WILSON, JOHN D. Assistant Professor,  
Department of Family Medicine SM  
M.D. Loma Linda University SM 2000
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Department of Emergency Medicine SM  
M.D. Loma Linda University SM 1984
- WINER, MYRON S. Assistant Professor,  
Department of Restorative Dentistry SD  
D.D.S. University of Illinois College of  
Dentistry 1953
- WINSLOW, BETTY J. Professor, School of  
Nursing SN  
Ph.D. University of Colorado Health Sciences  
Center 1994

- WINSLOW, GERALD R. Professor, Faculty of Religion FR and Department of Dental Education Services SD  
Ph.D. Graduate Theological Union 1979
- WINSTON, KAREN A. Assistant Professor, Department of Pediatrics SM  
M.D. Michigan State University 1987
- WISE, JAMES R. Associate Professor, Department of Orthodontics SD  
D.D.S. Loma Linda University SD 1967
- WITHERS, SHELLY ANNE. Assistant Professor, Department of Dental Hygiene SD  
B.S. Loma Linda University SD 2000
- WITTLAKE, WILLIAM A. Associate Professor, Department of Emergency Medicine SM and Department of Pediatrics SM  
M.D. Loma Linda University SM 1976
- WOHLMUTH, CINNA T. Assistant Clinical Professor, Department of Gynecology and Obstetrics SM  
M.D. Loma Linda University SM 1985
- WOLCOTT, DEANE L. Associate Clinical Professor, Department of Psychiatry SM  
M.D. Loma Linda University SM 1973
- WOLF, KATHLEEN M. Clinical Instructor, Department of Nutrition PH  
B.A. San Diego State College 1970
- WOLFE, DAVID JACK. Assistant Professor, Department of Endodontics SD  
D.D.S. University of California at Los Angeles 1979
- WOLFRAM, CLAUS D. Associate Professor, Department of Peridontics SD  
D.D.S. Loma Linda University SD 1971
- WOLFSEN, JAMES L. Assistant Clinical Professor, Department of Radiology SM  
M.D. Loma Linda University SM 1966
- WON, ESTHER U. Assistant Clinical Professor, Department of Family Medicine SM  
M.D. Loma Linda University SM 1984
- WONG, ANTOINETTE. Adjunct Assistant Professor, Department of Counseling and Family Science GS  
M.S. Loma Linda University GS 1985
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M.D. Loma Linda University SM 1993
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M.D. University of California at San Francisco 1999
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Ph.D. Fuller Theological Seminary 1998  
M.A. Fuller Theological Seminary Westminster Theological Seminary 1996  
J. D. Western State University, Western Sierra Law School 1990  
M.D. Loma Linda University SM 1960
- WONG, RAYMOND Y. Associate Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1979
- WONG, SAMMY S. Assistant Professor, Department of Medicine SM  
M.D. Howard University 1987
- WONG, VALARIE Y. Assistant Professor, Department of Pediatrics SM  
M.D. Baylor College of Medicine 1994
- WONGWORAWAT, M. DANIEL. Assistant Professor, Department of Orthopedic Surgery SM  
M.D. Loma Linda University SM 1996
- WOO, MICHAEL K. Assistant Professor, Department of Medicine SM  
M.D. Albert Einstein College of Medicine 1998
- WOOD, BEVERLY PHYLLIS. Clinical Professor, Department of Radiology SM  
M.D. University of Rochester School of Medicine 1965
- WOOD, CHARLES G. Assistant Professor, Department of Restorative Dentistry SD  
D.D.S. University of Southern California 1945
- WOOD, DAVID LYMAN III. Assistant Clinical Professor, Department of Orthopedic Surgery SM  
M.D. Loma Linda University SM 1980
- WOOD, MICHAEL N. Assistant Clinical Professor, Department of Surgery SM  
M.D. Loma Linda University SM 1981
- WOOD, VIRCHEL EDGAR, JR. Professor, Department of Orthopedic Surgery SM  
M.D. Loma Linda University SM 1960
- WRESCH, ROBERT R. Assistant Clinical Professor, Department of Ophthalmology SM  
M.D. Loma Linda University SM 1969
- WRIGHT, DOLORES. Associate Professor, School of Nursing SN  
D.N.Sc. Widener University 2000
- WRIGHT, EDWIN T. Professor, Department of Medicine SM  
M.D. Loma Linda University SM 1946

- WRIGHT, KENNETH R. Assistant Professor,  
Department of Pathology and Human  
Anatomy SM  
Ph.D. Loma Linda University 1992
- WRIGHT, LESTER N. Adjunct Associate  
Professor, Department of Health  
Administration PH  
M.D. Loma Linda University SM 1969  
M.P.H. Harvard University School of Public  
Health 1974
- WU, RONALD SENG-PENG. Clinical Instructor,  
Department of Gynecology and Obstetrics  
SM  
M.D. Loma Linda University SM 1968
- WU, SIDNEY S. C. Instructor, Department of  
Pediatrics SM  
M.D. Loma Linda University SM 2000
- WUCHENICH, GARY T. Adjunct Assistant  
Professor, Department of Dental Education  
Services SD  
D.D.S. Loma Linda University SD 1977
- WURANGIAN-CAAN, NELIA C. Associate  
Librarian, Library Faculty  
M.L.S. University of Western Ontario 1981
- WURSTEN, APRIL. Assistant Clinical Professor,  
Department of Psychiatry SM  
Ph.D. University of Arizona 1986
- WYCLIFFE, N. DAN. Assistant Professor,  
Department of Radiology SM  
M.B.B.S. Dhaka Med (Bangladesh) 1972
- YACOUB, IGNATIUS IMMANUEL. Professor,  
Department of Social Work and Social  
Ecology ST  
Ph.D. Claremont Graduate School 1976
- YAMADA, JASON MASAYOSHI. Assistant  
Professor, Department of Periodontics SD  
D.D.S. University of Southern California 1990
- YAMADA, ROBERT K. Assistant Clinical  
Professor, Department of Family Medicine  
SM  
M.D. University of California at San Francisco  
1985
- YAMANAKA, JEANINE N. Clinical Instructor,  
Department of Ophthalmology SM  
M.D. University of California at San Francisco  
1996
- YAMANISHI, J. FRANK. Assistant Clinical  
Professor, Department of Surgery SM  
M.D. Loma Linda University SM 1985
- YAMASHIRO-ZANE, DORRE ANNE. Instructor,  
Department of Occupational Therapy AH  
B.S. Loma Linda University AH 1993
- YANEZ, GLORIA. Clinical Instructor, Department  
of Pediatric Dentistry SD  
D.D.S. UTHSCSA School of Dentistry 2003
- YANG, JOANNA JIEHONG. Clinical Instructor,  
School of Nursing SN  
M.S. Loma Linda University GS 1995
- YANNI, GEORGE S. Assistant Professor,  
Department of Pediatrics SM  
M.D. Ain Shams University at Cairo (Egypt)  
1981
- YAP, WILSON J. L. Assistant Clinical Professor,  
Department of Medicine SM  
M.D. University of Santo Tomas 1987
- YEE, KIM. Instructor, Department of Pediatrics  
SM  
M.D. Jefferson Medical College 1997
- YEGGE, STEVEN R. Assistant Clinical Professor,  
Department of Orthopedic Surgery SM  
M.D. Loma Linda University SM 1985
- YELLON, STEVEN M. Professor, Department of  
Physiology and Pharmacology SM  
Ph.D. University of Connecticut 1981
- YEO, ELIOT M. Assistant Professor, Department  
of Restorative Dentistry SD  
D.D.S. University of Missouri 1987
- YEOMAN, LELAND R. Assistant Professor,  
Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1968
- YHIP, SHERRIE D. Assistant Clinical Professor,  
Department of Pediatrics SM  
M.D. Loma Linda University SM 1982
- YONEMOTO, LESLIE T. Associate Professor,  
Department of Radiation Medicine SM  
M.D. Johns Hopkins University 1991
- YONG, PAMELA A. Clinical Instructor,  
Department of Nutrition and Dietetics AH  
M.P.H. Loma Linda University PH 1989
- YOON, PATRICIA S. Assistant Professor,  
Department of Ophthalmology SM  
M.D. Loma Linda University SM 1997
- YOON, STUART SUNGJAE. Assistant Professor,  
Department of Pediatric Dentistry SD  
D.D.S. Loma Linda University SD 1998
- YOUNG, EUGENE Y. Clinical Instructor,  
Department of Psychiatry SM  
D.O. Western University 1994
- YOUNG, LILY L. Clinical Instructor, Department  
of Physical Therapy AH  
M.A. Hong Kong Union College 1976
- YOUNG, LIONEL W. Professor, Department of  
Radiology SM  
M.D. Howard University 1957

- YOUNG, PETER SIU-YEE. Assistant Professor,  
Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1988
- YOUNG, RICHARD A. Assistant Professor,  
Department of Restorative Dentistry SD  
D.D.S. Loma Linda University SD 1985
- YOW, WARREN SHIUWING. Associate Professor,  
Department of Restorative Dentistry SD  
D.M.D. Washington University 1983
- YU, JACK N. Associate Professor, Department of  
Family Medicine SM  
M.D. Boston University 1984
- YU, LEISURE. Associate Clinical Professor,  
Department of Orthopedic Surgery SM  
M.D. State University of New York at Buffalo  
1981
- YUHAN, ROBERT M. Assistant Clinical Professor,  
Department of Surgery SM  
M.D. Northwestern University Medical Center  
1990
- YUSUFALY, YASMIN A. Assistant Professor,  
Department of Medicine SM  
M.B.B.S. Dow Medical Center 1984
- ZAK, PAUL J. Adjunct Professor, Department of  
Neurology SM  
Ph.D. University of Pennsylvania 1994
- ZALSMAN, HARVEY, JR. Assistant Professor,  
Department of Oral and Maxillofacial  
Surgery SD  
D.D.S. Loma Linda University SD 1983  
M.D. Loma Linda University SM 1990
- ZAMORA, ZELNE LU. Assistant Professor, School  
of Nursing SN  
M.S.N. Azusa Pacific University 1998
- ZANE, ERNEST SUI SUNG. Associate Professor,  
Department of Ophthalmology SM  
M.D. College of Medical Evangelists 1956
- ZANE, RONALD S. O. Adjunct Assistant  
Professor, Department of Dental Education  
Services SD  
D.D.S. Loma Linda University SD 1957
- ZANE, STEVEN E. Assistant Clinical Professor,  
Department of Ophthalmology SM  
M.D. Loma Linda University SM 1990
- ZANINOVIC, PERIZA. Assistant Clinical  
Professor, Department of Dental Education  
Services SD  
D.D.S. Loma Linda University SD 2000
- ZAPPIA, JANE NEWMAN. Clinical Instructor,  
Department of Clinical Laboratory Science  
AH  
B.S. University of Central Florida 1977
- ZARRINKELK, HOOMAN M. Assistant Professor,  
Department of Oral and Maxillofacial  
Surgery SD  
D.D.S. Loma Linda University SD 1994
- ZASKE, MERLIN R. Associate Clinical Professor,  
Department of Pediatrics SM  
M.D. University of Washington 1960
- ZHANG, JOHN H. Research Professor,  
Department of Surgery SM, Department of  
Anesthesiology SM, and Department of  
Physiology and Pharmacology SM  
M.D. Chongging University of Medical Science  
1983  
Ph.D. University of Alberta 1992
- ZHANG, LUBO. Professor, Department of  
Physiology and Pharmacology SM  
Ph.D. Iowa State University 1986
- ZHANG, WU. Associate Professor, Department of  
Dental Education Services SD  
M.D. Norman Bethane University of Medical  
Sciences (China) 1977
- ZHU, YONG H. Associate Research Professor,  
Department of Surgery SM  
M.D. Shanghai First Medical College 1969
- ZIMMERMAN, GRENITH G. Professor,  
Department of Allied Health Studies AH  
and Department of Epidemiology and  
Biostatistics PH  
Ph.D. University of Minnesota 1970
- ZIRKLE, THOMAS J. Associate Professor,  
Department of Surgery SM  
M.D. Loma Linda University SM 1962
- ZOUROS, ALEXANDER. Assistant Professor,  
Department of Surgery SM  
M.D. Dalhousie University 1996
- ZUCCARELLI, ANTHONY J. Professor,  
Department of Biochemistry and  
Microbiology SM  
Ph.D. California Institute of Technology 1974
- ZUMWALT, JANICE R. Assistant Clinical  
Professor, School of Nursing SN  
M.B.A. La Sierra University 1993
- ZUPPAN, CRAIG W. Professor, Department of  
Pathology and Human Anatomy SM  
M.D. Loma Linda University SM 1980



# VII

## GENERAL INFORMATION

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SD School of Dentistry  
SM School of Medicine  
SN School of Nursing  
SP School of Pharmacy  
PH School of Public Health  
ST School of Science and Technology  
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GS Faculty of Graduate Studies

## SCHOOL OF ALLIED HEALTH PROFESSIONS

### ADMINISTRATION—AH

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Cytotechnology Program

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Cytotechnology Program

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Certificate Coordinator

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- ESTHER HUECKER, M.A., OTR/L, BCP, Program Director, Entry-Level Master of Occupational Therapy
- JUDITH A. PALLADINO, M.A., OTR/L, Academic Coordinator for Fieldwork Education, Occupational Therapy Program
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## PHYSICAL THERAPY

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- HOWARD W. SULZLE, Ed.D., Associate Department Chair
- LAWRENCE E. CHINNOCK, Ed.D., Program Director for Progression Master of Physical Therapy and for Entry-Level Doctor of Physical Therapy
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## PHYSICIAN ASSISTANT SCIENCES

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- YASMIN C. BRACHO, M.P.A., Assistant Clinical Coordinator for Master of Physician Assistant, Physician Assistant Sciences

## RADIATION TECHNOLOGY

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- JAMES M. SLATER, M.D., Medical Director for Radiation Therapy Technology Program
- TERESE R. PFEIFFER, B.S., Program Coordinator, Loma Linda University Programs, Fresno, California

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- KEIKO KHOO, M.A., M.S., Department Chair
- JEAN B. LOWRY, Program Director for Master of Science and for Bachelor of Science; Program Director for Certificate, Speech-Language Pathology and Audiology
- PAIGE SHAUGHNESSY, Academic Coordinator for Clinical Education, Speech-Language Pathology and Audiology Program
- KAREN MAINESS, Ph.D., Program Director for Associate in Science, Speech-Language Pathology Assistant

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**CLINICAL FACILITIES—AH**

- 21st Century Therapy, Raytown, MO  
 Abbink Physical Therapy, Westraten, The Netherlands  
 Able Health Care Network, Tualatin, OR  
 ACICA/ORC Physical Therapy, Irvine  
 Active Physical Therapy, Bozeman, MT  
 Active Physical Therapy, Paradise  
 Active Rehab PT-Vallejo, Vallejo  
 Active Therapeutics, Inc., Anchorage, AK  
 Adams, Valerie S., M.A., OTR, Long Beach  
 Adventist Health, St. Helena Hospital and Health Center, Deer Park  
 Adventist Health, St. Helena Hospital and Health Center, Deer Park  
 Advance Rehabilitation & Physical Therapy, Sun City  
 Adventist Health System, Feather River Hospital, Paradise  
 Adventist Health System, Florida Hospital Waterman, Tamares/Eustis, FL  
 Adventist Health System, Loma Linda University Behavioral Health Center, Loma Linda  
 Adventist Health System, Loma Linda University Medical Center, Loma Linda  
 Adventist Health System, Tennessee Christian Medical Center, Madison, TN  
 Adventist Health System, Walla Walla, WA  
 Adventist Health Systems, San Joaquin Community Hospital, Bakersfield  
 Adventist HealthCare, Inc., Shady Grove Adventist Hospital, Rockville, MD  
 Adventist HealthCare Mid-Atlantic (Shady Grove), Rockville, MD  
 Adventist HealthCare, Paradise Valley Hospital, National City  
 Adventist HealthCare, Simi Valley Hospital, Simi Valley  
 Adventist HealthCare, South Coast Medical Center, Laguna Beach  
 Adventist HealthCare, White Memorial, Los Angeles  
 Adventist Health Systems, Inc., Sunbelt, Orlando, FL  
 Adventist Medical Center, Glendale  
 Adventist Medical Center, Portland, OR  
 Adventist Nursing Home, Livingston, NY  
 Adventist Wellness Center, Guam SDA Wellness Centers Tamuning, Guam  
 Advocate Schools and Group Homes, Grand Terrace  
 Affiliated Health Services, Mt. Vernon, WA  
 Affiliated Physical Therapy, Inc., Blue Springs, MO  
 Agoura Hills Physical Therapy, Agoura Hills  
 AHM CGH, Inc., Chapman Medical Center, Orange  
 Aim Hi—A Division of Orthopaedic Medical Group, San Bernardino  
 Akami Physical Therapy, Inc., Honolulu, HI  
 Alaska Center for Children & Adults, Fairbanks, AK  
 Alexandria Hospital, Alexandria, VA  
 All Med Rehabilitation Center, Bronx, NY  
 All Saints Saint Mary's Medical Center, Racine, WI  
 All Sports Therapy Athletic Rehabilitation, Hanford  
 All Star Physical Therapy, Denver, CO  
 Allcare Therapy Services, Ridgecrest  
 Allentown Sports Medicine & Human Performance Center, Allentown, PA  
 Alliance Imaging, Anaheim  
 Alliant Health Systems, dba Alliant Medical Pavilion, Louisville, KY  
 Allied Services Skilled Nursing Center, Scranton, PA  
 Almaden Health and Rehab Center, San Jose  
 Alpine Physical Therapy and Wellness Center, Alpine  
 Alpine Special Treatment Center, Alpine  
 Alta Loma School District, Alta Loma  
 Alternatives to Domestic Violence (ADV), Riverside  
 Alvarado Hospital Medical Center & San Diego Rehab (Tenet Health System), San Diego  
 Alvarado Parkway Institute, La Mesa  
 Alvord School District, Riverside  
 AM Health, Riverside  
 American Ambulance, Fresno  
 American Ambulance and American Medical Response, Riverside  
 Anberry Rehabilitation Hospital, Atwater  
 Anderson Baim, PT, Inc., Modesto  
 Ando and Aston Physical Therapy, Anaheim Hills  
 Andrews County Hospital District, Permain Regional Medical Center, Andrews, TX  
 AngMo Kio Community Hospital, Singapore  
 Anleiter Physical Therapy, Gilbert, AZ  
 Ann Marie Stauble/San Bernardino Scottish Rite Childhood Language Center, Grand Terrace  
 Annette Levy (see Orthopedic Hospital)  
 Antelope Valley Hospital Medical Center, Lancaster  
 Anza Nursing and Rehabilitation, El Cajon  
 Apple Valley Care Center, Apple Valley  
 Apple Valley Physical Therapy, Apple Valley  
 Arbor Village, Fresno  
 Ardmore P.T., Inc., Ardmore, OK  
 Arrowback Medical Group, Colton  
 Arrowhead Orthopaedic & PT, San Bernardino  
 Arrowhead Regional Medical Center, Colton  
 Arroyo Grande Community Hospital (Vista Hospital System, Inc.), Arroyo Grande  
 Arthritis and Orthopedic Medical Center, Los Gatos  
 Asante Health System, dba Three Rivers Community Hospital, Medford, OR  
 Ascent Physical Therapy, Omak, WA  
 Ashland Community Hospital, Ashland, OR  
 Aspire Physical Therapy, San Luis Obispo  
 Associated Physical and Occupational Therapy, Kenmore, NY  
 Ather Sports Injury Clinic, Castro Valley  
 Athletic & Industrial Rehab, Modesto  
 Athletic Rehab Center, West Covina  
 Athletic Training Department, University of Nebraska, Lincoln, NE  
 ATS Physical Therapy, Las Vegas, NV  
 Augusta Medical Center, Fishersville, VA  
 Avalon Municipal Hospital and Clinic, Avalon  
 Avista Therapy Clinic, Louisville, CO  
 Back and Sports Injury PT, Inc., Denver, CO  
 Back on Track, Barstow  
 Bakersfield Memorial Hospital, Catholic HealthCare West, Central California, Bakersfield  
 Ballard and Associates, Raleigh, NC  
 Banner Health System, Mesa, AZ  
 Banner Health Systems, Phoenix, AZ  
 Banning Unified School District, Banning  
 Baptist Hospital Affiliate of the Voluntary Hospital, Nashville, TN  
 Baptist Montclair, a division of Baptist Health Systems, Inc., Birmingham, AL  
 Barton Memorial Hospital, South Lake Tahoe  
 Bauer Physical Therapy, Laguna Hills  
 Bay Rehabilitation, Montebello  
 Baylor University Medical Center, Dallas, TX  
 Bear and Associates, Redlands  
 Bear Valley Community Healthcare, Big Bear Lake  
 Beaver Medical Clinic, Inc., Redlands

- Behavioral Medicine Center, Loma Linda University, Redlands
- Bella Vista Hospital, Mayaguez, Puerto Rico
- Bellview-Redmond Physical Therapy Center, Redmond, WA
- Bertolucci Physical Therapy and Rehabilitation, Citrus Heights
- Beverly Health Care Center, Monterey
- Beverly Hospital, Montebello
- Beverly Manor Convalescent, La Mesa
- Beverly Manor Nursing & Rehabilitation, Burbank
- BHC Canyon Ridge Hospital, Inc., Chino
- BHC Fairfax Hospital, Kirkland, WA
- Black Hills Wellness Center, Hermosa, SD
- Blood Bank of San Bernardino-Riverside Counties, San Bernardino
- Blossomland Learning Center/Berrien County Intermediate School District, Berrien Springs, MI
- Blue Jay Physical Therapy, Blue Jay
- Blue Mountain Valley PT Clinic, Milton, Freewater, OR
- Bob Nye Physical Therapy, Lompoc
- Boca Raton Rehabilitation Center, Boca Raton, Florida
- Body Rx Physical Therapy, Glendale
- Boone Hospital Center, Columbia, MO
- Borden Physical Therapy, Flagstaff, AZ
- Bothwell Regional Health Center, Sedalia, MO
- Bradley Rehab Center, Cleveland, TN
- Brea Community Hospital, Brea
- Breech Medical Center, Lebanon, MO
- Brooktrails P.T., Willits
- Brotman Medical Center (Tenet Health System), Culver City
- Broughton Hospital, Morgantown, NC
- Bryan LGN Medical Center, Lincoln, NE
- Burbank Airport Hilton and Convention Center, Burbank
- Burbank Unified School District, Burbank
- Burgard Physical Therapy, Huntington Beach
- Burger Physical Therapy and Rehabilitation Agency, Folsom
- Cabrini Medical Center, New York, NY
- California Pacific Medical Center, San Francisco
- California Rehab Center, Camarillo
- California School for the Deaf, Riverside
- California (State of) University, Fullerton
- California (State of) Fairview Developmental Center, Costa Mesa
- California (University of) Irvine Medical Center, Orange
- California (University of) Los Angeles Hospital, Los Angeles
- California Therapy Solutions, Fountain Valley
- California (University of) Los Angeles Neuropsychiatric, Los Angeles
- California (University of) San Diego, La Jolla
- Campbell Clinic, Memphis, TN
- Canyon Lake Physical Therapy, Canyon Lake
- Cardenas & Associates, Studio City
- Caremark Kingsridge Center for Physical Therapy, Dayton, OH
- Caribou Physical Therapy, Sandpoint, ID
- Carillion Health Systems, Roanoke, VA
- Caring Hands Pediatric Therapy, Winston-Salem, NC
- Carlsbad Physical Therapy, Carlsbad
- Carmel Orthopedics & Sport Therapy, Carmel
- Carnahan Therapy/The Work Center, Lompoc
- Carter Physical Therapy, Covina
- Casa Colina Hospital for Rehabilitative Medicine, Pomona
- Cascade PT & Sports, Sedro Wooley, WA
- Cascade Healthcare Community, Inc. Bend, OR
- Cass Medical Center, Harrisonville, MO
- Castle Medical Center, Kailua, HI
- Castillo, Reuben, MD, Family Practice, Perris
- Catawba Memorial Hospital, Hickory, NC
- Catholic Healthcare West, So Cal
- Catholic Healthcare West–Central California, Bakersfield Memorial Hospital, Bakersfield
- Catholic Healthcare West–Central California, Mercy Hospital–Bakersfield, Bakersfield
- Catholic Healthcare West–Glendale, Glendale Memorial Hospital, Glendale
- Catholic HealthCare West–Sacramento, Mercy Healthcare Sacramento, Sacramento
- Catholic HealthCare West–Sacramento, Mercy Hospital of Folsom, Sacramento
- Catholic HealthCare West–Sacramento, Methodist Hospital of Sacramento, Sacramento
- Catholic Healthcare West, So Cal, Northridge Hospital Medical Center, Northridge
- Catholic HealthCare West–San Bernardino, St. Bernardine Medical Center and Community Hospital of San Bernardino, San Bernardino
- Catholic HealthCare West–San Gabriel, San Gabriel Valley Medical Center, San Gabriel
- Catholic HealthCare West–Southern California Hospital, Methodist Hospital–So, Arcadia
- Catholic HealthCare West–Southern California, Northridge Hospital Medical, Northridge
- Catholic HealthCare West–Southern California, St. Mary Medical Center, Long Beach
- Catholic HealthCare West/St. John's Regional, St. John's Regional Medical Center, S.F./Oxnard
- CCS Parkard, Torrance
- Cedars-Sinai Medical Center, Los Angeles
- Center for Comprehensive Rehab, Tampa, FL
- Center for Developing Kids, Pasadena
- Center for Rehab Excellence, Longview, TX
- Center for Sports & Wellness, Mission Viejo
- Center for Rehabilitative Medicine Watson Clinic, Lakeland, FL
- Centinela Hospital Medical Center (Tenet Health System), Inglewood
- Central Peninsula General Hospital, Soldotna, AK
- Central Unified School District, Fresno
- Central Washington Hospital, Wenatchee, WA
- Centre for Neuro Skills, Bakersfield
- Centre for Plastic Surgery, San Bernardino
- Centro de Desarrollo y Servicios Especializados, Inc., Mayaguez, Puerto Rico
- Century City Hospital, Los Angeles
- Chancellor Health Care, Santa Rosa
- Chaparral Medical Group, Pomona
- Chaparral Physical Therapy, Barstow
- Chapin Center/Genesis Rehab Services, Springfield, MA
- Chapman Convalescent, Riverside
- Chehalis Valley PT, Chehalis, WA
- Cherry Valley Health Care, Banning
- Child Development Institute, Woodland Hills
- Child Health Disability Prevention Program, San Diego
- Child Nutrition Services, Norco
- Children's Center of Riverside, Riverside
- Children's Healthcare of Atlanta at Egleston, Atlanta, GA
- Children's Hospital Central California (formerly Valley Children's Hospital), Fresno
- Children's Hospital and Health Center, San Diego
- Children's Hospital of Los Angeles at USC, Los Angeles

- Children's Hospital of Orange County, Orange  
 Children's Medical Center, Dayton, OH  
 Children's Medical Services CCS-Ventura, Ventura  
 Children's Mercy Hospital, Kansas City, MO  
 Children's Therapy Center, Camarillo  
 Children's Therapy Center, (The) Garden Grove  
 Children's Therapy Center, Las Vegas  
 Child's Play Physical Therapy, Anchorage, AK  
 Chino Valley Medical Center, Chino  
 Christ Hospital (The), Cincinnati, OH  
 Citrus Valley Medical Center/Queen of Angels, Covina  
 City of Hope National Medical Center, Duarte  
 Cleburne PT & Fitness Center, Cleburne, TX  
 Cleveland Community Hospital, Cleveland, TN  
 Clinicas Del Camino Real, Inc., Ojai/Oxnard  
 CMPT Associates PT, Greenville, PA  
 Coast Physical Therapy, La Jolla  
 Coastal Communities Hospital (Tenet Health System), Santa Ana  
 Coastal Physical Therapy, Heritage Gardens, Loma Linda  
 Coastal Physical Therapy, Valley Healthcare Center, San Bernardino  
 Coastal Physical Therapy, Brookings, OR  
 Coasttherapy, Huntington Beach  
 College Hospital of Costa Mesa, Costa Mesa  
 Colorado Physical Therapy Institute, Broomfield, CO  
 Colorado River Medical Center, Needles  
 Colorado Sports and Spine Center, Colorado Springs, CO  
 Colton Joint Unified School District, Colton  
 Columbia Chugach PT & Health Center, Anchorage, AK  
 Columbia Rehab, Longview, WA  
 Combined Therapy Specialists, Ashland, NC  
 Commonwealth Physical Therapy, Lexington, KY  
 Community Convalescent Center, Riverside  
 Community Convalescent of San Bernardino/Premier Health, Orange  
 Community Health Center of King County, Kent, WA  
 Community Hospital, Santa Rosa  
 Community Hospital of Central California, Fresno  
 Community Hospital of Chula Vista, Chula Vista  
 Community Hospital of Onaga, Onaga, KS  
 Community Hospital of Los Gatos, Los Gatos  
 Community Hospital of San Bernardino, a Catholic Healthcare West facility, San Bernardino  
 Community Hospitals of Central California, Fresno  
 Community Medical Center, Clovis  
 Community Medical Center, Fresno  
 Community Medical Center, Missoula, MT  
 Community Medical Group of Riverside, Riverside  
 Community Memorial Hospital of Buena Ventura, Ventura  
 Community Physical Therapy, Riverside  
 Comprehensive Cancer Center, Palm Springs  
 Comprehensive PT and Aquatic Center, Victorville  
 Comprehensive PT and Sports Medicine, Coon Rapids, MN  
 Comprehensive Rehabilitation, Hendersonville, TN  
 Computerized Diagnostic Imaging Center, Riverside  
 Concentra Health Services, Carrollton, TX  
 Continental Regency Rehab Hospital, San Diego  
 Cook Children's Medical Center, Fort Worth, TX  
 Cook County Hospital, Chicago, IL  
 Cooper Health System, Camden, NJ  
 Cooper University Hospital, Camden, NJ  
 Cooper Wellness Program, Dallas, TX  
 Cornerstone Medical Group, San Bernardino  
 Cornerstone Therapy, Huntington Beach  
 Corona/Norco Unified School District (Child Nutrition Services), Norco  
 Corona Physical Therapy, Corona  
 Corona-Temecula Orthopedic Association, Corona, CA  
 Cottonwood Hospital Back Institute, Murray, UT  
 Cottrell's Sports Physical Therapy, Kappa, HI  
 County of Los Angeles-Children's Medical Center, El Monte  
 County of Orange Health Care Agency, Orange  
 County of Riverside Department of Public Health, Riverside  
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 County of San Mateo Health Services Agency, San Mateo  
 County of Ventura-California Children's Services, Ventura  
 County Villa Rehabilitation Center, Los Angeles  
 Covenant Healthcare (19 sites), Milwaukee, WI  
 Cox Health Systems, Springfield, MO  
 CPC Fairfax Hospital, Kirkland, WA  
 CPC Millwood Hospital, Arlington, TX  
 CPC Sierra Vista Hospital, Sacramento  
 CPR Comprehensive Physical Rehabilitation, Lakewood/Palm, CO  
 CPR Therapy Services, Lakewood, CO  
 Crawford Long Hospital, Physical Therapy, Atlanta, GA  
 Crestwood Medical Center, Huntsville, AL  
 Cucamonga Unified School District, Rancho Cucamonga  
 Cumberland County Hospital System, Inc., Fayette, NC  
 CVE, Inc., San Francisco  
 CVPH Medical Center, Plattsburg, NY  
 Cypress Gardens, Riverside  
 Dallmeyer Physical Therapy, Santa Barbara  
 Dan Wyand PT & Associates/Northeastern Vermont Regional Hospital, Lyndonville, VT  
 Daughters of Charity, Seton Medical Center, Daly City  
 Davita, Inc., Torrance  
 Deaconess Rehabilitation Institute, Spokane, WA  
 DeKalb Medical Center, Decatur, GA  
 Deloitte & Touche, Costa Mesa  
 Department of the Army Community Hospital, Fort Benning, GA  
 Department of the Navy, Naval Medical Center, San Diego  
 DePaul Medical Center, Norfolk, VA  
 Desert Knolls Convalescent, Premier Healthcare, Inc., Victorville  
 Desert Life Rehabilitation and Care Center, Tucson, AZ  
 Desert Medical Group, Inc., Palm Springs  
 Desert Regional Medical Center (Tenet Health System), Palm Springs  
 Desert Sands Unified School District, La Quinta  
 Desert Springs Therapy Center, Desert Hot Springs  
 Desert Valley Hospital, Victorville  
 DeSoto Memorial Hospital, Arcadia  
 Detroit Medical Center, Detroit, MI  
 Developing Aging Solutions with Heart, dba DASH, Redlands  
 Developmental Pathway for Kids, Detroit, MI  
 Devonshire Care Center/Locomotion Therapy, Hemet  
 Dewitt Physical Therapy, Merced  
 Diamondback Physical Therapy, Gilbert, AZ  
 Dimensions in Food and Nutrition, Inc., Burtonsville, MD  
 Doctors Hospital Medical Center, Montclair  
 Doctors Hospital of Sarasota, Sarasota, FL  
 Dolphin Human Therapy, Miami, FL

Dominican Hospital, Santa Cruz  
 Dos Caminos Physical Therapy and Sports Rehab, Camarillo  
 Downey Regional Medical Center, Downey  
 Downey Unified School District, Downey  
 Drayer Physical Therapy Institute, Hummelstow, PA  
 Dr. McDougall's Right Foods/*Veggie Life Magazine*, Concorde  
 Drs. Hayashi, Sakai, and Dahms, Thousand Oaks  
 Durango Sports Club PT, Durango, CO  
 Dynamic Performances Therpay, Huntsville, AL  
 Dynamics Spinal Cord Rehab Center, Los Angeles

East Jefferson General Hospital, Metairie, LA  
 East Pasco Medical Center, Zephyrillis, FL  
 East Valley, SELPA, Colton  
 Easter Seal Children's Guild Therapy Center, Salem, OR  
 Easter Seal Society, Sacramento  
 Easter Seal Society of Inland Counties, San Bernardino  
 Easter Seals—Central California, Fresno  
 Eclipse Therapies, Inc., San Rafael  
 Ed Ayub Ortho and Sports, San Diego  
 Egleston's Children's Hospital at Emory University, Inc.,  
 Atlanta, GA  
 Eisenhower Memorial Hospital, Rancho Mirage  
 El Centro Regional Medical Center, El Centro  
 El Paso Physical Therapy Services, El Paso, TX  
 Elite Performance, Newport Beach  
 Elkin's Park Hospital (Tenet Health System) Elkin's Park, PA  
 Elks Rehabilitation Hospital, Boise, ID  
 Elmhurst Memorial Hospital, Elmhurst, IL  
 Ember Healthcare, Pomona  
 Emerald Bay Physical Therapy, South Lake Tahoe  
 Emilie Gamelin Institute, Portland, OR  
 England Physical Therapy, Garden Grove  
 Enloe Medical Center, Chico  
 Etiwanda School District, Etiwanda  
 Eureka Physical Therapy, Inc., Eureka  
 Evergreen Ancillary Services, LLC, Vancouver, WA  
 Evergreen Hospital Medical Center, Kirkland, WA  
 Excel Physical Therapy, Walla Walla, WA  
 Explorabilities, Albuquerque, NM

Fairbanks Memorial Hospital, Fairbanks, AK  
 Fairview Training Center, Physical Medicine Department,  
 Salem, OR  
 Fallbrook Hospital, Fallbrook  
 Fallbrook Physical & Occupational Therapy, Fallbrook  
 Fayetteville Therapy Services, Fayetteville, NC  
 Feather River Rehabilitation Center, Paradise  
 Felder Physical Therapy, Inc., Santa Ana  
 First Healthcare Corporation, Tacoma, WA  
 Fit for Life, Riverside  
 Fitness Center Health Park East, Brandenton, FL  
 Flagstaff Medical Center and Northern Arizona Rehab  
 Center, Flagstaff, AZ  
 Flanders Physical Therapy Portland, OR  
 Florida Hospital Waterman, Tamares, FL  
 Focus on Health, Newport Beach  
 Focus Physical Therapy, Rancho Santa Marguerita  
 Fontana Unified School District, Fontana  
 Foothills Ortho & Sports Therapy, Loveland, CO  
 Foothills Provincial General Hospital, Calgary,  
 Alberta, Canada  
 Fort Sanders Regional Medical Center, Knoxville, TN  
 Fortenase and Associates, Arcadia  
 Fountain Valley Regional Hospital and Medical Center,  
 Fountain Valley  
 Fox Occupational Medicine Center, San Bernardino

Franciscan Health System—West, Tacoma, WA  
 Freeman Ortho and Sports Medicine Center, Joplin, MO  
 Fresno Community Hospital and Medical Center, dba  
 California Cancer Care, Fresno  
 Fresno Fire Department, Fresno  
 Friends of Jefferson House, Riverside  
 Function Junction Rehabilitation Center, Crescent City  
 Future Rehabilitation, Santa Rosa  
 Futures Rehab and Heritage Healthcare, St. Helena  
 Fysiocur NV, Curacao, Netherlands

Galen of Kansas, Overland Park, KS  
 Galesburg Cottage Hospital, Galesburg, Illinois  
 Gambro Healthcare, San Bernardino  
 Gambro Health Care, Upland  
 Garfield Medical Center (Tenet Health System), Monterey  
 Park  
 Gaspar Physical Therapy, Encinitas  
 Gateway Hospital & Mental Health Center, Los Angeles  
 Gateway Therapy Center, Poway  
 Gateways Hospital, Los Angeles  
 General Hospital, Eureka  
 Genesys Regional Medical Center Health Park, Grand Blanc,  
 MI  
 Gently Physical Therapy & Sports Rehab, New Orleans, LA  
 Geri Care, Newport Beach  
 Gerontic Therapy Services, Seal Beach  
 Gila Regional Medical Center PT Department, Silver City, NM  
 Glendale Adventist Medical Center, Glendale  
 Glendale Memorial Hospital, Catholic Healthcare West, So  
 Cal, Glendale  
 Glendale Unified School District, Glendale  
 Global Medical Center, Montclair  
 Glynn & Giordano PT, Bakersfield  
 Good Samaritan Hospital, San Jose  
 Good Samaritan Hospital and Rehabilitation Center,  
 Puyallup, WA  
 Goodfellow Occupational Therapy, Fresno  
 Graciela Esquivel-Aguilar, MD, Fresno  
 Granada Hills Community Hospital, Granada Hills  
 Great Lakes Sports Medicine & Orthopaedics, Battle Creek,  
 MI  
 Greater Victoria Hospital Society, Victoria, British Columbia,  
 Canada  
 Green Hospital of Scripps, La Jolla  
 Gresham Sports Care PT, Gresham, OR  
 Guam Memorial Hospital, Tamuning, Guam  
 Guam SDA Wellness Center, Tamuning, Guam  
 Guardian Healthcare Group, Modesto  
 Guardian Rehabilitation Hospital, Modesto  
 H & W Therapy, Pueblo, CO  
 H & W Therapy, Soldotna, AK  
 Hairston and Daley Physical Therapy, Orange  
 Hale Makua, Kahului, HI  
 Hallmark Rehabilitation, Foothill Ranch  
 Hamilton Physical Therapy, Hamilton, MT  
 Hand Rehabilitation Clinic, Beverly Hills  
 Hands on Hands Rehabilitation Center, Costa Mesa  
 Hanford Community Hospital, Hanford  
 Harbor View Medical Center, Seattle, WA  
 Hardee PT/Rehab Service, Inc., Wauchula, FL  
 Hawaii State Hospital, Kaneohe, Oahu, HI  
 Hawaiian Electric Company, Honolulu, HI  
 Hawaiian Rehabilitation Services, Kailua-Kona, HI  
 HCA Healthcare-Good Samaritan, San Jose  
 Health Pro Physical Therapy, Walnut Creek

- Health Services Agency, Modesto  
 Health South Corporation, Birmingham, AL  
 Health South Corporation, Las Vegas, NV  
 Health South Rehabilitation, Willowbrook, IL  
 Health South Western Rehabilitation Institute, Sandy, UT  
 HealthAlliance Hospital, Leominster, MA  
 Healthcare Partners Medical Group, Torrance  
 HealthSouth Community Re-Entry Center of South Florida, Ft. Lauderdale, FL  
 HealthSouth Community Re-Entry Center of Texas, Dallas, TX  
 HealthSouth Comprehensive Rehabilitation Unit, Birmingham, AL  
 HealthSouth Corporation—multiple sites  
 HealthSouth Dallas Rehabilitation Institute, Dallas, TX  
 HealthSouth Doctor's Hospital, Coral Gables, FL  
 HealthSouth Head Injury Rehabilitation Center, St. Louis, MO  
 HealthSouth Rehabilitation Center of Tucson, Tucson, AZ  
 HealthSouth Rehabilitation Center of Van Nuys, Van Nuys  
 HealthSouth Rehabilitation Corporation, dba Sea Pines, Birmingham, AL  
 HealthSouth Sub-Acute Hospital of North Houston, Conroe, TX  
 HealthSouth Sunrise Rehabilitation Hospital, Ft. Lauderdale, FL  
 HealthSouth Treasure Coast Rehabilitation Hospital, Vero Beach, FL  
 HealthSouth, Tustin Rehabilitation, Tustin  
 Healthwin Hospital—St. Clair Darden Health Systems, South Bend, IN  
 Heart Institute of the Desert, Rancho Mirage  
 Helix Healthcare, Inc, La Mesa  
 Hemet Healthcare, Hemet  
 Hemet Unified School District, Hemet  
 Hendrick Medical Center, Abilene, TX  
 Hesperia Physical Therapy, Hesperia  
 Hi Desert Medical Center, Joshua Tree  
 High Desert Physical Therapy, Victorville  
 Highland Physical Therapy, San Bernardino  
 Hillcrest Baptist Medical Center, Waco, TX  
 Hillcrest Medical Center, Tulsa, OK  
 Hillhaven—Alta Vista, Riverside  
 Hillhaven Fair Oaks, Carmichael  
 Hoag Memorial Hospital, Newport Beach  
 Hollywood Medical Center, Hollywood, FL  
 Hollywood Physical Therapy, Los Angeles  
 Holmes Regional Nursing Home, Melbourne, FL  
 Holy Family Hospital, Spokane, WA  
 Holy Rosary Medical Center, Ontario, OR  
 Horizon Physical Therapy, Redlands  
 Hospitale Maternidade de Jundiai, San Paulo, Brazil  
 Houston Rehabilitation Institution, Houston, TX  
 Howard Memorial Hospital, Willits  
 Hudson and Walker PT, Apple Valley  
 Huguley Memorial Medical Center, Ft. Worth, TX  
 Huntington Beach Hospital & Medical Center, Huntington Beach  
 Huntington Drive Skilled Nursing Center, Arcadia  
 Huntington East Valley Hospital, Glendora  
 Huntington Memorial Hospital, Pasadena  
 Huntsville Pool and Land Therapy, Huntsville, AL  
 Hurley Medical Center, Flint, MI  
 Hy-Lond Convalescent, Modesto  
 Idaho Physical Therapy, Nampa, ID  
 IHC Health Services/Primary Children's Medical Center, Salt Lake City, UT  
 IHC Rehab Services of St. George, St. George, UT  
 Immanuel Medical Center, Omaha, NE  
 Imperial Valley Therapy Centers, El Centro  
 In Balance, A Woman's Health & Wellness, San Juan  
 Independent PT—Torrance, Torrance  
 English & Petersen PT, Mesa, AZ  
 Inland Empire Physical Therapy, Corona  
 Inland Hand Therapy, Rancho Cucamonga  
 Inland Mental Health Associates, Inc., Chino  
 Inland Surgery Center, Redlands  
 Inland Temporary Homes, Loma Linda  
 Inland Valley Regional Medical Center, Wildomar  
 Innovative Health Systems, Inc., Sacramento  
 Integris Baptist Medical Center, Oklahoma City, OK  
 Intergró Rehab Services, Huntington Beach  
 Interlink Rehabilitation, Van Nuys  
 Intermountain Health Care, Orem, UT  
 Island Physical Therapy Center, Anacortes, WA  
 Jack D. Close & Associates, Las Vegas, NV  
 Jayne Shover Easter Seal Rehabilitation Center, Elgin, IL  
 Jean Hanna Clark Rehabilitation Center, Las Vegas, NV  
 Jefferson County Health Department, Louisville, KY  
 Jefferson County Public Schools, Golden, CO  
 Jennie Edmundson Hospital, Council Bluffs, IA  
 J. F. Kennedy Memorial Hospital (Tenet Health System), Indio  
 Jim Thorp Rehabilitation, Oklahoma City, OK  
 John Breuer Rehab Services, Coos Bay, OR  
 Johns Hopkins Hospital, Baltimore, MD  
 Joyner Sports Medicine Institute, Division of Novacare, Harrisburg, PA  
 JP Therapy and Magnolia Rehabilitation and Nursing, Riverside  
 JP Therapy Villa Rehab Hospital, Riverside  
 Jump Start, Colton  
 June Weinstein and Associates, Villa Park  
 Jurupa Unified School District, Riverside  
 Kadlec Medical Center, Richland, WA  
 Kaiser Foundation Hospital—Baldwin Park, Baldwin Park  
 Kaiser Foundation Hospital—Bellflower, Bellflower  
 Kaiser Foundation Hospital—Fontana, Fontana  
 Kaiser Foundation Hospital—Los Angeles, Los Angeles  
 Kaiser Foundation Hospital—Panorama City  
 Kaiser Foundation Hospital—Riverside, Riverside  
 Kaiser Foundation Hospital—San Diego, San Diego  
 Kaiser Foundation Hospital—Woodland Hills  
 Kaiser Foundation Hospitals, Honolulu, HI  
 Kaiser Permanente Hospitals and the Permanente Medical Group, Oakland  
 Kaiser Permanente, Fresno Medical Center, Fresno  
 Kaiser Permanente Medical Group—North  
 Kaiser Permanente—Southern California Region, Pasadena  
 Kansas Rehabilitation Hospital, Topeka, KS  
 Kaweah Delta Healthcare District, Visalia  
 Kennebec Valley Medical Center, Augusta, ME  
 Kennewick General Hospital, Kennewick, WA  
 Kensington Physical Therapy, Inc., Gaithersburg, MD  
 Kentfield Rehabilitation Hospital, Kentfield  
 Kern Radiology, Bakersfield  
 Kern Valley Health District, Mt. Mesa  
 Kettering Medical Center, Kettering, OH

- Keystone Vocational Services, San Francisco  
 Kimbro Medical Center, Cleburne, TX  
 Kindred Hospital, Vencor, Ontario  
 Kindred Hospital, Rehabilitation, Brea  
 Kingman Community Hospital, Kingman, KS  
 Kingston Hospital, Kingston, NY  
 Kitsap PT and Sports Clinic, Poulsbo, WA  
 Knight Physical Therapy, Garden Grove  
 Knollwood Psychiatric Center, Riverside  
 Knox Community Hospital, Mt. Vernon, OH  
 Kodiak Island Hospital and Care Center, Kodiak, AK  
 Kona Hospital, Kealahou, HI  
 Kootenai Medical Center, Coeur d'Alene, ID  
 Kornhill Physiotherapy Centre, Quarry Bay, Hong Kong  
 KPMG Peat Marwick, Long Beach  
 Kruppa Physical Therapy/Rimrock Villa Convalescent,  
 Barstow  
 Kyrene Elementary School District, Tempe, AZL & J  
 Telesmanic & Associate (Horizon Subacute), Fresno
- La Jolla Spine and Sport, La Jolla  
 La Palma Intercommunity Hospital, La Palma  
 La Pine Physical Therapy, La Pine, OR  
 Lake Arrowhead Physical Therapy/Mountains  
 Community Hospital, Lake Arrowhead  
 Lake Centre for Rehabilitation, Leesburg, FL  
 Lake Chelan Community Hospital, Lake Chelan, WA  
 Lake Chelan Physical Therapy, Chelan, WA  
 Lake City Orthopedic & Sports Physical Therapy,  
 Coeur d'Alene, ID  
 Lake Elsinore Unified School District, Lake Elsinore  
 Lake Forest Hospital, Lake Forest, WA  
 Lakeland Regional Health System, Berrien Center, MI  
 Lakeland Regional Health System, St. Joseph, MI  
 Lancaster Community Hospital, Lancaster  
 Lanternman Developmental Center, Pomona  
 LaPalma Intercommunity Hospital, La Palma  
 Las Encinitos Hospital, Pasadena  
 Las Virgenes Unified School District, Calabasas  
 LaSalle Medical Associates, San Bernardino  
 Laurie Lewis/Therapy 4 U, San Jacinto  
 Lawrence Hospital, Bronxville, NY  
 LDS Hospital Rehabilitation Center, Salt Lake City, UT  
 Learning Service Corp., Gilroy  
 LeBouheur Children's Medical Center, Memphis, TN  
 Legacy Rehabilitation Services, Portland, OR  
 Lehigh Valley Physical Therapy and Rehabilitation,  
 Walnutport, PA  
 Lester E. Cox Medical Center, Springfield, MO  
 Lewis, Bower & Associates, Claremont  
 Life Care Center of Kennewick, Kennewick, WA  
 Life Care of Corona, Corona  
 Lifecare Center of Hawaii, Hilo, HI  
 Lifespan Wellness Clinic, Fullerton  
 Lifestyle Center of America, Sulphur, OK  
 Lihue PT & Sports Rehab of T.O.R.C.H., Hilo, HI  
 Lincoln Regional Center, Lincoln, NE  
 Linda Brown and Associates, Visalia  
 Linda Valley Care Center, Loma Linda  
 Locomotion Therapy, Covina  
 Locomotion Therapy, Inc., 3-Way Hemet Convalescent, Los  
 Angeles  
 Loma Linda Fire Department, Loma Linda  
 Loma Linda University Behavioral Medical Center, Loma  
 Linda  
 Loma Linda University Medical Center, Loma Linda  
 Long Beach Memorial Medical Center, Long Beach
- Long Beach WIC Program, Long Beach  
 Lorien Columbia Nursing & Rehabilitation Center, Columbia,  
 MD  
 Los Alamitos Medical Center, Los Alamitos  
 Los Angeles (County of) Children's Medical Services, El  
 Monte  
 Los Angeles (County of) University of Southern  
 California Medical Center, Los Angeles  
 Los Robles Regional Medical Center, Thousand Oaks  
 Louis A. Weiss Memorial Hospital, Chicago, IL  
 Lourdes Medical Center, Pasco, WA  
 Lutheran Community Health Services, dba Lutheran Rehab,  
 Wheat Ridge, CO  
 Lutheran Social Services of Southern California, Riverside  
 Lynne K. Nishikawa, M.S., Inc., Colton
- Macon Health Care, Macon, MO  
 Madera Community Hospital, Madera  
 Madonna Rehabilitation Hospital, Lincoln, NE  
 Magan Clinic, Covina  
 Magic Valley Regional Medical Center, Twin Falls, ID  
 Magnolia Physical Therapy, Huntington Beach  
 Magnolia Rehabilitation & Nursery Center, Riverside  
 Magro, Joseph, Do, San Bernardino  
 Manor Care Nursing & Rehabilitation Center, Hemet  
 Manor Care Nursing Center, Palm Desert  
 Marcus Daly Memorial Hospital, Hamilton, MT  
 Marguerite Physical Therapy Clinic, Inc., Mission Viejo  
 Marian Medical Center, Santa Maria  
 Mariners Rehabilitation, Costa Mesa  
 Mariposa Women's Center, Orange  
 Marshall Hospital, Placerville  
 Martin Army Community Hospital, Ft. Benning, GA  
 Martin Luther Hospital, Anaheim  
 Masada Homes, Gardena  
 Mater Misericordiae Hospital-Mercy Hospital, Merced  
 Matrix, Lodi  
 Matrix-Long Beach Sports Rehab, Long Beach  
 Maywood Health Care, Oxnard  
 Meadowbrook Rehabilitation Hospital, Tulsa, OK  
 Medford Sports Injury & Therapy Center, Medford, OR  
 Medical Arts Physical Therapy, Honolulu, HI  
 Medical Center of Central Massachusetts,  
 Worcester, MA  
 Meeting Street Center, East Providence, RI  
 Memorial HealthCare, Worcester, MA  
 Memorial Hospital, Chatanooga, TN  
 Memorial Hospital, Modesto  
 Memorial Hospital of Carbondale, Carbondale, IL  
 Menifee Valley Medical Center, Sun City  
 Mental Health Association of San Mateo County,  
 Redwood City  
 Mental Health Association of San Mateo County,  
 San Mateo  
 Mercy Air Services, Inc., Fontana  
 Mercy Air Services, Rialto  
 Mercy Cancer Center, Merced  
 Mercy Healthcare, Sacramento  
 Mercy Hospital and Health Services, Merced  
 Mercy Hospital and Medical Center, Des Moines, IO  
 Mercy Hospital and Medical Center, San Diego  
 Mercy Hospital Catholic Healthcare West, Central California,  
 Bakersfield  
 Mercy Medical Center, Nampa, ID  
 Mercy Medical Center, Redding  
 Mercy Medical Center, Roseburg, OR  
 Methodist Hospital of Southern California, Arcadia

- Methodist Hospitals of Memphis, Memphis, TN  
 Methodist Medical Center, Jacksonville, FL  
 Metro Ortho & Sports Therapy, Silver Spring, MD  
 Michael DeVitt Physical Therapy, Boise, ID  
 Mid Coast Hospital, Brunswick, ME  
 Mid-America Rehabilitation, Overland Park, KS  
 Middle Tennessee Medical Center, Inc., Murfreesboro, TN  
 Middleton Village Nursing and Rehabilitation Center, Middleton, WI  
 MidMichigan Medical Center, Midland, MI  
 MidValley Hospital, Omak, WA  
 Midwestern State University, Wichita Falls, TX  
 Mills–Peninsula Hospitals (2 sites), Burlingame  
 Milpitas Physical Therapy, Milpitas  
 Mintz Therapy Services, Los Olivas  
 Mission Hospital Regional Medical Center, Mission Viejo  
 Mission Orthopedic Physical Therapy, Mission Viejo  
 Missouri Rehabilitation Center, Mt. Vernon, MO  
 Mobile P.E.T. Systems, Inc., San Diego  
 Modesto Back School, Modesto  
 Mohave Physical Therapy & Sports Medicine, Victorville  
 Monett Physical Therapy, Monett, MO  
 Montefiore Hospital, Bronx, NY  
 Montrose Memorial Hospital, Montrose, CO  
 Moreno Valley Physical Therapy, Moreno Valley  
 Moreno Valley Unified School District, Moreno Valley  
 Morongo Basin Ambulance, Joshua Tree  
 Morrison's Healthcare Inc., Smyrna, GA  
 Morton Plant Mease Healthcare, Clear Water, FL  
 Mount Alvernia Hospital, Singapore  
 Mount San Antonio Gardens, Pomona  
 Mount Shasta Physical Therapy, Mt. Shasta  
 Mount Washington Pediatric Hospital, Baltimore, MD  
 Mountain Land Rehabilitation, Salt Lake City, UT  
 Mountain View Child Care Center, Loma Linda  
 Mountain View Physical Center, Upland  
 Mountains Community Hospital, Lake Arrowhead  
 Murietta Valley Unified School District, Murrieta  
 Muskogee Rehabilitation & Sports Medicine, Muskogee, OK  
 Myers & Associates, Mammoth Lake  
 Myopoint, San Diego
- Napa County Health and Human Services, Napa  
 Napa State Hospital, Napa  
 Napa Valley Physical Therapy Center, Napa  
 Nashville Sports Therapy, Hermitage, TN  
 National Center for Equine-Facilitated Therapy, Woodside  
 National Guard Health Affairs, Riyadh, Saudi Arabia  
 National Medical Specialty Hospital of Redding, Redding  
 Neuro Sports Rehab Associates, Fremont  
 New England Rehabilitation Hospital, Inc., Danvers, MA  
 New River Wellness, Christiansburg, VA  
 Newport Language-Speech Centers, Mission Viejo  
 Nordstrom Rehabilitation Services, Palo Alto  
 North Adams Regional Hospital, North Adams  
 North American Computer College, Glendale  
 North East Georgia Health System, Inc., Gainseville, GA  
 North East Oregon Physical Therapy, La Grande, OR  
 North Georgia Pediatric Therapies, Ringgold, Georgia  
 North Idaho P.T., Coeur d'Alene, ID  
 North Kansas City Hospital, North Kansas City, MO  
 North River Hand Therapy Clinics, Hikson, TN  
 North Santa Rosa Physical Therapy, Santa Rosa  
 North Western Memorial Health South Sports Medicine, Chicago, IL  
 Northbay Health Care Services, Fairfield
- Northeast Community Clinic, Alhambra  
 Northeast Oklahoma Rehabilitation Hospital, Tulsa, OK  
 Northern Michigan Hospital, Petosky, MI  
 Northern Star Therapy, Limited, St. Cloud, MN  
 Northridge Hospital Medical Center, Catholic Healthcare West, So Cal, Northridge  
 Northwest Country Place, Inc., McMinnville, OR  
 Northwest Hospital, Seattle, WA  
 Northwest Kidney Centers, Seattle, WNorthwest Physical Therapy, Bellingham, WA  
 Northwest Physical Therapy, Mt. Vernon, WA  
 Northwest Rehab Institute, Vancouver, WA  
 Northwest Therapy and Fitness, Pontiac, MI  
 Northwoods Rehab Associates/Howard Young Medical Center, Woodruff, WI  
 Norton Hospitals, Inc., Louisville, KY  
 NOTAMI Hospitals of California, Inc., San Jose  
 NOVA CARE Contract Division, Genesco, IL  
 Nutrition and Lifestyle Medical Clinic, Calimesa  
 Nutrition Consultation (Margaret K. Heath), Loma Linda
- Oasis Physical Therapy, Pasco, WA  
 O'Conner Hospital-Physical Medicine, San Jose  
 Occupational Therapy Training Program, Torrance  
 Oceania, Palo Alto  
 Odessa Physical Therapy, Odessa, TX  
 Ojai Unified School District, Ojai  
 Okanogan-Douglas District Hospital, Brewster, WA  
 Old Town Physical Therapy Forrest Grove, OR  
 Ontario-Montclair School District, Ontario  
 Orange County Health Care Agency, Santa Ana  
 Orange County Therapy Services, Laguna Hills  
 Orange Unified School District, Orange  
 Options, San Diego  
 Oregon Health Sciences University, Human Performance Laboratory, University Hospital, Portland, OR  
 Ortho Sports Physical Therapy, Mission Viejo  
 Orthopaedic and Neurological Rehabilitation, Inc., Sacramento  
 Orthopaedic Hospital, Los Angeles  
 Orthopaedic Sports, Inc., Stillwater, MN  
 Orthopedic & Sports PT, Santa Rosa  
 Orthopedic Associates, Silver Spring, MD  
 Orthopedic Hospital, Ltd., Houston, TX  
 Orthopedic Physical Therapy Institute, Riverside  
 Orthopedic Surgery and Sports Medicine Physical, La Habra  
 Osteopathic Medical Center of Texas, Ft. Worth, TX  
 OT for Kids, Belmont  
 Our Lady of Victory Home of Charity-Baker Victory Services, Buffalo, NV  
 Outback Physiotherapy, Redlands  
 Outreach Therapy Consultants, Spokane, WA
- P.O.S.T. Rehabilitation Clinic, Moreno Valley  
 PACE Therapy-Christian Heritage, Upland  
 PACE Therapy-Clairemont Care Center, Pomona  
 PACE Therapy, Inc.-Heritage Garden, Loma Linda  
 PACE Therapy-Las Villas Del Norte Health Professions, Escondido  
 PACE Therapy-Parkmont Care Center, Paramount  
 PACE Therapy-Rancho Encinitas, Encinitas  
 PACE Therapy-Vista Del Mar, Vista  
 PACE Therapy-Western Care Center, Pomona  
 Pacific Care Insurance Company, Cypress  
 Pacific Coast Healthcare, Encino  
 Pacific Gardens, Fresno

- Pacific Health Education Center, Bakersfield  
 Pacific Physical Therapy, Monterey  
 Pacific Southwest Therapies, Inc., Las Vegas, NV  
 Pacific Therapies, Inc., Huntington Beach  
 Pain Management Clinic of Hawaii, Inc., Honolulu, HI  
 Palm Beach Medical Center, Palm Beach, FL  
 Palm Beach Medical Center, West Palm Beach, FL  
 Palm Springs Health Care, Palm Springs  
 Palm Springs Unified School District, Palm Springs  
 Palomar Pomerado Health System, San Diego  
 Paradise Valley Hospital SouthBay Rehab Center, National City  
 Park Manor Rehabilitation Center, Walla Walla, WA  
 Parkridge Centre, Saskatoon, Canada  
 Parkridge Hospital, Fletcher, NC  
 Parkview Community Hospital (Soderno Marriot), Riverside  
 Parkview Episcopal Medical Center, Pueblo, CO  
 Parkview Memorial Hospital, Brunswick, ME  
 Partners in Therapy, LLP, Ft. Worth, TX  
 Pasadena Department of Health WIC Program, Pasadena  
 Pasadena Rehabilitation Institute, Pasadena  
 Pass Physical Therapy, Beaumont  
 Paul Chang's Rehabilitation Services, Blue Springs, MO  
 Peace Arch Hospital, White Rock, British Columbia, Canada  
 PeaceHealth, Eugene, OR  
 Peachwood PT Sports and Spine Center, Glendora  
 Peak Performance, Chino  
 Pediatric Building Blocks, San Ramon  
 Pediatric Intervention Inc., San Jose  
 Pediatric Therapy Associates, Shrewsbury, MA  
 Pediatric Therapy Association, Plantation, FL  
 Performance Physical Therapy, Orem, UT  
 Performax PT, Littleton, CO  
 Perspective Therapy, Oceanside  
 Permian Regional Medical Center, Andrews, TX  
 Phoenix Memorial Hospital and NOVACARE, Phoenix, AZ  
 PhyCor, Inc., Honolulu, HI  
 Physical Rehabilitation Center of Orange, Westminster  
 Physical Therapy & Sports Rehabilitation Services, Sunnyside, WA  
 Physical Therapy Associates, Worcester, MA  
 Physical Therapy Center, Rialto  
 Physical Therapy Institute, Inc., Poway  
 Physical Therapy, Northwest, Salem, OR  
 Physical Therapy Services, Tyler, TX  
 Physical Therapy Specialists, Lovieville, KY  
 Physical Therapy Sports Institute, Hemet  
 Physiotherapy Associates, Madison, TN  
 Physiotherapy Associates, Glen Burnie, MD  
 Physiotherapy Associates, Holland, MI  
 Physiotherapy Associates, Madison, TN  
 Physiotherapy Associates—Corporate Office, Memphis, TN  
 Physiotherapy Associates—Northside, San Diego  
 Pinecrest Rehabilitation Hospital, (Tenet Health System), Delray Beach, FL  
 Pinnacle Rehabilitation, Nashville, TN  
 Pioneer Valley Hospital, West Valley City, UT  
 Pioneers Memorial Hospital, Brawley  
 Pisgah PT & Sports Rehabilitation, Hendersonville, NC  
 Pleasant Valley School District, Pleasant Valley  
 Point West Physical Therapy, Santa Rosa  
 Pollock Physical Therapy, Upland  
 Pomona Unified School District, Pomona  
 Pomona Valley Hospital, Pomona  
 Portals, Los AngelesPortercare Memorial Hospital, Denver, CO  
 Portland VA Medical Center, Portland, OR  
 PPTS of Blythe, Blythe  
 Premier Healthcare, Orange  
 Premier Healthcare, San Bernardino  
 Premier Healthcare, Victorville  
 Premier Healthcare, Whittier  
 Premier Healthcare, Inc., Orange  
 Presbyterian Intercommunity Hospital, Whittier  
 Priority Rehabilitation, San Bernardino  
 Pro Rehab, St. Louis, MO  
 ProCare Physical Therapy, Redlands  
 Professional Orthopedic & Sports Care, Fontana  
 Professional Physical Therapy Association, Whittier  
 Professional Physical Therapy Services, Anchorage, AK  
 Professional Therapy Associates, Inc., Strongsville, OH  
 Professional Therapy Systems, Chattanooga, TN  
 Progressive Rehabilitation Options, Minneapolis, MN  
 Progressive Therapy, Columbia, SC  
 Pro-Health Rehab and Sports Medicine, Lawndale  
 Providence Alaska Medical Center, Anchorage, AK  
 Providence Centralia Hospital, Centralia, WA  
 Providence Health Systems, Everett, WA  
 Providence Health Systems Southern California Burbank  
 Providence Health Systems, Los Angeles  
 Providence Health Systems Regional Rehabilitation, Portland, OR  
 Providence Hospital—Chehalis and Black Hills PT, Chehalis, WA  
 Providence Seattle Medical Center, Seattle, WA  
 Providence Speech & Hearing Center, Orange  
 Providence St. Peter Hospital, Olympia, WA  
 Provider Health Services & Good Samaritan, Addison, TX  
 Public Health Foundation WIC Program, Irwindale  
 QuadraMed, Seal Beach  
 Queen of Angels-Hollywood Presbyterian Medical Center, Los Angeles  
 Queen of the Valley Hospital-Napa, Napa  
 Queen's Medical Center, Honolulu, HI  
 R. J. Therapy, Long Beach  
 Radiation Therapy Medical Group, Riverside  
 Redlands Community Hospital, Redlands  
 Ralph K. Davies Medical Center, San Francisco  
 Ramona Physical Therapy, Ramona  
 Rancho Physical Therapy, Murrietta  
 Ranier Vista Care Center, Puyallup, WA  
 Rasco and Associates, Blue Jay  
 RCI Image Systems, El Segundo  
 Reading Rehabilitation Hospital, Reading, PA  
 Rebound Orthopedic & Sports Medicine, Portland, OR  
 Rebound Physical Therapy, Bend, OR  
 Reche Canyon Convalescent, Colton  
 Redding Medical Center, Inc., Redding  
 Redding Physical Therapy, Redding  
 Redhawk Physical Therapy, Redding  
 Redington Fairview General Hospital, Skowhegan, ME  
 Redlands Community Hospital, Redlands  
 Redlands Ortho & Sports Clinic, Redlands  
 Redlands Unified School District, Redlands  
 Redlands Yucaipa Guidance Clinic Association, RedlandsRegency Care Center, Spokane, WA  
 Regency Care Center at Walla Walla, Walla Walla, WA  
 Regional Medical Center of Orangeburg and Calhoun, Orangeburg, SC  
 Rehab Associates, LLC, Hermiston, OR  
 Rehab Hospital of the Pacific, Honolulu, HI

- Rehab Plus, Placentia  
 Rehab Specialists, Inc., Portland, OR  
 Rehab Visions, Omaha, NE  
 Rehabaccess, Decatur, AL  
 Rehabilitation and Sport Medicine Center, Bradentown, FL  
 Rehabilitation Dynamics, Inc., New Florence, MO  
 Rehabilitation Hospital of Nevada, Las Vegas, NV  
 Rehabilitation Hospital of Nevada, Reno, NV  
 Rehabilitation Hospital of the Pacific, Honolulu, HI  
 Rehabilitation Institute at Santa Barbara (The),  
   Santa Barbara  
 Rehabilitation Institute of Chicago, Chicago, IL  
 Rehabilitation Institute of Orange, Santa Ana  
 Rehabilitation Institute of Santa Barbara, Santa Barbara  
 Rehabilitation Network, Salem, OR  
 Rehabilitation Providers, Monterey  
 Rehabilitation Services of Columbus, Inc., Columbus, GA  
 Rehabilitation Technology Works, San Bernardino  
 Reability, Smyrna, TN  
 Reability Center, Harlingen, TX  
 Reability Corporation, Wharton, TX  
 Rehabnet, Inc., Tustin  
 Restorative Care Center, Seattle, WA  
 Results Rehabilitation, Inc., Coronado  
 Return to Work Center, North Quincy, MA  
 Reuben Carlos Castillo, MD, Perris  
 Reykjavik Hospital, Iceland  
 Rialto Unified School District, Rialto  
 Richards HealthCare, Inc., Houston, TX  
 Ridgecrest Community Hospital, Ridgecrest  
 Ridgecrest Physical Therapy, Ridgecrest  
 Riverside Community Hospital, Riverside  
 Riverside County Department of Public Health, Riverside  
 Riverside County Office on Aging, Riverside  
 Riverside County Regional Medical Center,  
   Moreno Valley  
 Riverside Physical Therapy Center, Riverside  
 Riverside Unified School District, Riverside  
 Robert F. Kennedy Medical Center, Hawthorne  
 Robert H. Ballard Rehabilitation Hospital,  
   San Bernardino  
 Robert J. Yahne Physical Therapy Corp., Hanford  
 Robert Packer Hospital, Sayre, PA  
 Robin Irwin Physical Therapy Services, Decatur, AL  
 Rockwood Ortho and Sports PT, Portland, OR  
 Rogue Valley Manor, Medford, OR  
 Rosemary Johnson and Associates, Monrovia  
 Rosenberry PT Center for Sports Medicine and Spine,  
   Solvang  
 Rusk Rehabilitation Center, Columbia, MO
- S.C.O.R.E., Tucson, Arizona  
 Saddleback Memorial Medical Center, Laguna Hills  
 Saddleback Unified School District, Moreno Valley  
 Salinas Valley Memorial Healthcare System, Salinas  
 Salt Lake City County Health Department, Salt Lake City,  
   UTSamaritan Health Services, Inc., Corvallis, OR  
 Samaritan Health System, Mesa, AZ  
 San Antonio Community Hospital, Upland  
 San Antonio Urology Medical Group, Inc., Upland  
 San Bernardino City Fire Department, San Bernardino  
 San Bernardino City Unified School District, San Bernardino  
 San Bernardino County Medical Center, San Bernardino  
 San Bernardino (County of) Mental Health Department, San  
   Bernardino  
 San Bernardino (County of) Office of Aging,  
   San Bernardino
- San Bernardino County Preschool Services Department, San  
   Bernardino  
 San Bernardino (County of) Public Health Department, San  
   Bernardino  
 San Bernardino (County of) Superintendent of Schools,  
   Colton  
 San Diego (County of) California Children's Services, San  
   Diego  
 San Diego Hospital Association, San Diego  
 San Gabriel Valley Medical Center, San Gabriel  
 San Geronio Memorial Hospital, Banning  
 San Joaquin Community Hospital (an Adventist Hospital),  
   Bakersfield  
 San Joaquin General Hospital, Stockton  
 San Joaquin Valley Rehabilitation Hospital, Fresno  
 San Jose Medical Center, San Jose  
 San Pedro Peninsula Hospital, San Pedro  
 Santa Ana Tustin Physical Therapy, Santa Ana  
 Santa Barbara County California Children's Center, Santa  
   Barbara  
 Santa Monica Orthopedic Sports Medical Group,  
   Santa Monica  
 Scottish Rite Children's Healthcare, Atlanta, GA  
 Scripps Clinic Wellness Program, La Jolla  
 Scripps Health Ornish Program, La Jolla  
 Scripps Memorial Hospital, Chula Vista  
 Scripps Memorial Hospital, Encinitas  
 Scripps Memorial Hospital, La Jolla  
 Scripps Memorial Hospital, San Diego  
 Scripps Mercy Hospital, San Diego  
 Seattle-King County Department of Public Health,  
   Seattle, WA  
 Seattle Medical and Rehabilitation Center, Seattle, WA  
 Seattle Physical Therapy, Seattle, WA  
 Select Therapy, Inc., & Corona Meadows, Irvine  
 Sentara Bayside Hospital, Virginia Beach, VA  
 Sequoia Regional Cancer Center, Visalia  
 Seton Medical Center, Daly City  
 Shady Grove Adventist Hospital, Rockville, MD  
 Shady Grove Center for Sports Medicine & Rehabilitation,  
   Rockville, MD  
 Shapewell, Inc., Palm Desert  
 Sharp Cabrillo Hospital, San Diego  
 Sharp Chula Vista Medical Center, San Diego  
 Sharp Coronado Hospital & Healthcare Center,  
   San Diego  
 Sharp Grossmont Hospital, San Diego  
 Sharp Healthcare, Hospital Association, San Diego  
 Sharp Home Care, San Diego  
 Shawnee Mission Medical Center, Shawnee Mission, KS  
 Shea Health Center, San Bernardino  
 Shelley Cooper Physical Therapy, Palm Desert  
 Shoroye, Adeyinka, MD, Pediatrics, Riverside  
 Shriners Hospital for Children, Los Angeles  
 Shriners Hospital for Crippled Children, Lexington, KY  
 Shriners Hospital for Crippled Children, Northern California,  
   Sacramento  
 Sierra Ortho & Athletic Rehabilitation,  
   Diamond Springs  
 Sierra Pediatric Clinic, Roseville  
 Silverlake Youth Services, Yucaipa  
 Simi Valley Adventist Hospital, Simi Valley  
 Simonean Pediatric Center for Child Development,  
   San Jose  
 Siskin Hospital for Physical Rehabilitation, Chattanooga, TN  
 Sisters of Providence in California, Burbank  
 Sisters of Providence in Washington, Olympia, WA

- Sisters of Saint Joseph of Orange Corp., Mission Viejo  
 Sky Life Ambulance, Fresno  
 SO CA Center for Sports Medicine, Long Beach  
 Sodexo Health Care Services at Desert Regional, Palm Springs  
 Sodexo Health Care Services at Good Samaritan, Los Angeles  
 Sonoma Valley Hospital, Sonoma  
 Sonora Community Hospital, Sonora  
 Sonora Physical Therapy Center, Sonora  
 South Bay Spine and Physical Therapy, Torrance  
 South Coast Medical Center, Laguna Beach  
 South County Orthopedic Specialists, Laguna Hills  
 South Haven Community Hospital, South Haven, MI  
 South Pacific Rehab Services, Encino  
 South Peninsula Hospital Homer, AK  
 South Umpqua Physical Therapy, Roseburg, OR  
 South Walton Physical Therapy & Rehabilitation, Santa Rosa Beach, FL  
 Southcentral Counseling Center Anchorage, AK  
 Southeast Rehabilitation Hospital, Dothan, AL  
 Southern Hills Medical Center, Nashville, TN  
 Southern Utah Physical Therapy, Cedar City, UT  
 Southhill Physical Therapy/Sports Rehabilitation, Spokane, WA  
 Southside Regional Medical Center, Petersburg, VA  
 Southside Rehab Services, Colonial Heights, VA  
 Southwest Palm Control & Sports Therapy, Palm Desert  
 Southwest Physical Therapy, Littleton, CO  
 Southwest Texas Methodist Hospital, San Antonio, TX  
 Speech and Language Development Center, La Mirada  
 Special Kids, Murfreesboro, TN  
 Specialized PT Center, Orange City, FL  
 Specialty Hospital of Southern California, La Mirada  
 Spectrum Health East Campus, Grand Rapids, MI  
 Spectrum MRI Imaging Center, Chino  
 Speech and Language Development Center, Buena Park  
 Spine & Sports Medicine Institute, Concord  
 Spooner Physical Therapy, Scottsdale, AZ  
 Sport and Spine Physical Therapy, San Bernardino  
 Sports & Orthopedic Physical Therapy, Inc., Minneapolis, MN  
 Sports & Orthopedic Therapy Services, Silver Spring, MD  
 Sports Care of San Francisco Physical Therapy, San Francisco  
 Sports Fit P.T., San Ramon  
 Sports Medicine and Ortho Rehab Center, Vienna, VA  
 Sports Medicine Giant, Columbus, OH  
 Sports Medicine Hawaii Ltd., Honolulu, HI  
 Sports Medicine Institute, Orange  
 Sports Medicine Institute of Sinai Samaritan Medical Center, Mequon, WI  
 Sports Orthopedics and Rehabilitation, Tamuning, Guam  
 Sports Performance, Pleasant  
 Springdale Village, Mesa, AZ  
 Square One Rehabilitation, Kansas City, KS  
 SSM Health Care of Oklahoma, OK  
 St. Agnes Cancer Center, Fresno  
 St. Alexis Hospital and Medical Center, Cleveland, OH  
 St. Alphonsus Regional Medical Center, Boise, ID  
 St. Anthony Hospital, Oklahoma City, OK  
 St. Bernardine Medical Center/Community Hospital, San Bernardino  
 St. Charles Hospital, Port Jefferson, NY  
 St. Charles Medical Center, Bend, OR  
 St. Elizabeth Community Health Center, Lincoln, NE  
 St. Francis Healthcare Network, Honolulu, HI  
 St. Francis Medical Center, Lynwood  
 St. Francis Medical Center—West, Ewa Beach, HI  
 St. George Care & Rehab Center, St. George, UT  
 St. George Physical Therapy, Charlotte, NC  
 St. Helena Hospital and Health Center—an Adventist Hospital, Deer Park  
 St. John's Health System, Lebanon, MO  
 St. John's Hospital & Health Center, Santa Monica  
 St. John's Medical Center, Tulsa, OK  
 St. John's Mercy Hospital, Washington, MO  
 St. John's Regional Medical Center, Oxnard  
 St. Joseph Health System, Eureka  
 St. Joseph Health Systems, Santa Rosa  
 St. Joseph Hospital, Lexington, KY  
 St. Joseph Hospital of Orange, Orange  
 St. Joseph Medical Center, Burbank  
 St. Joseph Regional Medical Center, Lewiston, ID  
 St. Joseph's Hospital of Atlanta, Atlanta, GA  
 St. Joseph's Medical Center of Stockton, Stockton  
 St. Jude Medical Center, Fullerton  
 St. Louis Health Care Network, St. Louis, MO  
 St. Luke's Hospital, Kansas City, MO  
 St. Luke's Hospital, Phoenix, AZ  
 St. Luke's Rehabilitation Institute, Spokane, WA  
 St. Mary Medical Center, Apple Valley  
 St. Mary Medical Center, Catholic Healthcare West, So Cal, Long Beach  
 St. Mary Medical Center and Turning Point Rehab, Walla Walla, WA  
 St. Mary Regional Medical Center, Apple Valley  
 St. Patrick Hospital, Missoula, MT  
 St. Rose Hospital, Hayward  
 St. Vincent Information Medical Center, Little Rock, AR  
 Salinas Valley Memorial Medical Center, Salinas  
 Sisters of Providence in California  
 Sisters of Providence in Washington  
 Stanford Hospitals & Clinics, Stanford  
 Star Rehabilitation, Corona  
 State of Alaska, Department of Health and Social Services, Division of Public Health, Anchorage, AK  
 Stein Education Center, San Diego  
 Stevens Memorial Hospital, Edmond, WA  
 Stewart Rehabilitation Center, McKay Dee Hospital, Ogden, UT  
 Storm Physical Therapy, Medford, OR  
 Strategic Health Services, Riverside  
 Straub Clinics Hospital, Lihue, HI  
 Summit Medical Center, Hermitage, TN  
 Summit Physical Therapy, Claremore, OK  
 Sun City Cancer Care Center, Sun City  
 Sun Health Corporation/Sundance, San Diego  
 Sun Healthcare Group, Fresno  
 Sunbelt East/Rehab Works, Orlando, FL  
 Sunbelt Therapy Management Services, Ocean Springs, MS  
 Sunbelt Therapy Management Services, Decatur, AL  
 Sundance Corp/Sun Health Care Group, Carlsbad  
 Sundance Rehab Corporation, Walla Walla, WA  
 Sundance Rehabilitation, Seattle, WA  
 SunDance Rehabilitation Corp., Concord  
 Sundance Rehabilitation Corporation, Houston, TX  
 Sunplus Home Health Services, Upland  
 Sunrise Hospital and Medical Center Therapy Management, Las Vegas, NV  
 Susan Jane Smyth, Eureka  
 Sutter Auburn Faith Community Hospital, Auburn  
 Sutter Davis Hospital, Davis  
 Sutter Health Central, Sacramento

- Sutter Merced Medical Center, Merced  
 Sutter Roseville Medical Center, Roseville  
 Swanson Sports Training & PT, Franklin, TN  
 Swedish Covenant Hospital, Chicago, IL  
 Symphony Rehab Services, Inc., & Christian Heritage, Upland  
 Symphony Rehabilitation Services–Willow Care Center, Hannibal, MO  
 Symphony Rehabilitation, Inc., & Center Health Care, Colton  
 Syncor International Corporation, Woodland Hills
- Tahlequah City Hospital, Tahlequah, OK  
 Tarzana Regional Medical Center, Tarzana  
 Team Physical Therapy, Alta Loma  
 Team Physical Therapy, Auburn  
 Telecare Corporation, Santa Maria  
 Tenet California Health System, Santa Ana  
 Tenet California HealthSystem, Whittier Hospital Medical Center, Whittier  
 Tenet Healthcare Corporation, Daniel Freeman Memorial Hospital, Inglewood  
 Tenet Healthcare Corporation, Garfield Medical Center, Monterey Park  
 Tenet HealthSystem, Alvarado HMC & San Diego, San Diego  
 Tenet HealthSystem, Brotman Medical Center, Culver City  
 Tenet HealthSystem, Coastal Communities Hospital, Santa Ana  
 Tenet HealthSystem Desert, Inc., Desert Regional Medical Center, Palm Springs  
 Tenet HealthSystem, Doctors Medical Center of Modesto, Modesto  
 Tenet HealthSystem, Elkins Park Hospital, Elkins Park  
 Tenet HealthSystem, J. F. Kennedy Memorial Hospital, Indio  
 Tenet HealthSystem, Pinecrest Rehabilitation Hospital, Delray Beach  
 Tenet HealthSystem Hospitals, Inc., Monterey Park Hospital, Monterey Park  
 Tenet HealthSystem Hospitals, Inc., USC University Hospital, Los Angeles  
 Tenet HealthSystems, AQ, Inc., Queen of Angels–Hollywood Presbyterian Hospital, Los Angeles  
 Tenet Western Division, Centinela Hospital Medical Center, Inglewood  
 Tennessee Christian Medical Center—an Adventist health-care facility, Madison, TN  
 Terrebonne General Hospital, Houma, LA  
 The Aspen Club Sports Medicine Institute, Aspen, CO  
 The Huntsville Hospital, Huntsville, AL  
 The Institute for Rehabilitation and Research, Houston, TX  
 The Jewish Hospital of St. Louis, St. Louis, MO  
 The Physical Therapy Clinic, Inc, Citrus Heights  
 The Therapy Source, P.A., Boise, ID  
 Thera TX & Lake Forest Nursing Home, Lake Forest  
 Therapy Center (The), Knoxville, TN  
 Therapy in Action, Tarzana  
 Therapy Source PA, Boise, ID  
 Therapy Specialists, San Diego  
 Therasport North West, Spokane, WA  
 Theratx, San Diego  
 Think Physical Therapy, Santa Ana  
 Thompson Physical Therapy Associates, Inc., Yuba City  
 Three Rivers Area Hospital, Three Rivers, MI  
 Tokos Medical Corporation, Santa Ana  
 Torrance Memorial Hospital Medical Center, Torrance  
 Totally Kids Specialty Healthcare, Loma Linda
- Total Fitness Physical Therapy, Honolulu, HI  
 Total Rehab Care, Fullerton  
 Total Rehabilitation and Conditioning, Anaheim  
 Totally Kids Specialty Healthcare, Loma Linda  
 Tri-Cities Physical Therapy, Kennewick, WA  
 Tri-City Medical Center, Oceanside  
 Tri-City Mental Health, Pomona  
 Tripler Army Medical Center, Honolulu, HI  
 Tuality Community Hospital, Hillsboro, OR  
 Tulare District Hospital, Tulare  
 Tuomey Regional Medical Center, Sumter, SC  
 Turner, Natalie, Fresno  
 Tustin Rehab Hospital, Tustin
- UCSF Stanford Health Services, Stanford  
 UMass Memorial Hospital, Leominster, MA  
 Unilab, Riverside  
 United Cerebral Palsy Association of Central Arizona, Phoenix, AZ  
 United Cerebral Palsy, Dallas, TX  
 United Therapy Network, Inc., Colton  
 Universal Health Systems, Murietta  
 Universal Health Systems, Rancho Springs  
 Universidad de Montemorelos, Nuevo Leon, Mexico  
 University Hospital, Denver, CO  
 University Medical Center, Fresno  
 University Medical Center of Southern Nevada, Las Vegas  
 University of California–Davis Medical Center, Davis  
 University of California–Irvine, Irvine  
 University of California–Los Angeles, Los Angeles  
 University of California Medical Center, Los Angeles  
 University of California, San Diego Medical Center, San Diego  
 University of California–Stanford Hospital, Stanford  
 University of Connecticut Health Center, Farmington, CT  
 University of Kentucky Metabolic Research Group, Lexington, KY  
 Upper Valley Medical Center, Troy, OH  
 US HealthWork Medical Group, Ontario  
 US Spine & Sport, San Diego  
 USC University Hospitals (Tenet Health System), Los Angeles  
 Utah Valley Regional Medical Center, Provo, UT
- Val Verde Unified School District, Perris  
 Valley Children’s Hospital, Fresno  
 Valley Health Systems, dba Hemet Valley Hospital, Hemet  
 Valley Medical Center, Renton, WA  
 Valley Physical Therapy, Alamosa, CO  
 Valley Physical Therapy and Rehabilitation, Yakima, WA  
 Valley PT, Walla Walla, WA  
 Valley View Sports Medicine & Rehabilitation, Cedar City, UT  
 Vancouver Children’s Therapy Center, Vancouver, WA  
 Vanderbilt Sports Medicine Center, Nashville, TN  
 Vanderbilt University, Nashville, TN  
 Vartabedian & Associates Designs for Wellness, Loma Linda  
 Vegetarian Institute of Nutrition & Culinary Art, Columbia, MD  
 Vencor–Hillhaven Corporation, Concord  
 Vencor, Inc., Puyallup, WA  
 Vencore Hospital–Ontario, Ontario  
 Ventura County Public Health, Ventura  
 Veranda Nursing & Rehab Center, Orlando, FL

Veritas Health Services, Inc., Chino  
 Veterans Administration Hospital—San Diego, San Diego  
 Veterans Administration Medical Center, Lexington, KY  
 Veterans Administration Medical Center—Long Beach, Long Beach  
 Veteran Administration Medical Center, Portland, OR  
 Veterans Administration Medical Center, Salt Lake City, UT  
 Veterans Administration Northern Indiana Health Care, Fort Wayne, IN  
 Veterans Affairs, Palo Alto Health Care System, Palo Alto  
 Veterans Affairs Medical Center, Fresno  
 Veterans Affairs Medical Center, Phoenix  
 Veterans Medical Center, Jerry L. Pettis Memorial, Loma Linda  
 Victor Valley Community Hospital, Victorville  
 Virginia Baptist Hospital, Lynchburg, VA  
 Virginia Mason Medical Center, Seattle, WA  
 Virginia Rehab, Staunton, VA  
 Vista Hospital Systems, Inc., Arroyo Grande  
 Vitas Healthcare Corp., San Bernardino  
 VNA-Ramona, Sun City  
 Volunteer Center, Santa Cruz

Wahiawa General Hospital, Honolulu, HI  
 Walker Physical Therapy, Sun City  
 Walters Physical Therapy, Claremont  
 Warburton Hospital, Warburton, Victoria, Australia  
 Washington Hospital Center, Washington, DC  
 Washington Physical Therapy, Pasco, WA  
 Waterman Physical Therapy Services, San Bernardino  
 Way Station, Inc., Frederick, MD  
 Wayne L. Shelton, PT, Spanish Fork, UT  
 Weed Army Community Hospital, Ft. Irwin  
 Well Tone Aquatics & Physical Therapy Centers, Riverside  
 Wellmont Health System, Bristol, TN  
 Wellton Health Systems, Bristol, TN  
 Wesley Woods Geriatric Hospital, Atlanta, GA  
 West Allis Memorial Hospital, Peak Performance Clinic, West Allis, WI  
 West Anaheim Extended Care, Anaheim  
 West Coast Spine Restoration Center, Riverside  
 West Covina PET Medical Center, West Covina  
 West Gate Convalescent Center, San Jose  
 West Tennessee Rehabilitation Center, Jackson, TN  
 Western Medical Center—Santa Ana, Santa Ana  
 Westlake Physical Therapy, Westlake Village  
 Westminster Therapeutic Residential, Westminster  
 Western Medical Center Hospital—Anaheim, Anaheim  
 Western Rehabilitation NOVA Care and Phoenix Baptist Hospital Medical Center, Phoenix, AZ  
 Westside Physical Therapy Clinic, Yakima, WA  
 West-Star Physical Therapy, City of Industry  
 White Memorial Medical Center—an Adventist health care facility, Los Angeles  
 Whittier Hospital Medical Center, Whittier  
 Wilcox Memorial Hospital, Lihue, HI  
 Wilcox Physical Therapy Center, Anaheim  
 William Beaumont Hospital, Troy, MI  
 Williamstown Physical Therapy, Williamstown, MA  
 Wimbledon Park Physical Therapy, Victorville  
 Winways-Interface Environment, Orange  
 Wood River Medical Center, Sun Valley, ID  
 Worthington Foods, Inc., WorthXtreme Physical Therapy, Downey  
 Yavapai Regional Medical Center, Prescott, AZ  
 Yonemoto PT Services, Alhambra

Yonkers General Hospital, Yonkers, NY  
 Yuma Rehabilitation, Yuma, AZ

Zelda Billingy, M.D., Montebello  
 Ziprick, Schlitz, Heinrich, & Cramer, Redlands

## SCHOOL OF DENTISTRY

### ADMINISTRATION—SD

CHARLES J. GOODACRE, D.D.S., M.S.D., Dean  
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 JAMES KETTERING, Ph.D., M.S., Associate Dean for Advanced Dental Education  
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 KATHLEEN MOORE, M.H.I.S., Assistant Dean for Educational Support Services  
 BARBARA BOSTWICK, B.S., Director of Development  
 MAYNARD LOWRY, Ph.D., Special Gifts and Planned Giving

### COMMITTEES—SD

#### ACADEMIC REVIEW

#### ADMINISTRATIVE COUNCIL

#### ADMISSIONS

#### AWARDS

#### CLINIC ACTIVITIES

##### SUBCOMMITTEES

Clinical Quality Assurance

Communicable Disease Control and Prevention

#### CURRICULUM

##### SUBCOMMITTEES

Basic Science Curriculum

Behavioral Science Curriculum

Clinical Science Curriculum

Dental Hygiene Curriculum

Group Practice/Patient Care

International Dentist Program Curriculum

DENTAL HYGIENE ADVISORY COMMITTEE  
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 FACULTY PROMOTIONS  
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 ADVISORY  
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 SAFETY  
 SERVICE LEARNING AND INTERNATIONAL  
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 MARVALEE J. HOFFMAN, Director of Records and  
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## SCHOOL OF MEDICINE

### ADMINISTRATION—SM

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 Medical Education  
 HENRY L. LAMBERTON, Psy.D., Associate Dean for  
 Student Affairs  
 STEPHEN A. NYIRADY, Ph. D., Associate Dean for  
 Admissions and Recruitment  
 RICARDO L. PEVERINI, M.D., Associate Dean for  
 Clinical Faculty  
 LEROY E. REESE, M.D., Associate Dean for Los  
 Angeles Programs

### COMMITTEES—SM

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 SPIRITUAL LIFE AND WHOLENESS  
 ACADEMIC REVIEW  
 GRADUATE MEDICAL EDUCATION  
 CONTINUING MEDICAL EDUCATION  
 FACULTY AFFAIRS  
     Basic Science Faculty Council  
     Clinical Science Faculty Council  
     Faculty Promotions

## SCHOOL OF NURSING

### ADMINISTRATION—SN

HELEN E. KING, Ph.D., RN, Dean  
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 Graduate Program  
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 Dean, Financial Affairs  
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 Recruitment, and Marketing  
 VANETA M. CONDON, Ph.D., Learning Resource  
 Laboratory  
 PATRICIA S. JONES, Ph.D., Director, Office of  
 International Nursing

### COUNCILS AND COMMITTEES—SN

#### INTERNATIONAL NURSING COUNCIL

PATRICIA S. JONES, Chair  
 SELECTED School of Nursing faculty and  
 Medical Center nursing administrators

#### SCHOOL OF NURSING COUNCILS

#### FACULTY COUNCIL

Dean, Chair  
 All full-time and part-time faculty  
 Invitees: GFT and voluntary faculty

#### GRADUATE FACULTY COUNCIL

Associate Dean, Chair  
 All full-time and part-time graduate faculty

#### UNDERGRADUATE FACULTY COUNCIL

Associate Dean, Chair  
 All full-time and part-time undergraduate faculty

#### STANDING FACULTY COMMITTEES

##### ADMISSIONS

##### CURRICULUM

##### DIVERSITY

##### FACULTY AFFAIRS

##### TEACHING/LEARNING RESOURCES

##### RANK AND TENURE

##### RESEARCH

##### SPIRITUAL LIFE AND WHOLENESS

##### TODAY'S NURSING TECHNOLOGY (TNT)

## CLINICAL FACILITIES—SN

### THE UNIVERSITY

LLU MEDICAL CENTER (MC) (est. 1905)  
 License for 789 beds includes MC, CH, and CMC  
 11234 Anderson Street  
 Loma Linda, CA 92350  
 909/824-0800  
 B. Lyn Behrens, president and CEO  
 Liz Dickinson, RN, CNOR, VP Patient Care Services  
 Helen Staples-Evans, Administrative Director, Staff  
 Development  
 LLU CHILDREN'S HOSPITAL (CH), 244-bed capacity  
 11234 Anderson Street  
 Loma Linda, CA 92354  
 558-8000  
 Norman McBride, vice president  
 Shirley Barnett, executive director of nursing  
 LLU COMMUNITY MEDICAL CENTER (CMC), 118-bed capacity  
 25333 Barton Road  
 Loma Linda, CA 92354  
 796-0167  
 Michael Jackson, senior vice president  
 Esther Valenzuela, clinical director of perioperative  
 services, nurse manager  
 LLU BEHAVIORAL MEDICINE CENTER, licensed for 89 beds  
 1710 Barton Road  
 Redlands, CA 92373  
 558-9221  
 Christina Bivona-Tellez, director of nursing services  
 LLU FAMILY MEDICAL GROUP (clinic)  
 25455 Barton Road, Suite 204B, Professional Plaza  
 Loma Linda, CA 92354  
 909/558-6600  
 John Testerman, president, LLUFMG; chair,  
 Department of Family Medicine, School of Medicine  
 Julie Tudor, administrator, Department of Family  
 Medicine, Professional Plaza, Room 207B  
 LLU HOME CARE SERVICES  
 11265 Mountain View Avenue  
 Loma Linda, CA 92354  
 Mattie Wren, administrative director, Suite 11  
 909/558-3096—Jan Huckins, director, hospice and home  
 health  
 Nora Kalbermatter, director  
 LLUHC PEDIATRIC DEPARTMENT  
 11370 Anderson Street, Suite B 100  
 Loma Linda, CA 92354  
 909/796-4848  
 LLU SCHOOL OF PUBLIC HEALTH  
 SOCIAL ACTION COMMUNITY (SAC) HEALTH SYSTEM  
 Norton Clinic  
 1455 East 3rd Street  
 San Bernardino, CA 92408  
 Mail: 1454 East 2nd Street  
 San Bernardino, CA 92408  
 909/382-7100  
 Kenneth Hart, medical director  
 Valerie Ojeil, clinic nurse manager

**AFFILIATED FACILITIES****ADVENTIST COMMUNITY TEAM SERVICES (ACTS)**

P.O. Box 477  
Loma Linda, CA 92354  
909/796-8357

**AMERICAN LUNG ASSOCIATION OF ORANGE COUNTY**

1570 E. 17th Street  
Santa Ana, CA 92705  
714/835-0169

**ARROWHEAD REGIONAL MEDICAL CENTER**

400 North Pepper Avenue  
Colton, CA 92324  
909/580-1000

**BEAVER MEDICAL GROUP**

2 West Fern  
Redlands, CA 92373  
909/793-3311

**CALIFORNIA STATE UNIVERSITY, SAN BERNARDINO**

5500 University Parkway  
San Bernardino, CA 92407  
909/880-5241

**CATHOLIC HEALTH CARE, see:****COMMUNITY HOSPITAL OF SAN BERNARDINO****CHILDREN'S HOSPITAL OF LOS ANGELES**

4650 Sunset Boulevard  
Los Angeles, CA 90027  
323/660-2450

**CHILDREN'S HOSPITAL OF ORANGE**

455 South Main Street  
Orange, CA 92868  
714/997-3000

**CHILDREN'S HOSPITAL OF SAN DIEGO**

3026 Children's Way  
San Diego, CA 92123-4282  
858/576-1700

**CITRUS VALLEY MEDICAL CENTER, QUEEN OF THE VALLEY INTERCOMMUNITY CAMPUSES**

210 W. San Bernardino Avenue  
Covina, CA 91723-1549  
626/962-4011

**COLTON JOINT UNIFIED SCHOOL DISTRICT OFFICE**

1212 Valencia Avenue  
Colton, CA 92324  
909/876-4216

**COMMUNITY ADULT DAY CARE**

3102 E. Highland Avenue  
P.O. Box 387  
Patton, CA 92369  
909/944-4865

**COMMUNITY HOSPITAL OF SAN BERNARDINO**

1805 Medical Center Drive  
San Bernardino, CA 92411  
909/887-6333, ext. 1190

**COUNTY OF RIVERSIDE COMMUNITY HEALTH AGENCY****DEPARTMENT OF PUBLIC HEALTH  
PUBLIC HEALTH NURSING**

4065 County Circle Drive  
Riverside, CA 92503  
P.O. Box 7600  
Riverside, CA 92513-7600  
909/358-5516

**COUNTY OF RIVERSIDE DEPARTMENT OF PUBLIC SOCIAL SERVICES**

4060 County Circle Drive  
Riverside, CA 92503  
909/358-3000

**COUNTY OF RIVERSIDE HEALTH SERVICE AGENCY  
RIVERSIDE COUNTY REGIONAL MEDICAL CENTER,  
see: RIVERSIDE COUNTY REGIONAL MEDICAL CENTER****COUNTY OF RIVERSIDE MENTAL HEALTH SERVICES,  
see: RIVERSIDE COUNTY REGIONAL MEDICAL CENTER  
INPATIENT TREATMENT FACILITY; or  
CONTINUING COMMUNITY CARE/CENTRAL****D.A.S.H., INC.—THE OTHER PLACE (day care: clinical)**

P.O. Box 8370  
Redlands, CA 92374-1570  
909/798-1667

**DESERT VALLEY MEDICAL CENTER**

16850 Bear Valley Road  
Victorville, CA 92392  
760/241-8000, ext. 8373

**EDGAR ARDILA PULMONARY &  
CRITICAL CARE MEDICINE**

28030 Blackberry Way  
Yorba Linda, CA 92887  
714/692-2594

**EISENHOWER MEDICAL CENTER**

39000 Bob Hope Drive  
Rancho Mirage, CA 92270-3221  
760/773-1288

**FONTANA UNIFIED SCHOOL DISTRICT**

9680 Citrus Avenue  
Fontana, CA 92335  
909/357-5000, ext. 7091

**GLENDALE ADVENTIST MEDICAL CENTER**

1509 Wilson Terrace  
Glendale, CA 91206  
818/409-8000

**HEADSTART / STATE PRESCHOOL DEPARTMENT**

250 South Lena Road  
San Bernardino, CA 92415-0630  
909/387-2355

**HEARTLAND HOME HEALTH CARE & HOSPICE**

1700 Iowa Avenue #230  
Riverside, CA 92507

**HEMET UNIFIED SCHOOL DISTRICT**

2350 West Latham Avenue  
Hemet, CA 92545  
909/765-5100

**HERITAGE GARDENS HEALTH CARE CENTER**

25271 Barton Road  
Loma Linda, CA 92354  
909/796-0216

**HOAG MEMORIAL HOSPITAL**

One Hoag Drive  
Newport Beach, CA 92663  
Mail: P.O. Box 6100  
Newport Beach, CA 92658-6100  
949/645-8600

**INDIAN HEALTH, INC., see:**

RIVERSIDE-SAN BERNARDINO COUNTY INDIAN HEALTH,  
INC.

## INDIO EMERGENCY MEDICAL GROUP

81893 Dr. Carreon Drive, Suite 4  
Indio, CA 92201

## INLAND REGIONAL CENTER

(Formerly Inland County Developmental Disability Services)  
674 Brier Drive  
San Bernardino, CA 92408  
909/890-3000

## INLAND TEMPORARY HOMES

26300 Mission Road, (PO Box 239)  
Loma Linda, CA 92350

## INLAND VALLEY REGIONAL MEDICAL CENTER

36485 Inland Valley Drive  
Wildomar, CA 92595  
677-1111

## JFK URGENT CARE

81863 Dr. Carreon Drive, Suite 3  
Indio, CA 92201

## JURUPA UNIFIED SCHOOL DISTRICT

4850 Pedley Road  
Riverside, CA 92509  
951/222-7718

## KAISER PERMANENTE FONTANA MEDICAL CENTER

9961 Sierra Avenue  
Fontana, CA 92335  
909/427-5000

## KAISER PERMANENTE PASADENA MEDICAL CENTER

626/440-0036  
450 N. Lake Avenue  
Pasadena, CA 91101

## KAISER PERMANENTE RIVERSIDE MEDICAL CENTER

10800 Magnolia Avenue  
Riverside, CA 92505  
951/353-2000

## KINDRED HOSPITAL (formerly Vencor Hospital)

550 North Monterey Avenue  
Ontario, CA 91764  
391-0333

## KNOLLWOOD PSYCHIATRIC &amp; CHEMICAL DEPENDENCY CENTER

5900 Brockton Avenue  
Riverside, CA 92506  
951/275-8400

## LINDA VALLEY CARE CENTER

25383 Cole Street  
Loma Linda, CA 92354  
909/796-0235

## LINDA VALLEY VILLA

11075 Benton Street  
Loma Linda, CA 92354  
909/796-7501

## LOMA LINDA ACADEMY

10656 Anderson Street  
Loma Linda, CA 92354  
909/796-0161

## LOMA LINDA CHILD &amp; ADOLESCENT CLINIC

25051 Redlands Boulevard  
Loma Linda, CA 92354  
478-7776

## LONG BEACH MEMORIAL MEDICAL CENTER

2801 Atlantic Avenue  
P.O. Box 1428  
Long Beach, CA 90801-1428  
562/933-0641

## MARY'S MERCY CENTER/VERONICA'S HOME OF MERCY

64 Robert Avenue  
San Bernardino, CA 92411  
785-1283

## NAVAL HOSPITAL

Box 788250  
Twentynine Palms, CA 92278-8250

## NAVAL HOSPITAL, CAMP PENDLETON

Box 55519  
Camp Pendleton, CA 92055-5191

## NAVAL MEDICAL EDUCATION &amp; TRAINING COMMAND

Code OGD  
8901 Wisconsin Avenue  
Bethesda, MD 20889-5611

## OLUSOLA OYEMADE, M.D., INC.

777 East Milliken Avenue, Suite 360  
Rancho Cucamonga, CA 91730  
909/944-7099

## PARADISE VALLEY HOSPITAL

2400 East 4th Street  
National City, CA 92150  
619/470-4321

## PARENT CARE MANAGEMENT SERVICE

27292 Messina Street, Suite C  
Highland, CA 92346  
909/864-2085

## PARKVIEW ADVENTIST MEDICAL CENTER

329 Maine Street  
Brunswick, ME 04011

## PARKVIEW COMMUNITY HOSPITAL MEDICAL CENTER

3865 Jackson Street  
Riverside, CA 92503  
951/688-2211

## POMONA UNIFIED SCHOOL DISTRICT

HEALTH SERVICES  
800 South Garey Avenue  
Pomona, CA 91766  
397-4700

## RAMONA VNA AND HOSPICE

890 W. Stetson Avenue, Suite A  
Hemet, CA 92543  
658-9288

## RECHE CANYON REHABILITATION AND HEALTH CARE CENTER, INC.

1350 Reche Canyon Road  
Colton, CA 92324-9744  
909/370-4411

## REDLANDS COMMUNITY HOSPITAL

350 Terracina Boulevard  
Redlands, CA 92373-0742  
909/335-5500

## REDLANDS UNIFIED SCHOOL DISTRICT

10 West Lugonia Avenue  
Redlands, CA 92373  
909/307-5300

## RIALTO UNIFIED SCHOOL DISTRICT

182 East Walnut Avenue  
Rialto, CA 92376-3598  
909/820-7700

## RIVERSIDE COMMUNITY HOSPITAL

4445 Magnolia Avenue  
Riverside, CA 92501  
951/788-3000

## RIVERSIDE COUNTY MENTAL HEALTH, see:

RIVERSIDE COUNTY REGIONAL MEDICAL CENTER  
INPATIENT TREATMENT FACILITY; or  
CONTINUING COMMUNITY CARE /CENTRAL

## RIVERSIDE COUNTY REGIONAL MEDICAL CENTER

26520 Cactus Avenue  
Moreno Valley, CA 92555  
951/486-4000

RIVERSIDE COUNTY REGIONAL MEDICAL CENTER  
(PSYCHIATRIC) INPATIENT TREATMENT FACILITY

9990 County Farm Road, Suite 2  
Riverside, CA 92503  
951/358-4700

RIVERSIDE COUNTY REGIONAL MEDICAL CENTER  
CONTINUING COMMUNITY CARE/CENTRAL

1695 Spruce Street  
Riverside, CA 92507  
Mail: P.O. Box 52567  
Riverside, CA 92517  
951/358-4801

RIVERSIDE /SAN BERNARDINO COUNTIES INDIAN HEALTH,  
INC.

11555 1/2 Potrero Road  
Banning, CA 92220  
849-4761

## SAN ANTONIO COMMUNITY HOSPITAL

999 San Bernardino Road  
Upland, CA 91786  
909/985-2811

## SAN BERNARDINO UNIFIED SCHOOL DISTRICT

1535 W. Highland Avenue  
San Bernardino, CA 92411

SAN BERNARDINO CITY UNIFIED SCHOOL DISTRICT  
HEALTH SERVICES

1535 West Highland Avenue  
San Bernardino, CA 92411  
909/880-6839

## SAN BERNARDINO COUNTY MEDICAL CENTER

See: ARROWHEAD REGIONAL MEDICAL CENTER

## SAN BERNARDINO COUNTY PROBATION DEPARTMENT

## Administrative offices:

Civic Center Building  
175 West 5th Street, 4th floor  
San Bernardino, CA 92415

## Affiliation site:

Juvenile Hall  
900 East Gilbert Street  
San Bernardino, CA 92415  
909/387-766

SAN BERNARDINO COUNTY DEPARTMENT OF PUBLIC  
HEALTH

351 North Mountain View Avenue  
San Bernardino, CA 92415-0010  
909/387-6224

## SAN BERNARDINO CITY UNIFIED SCHOOL DISTRICT

1535 W. Highland Avenue  
San Bernardino, CA 92411

## SAN JOAQUIN COMMUNITY HOSPITAL

2615 Eye Street  
Bakersfield, CA 93303  
661/395-3000

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3160 Geneva Street  
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Palm Springs, CA 92262  
Mail: P.O. Box 2739  
Palm Springs, CA 92263  
760/323-6760

## TOTALLY KIDS

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Loma Linda, CA 92354  
909/796-6915

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909/825-7084

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Riverside, CA 92507  
951/413-1200

VISITING NURSE ASSOCIATION OF SOUTHERN CALIFORNIA  
150 West 1st, Suite 270  
Claremont, CA 91711

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 909/558-4594

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 California  
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 Program and Center for Health Promotion,  
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 Department, San Bernardino, California  
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 Castle Memorial Hospital, Kailua, Hawaii  
 Centinela National Athletic Health Institute, Los  
 Angeles, California  
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Paradise Valley Hospital, National City, California

Patton State Hospital, Patton, California

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Taiwan Adventist Hospital, Taipei, Taiwan

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Youngberg Adventist Hospital, Singapore

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 Medical College

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 Assessment and Treatment Services Center  
 Bilingual Family Counseling, Ontario, California  
 Boys and Girls Club, Redlands, California

Canyon Ridge Hospital, Chino, California  
 Casa Pacifica Clinical Services  
 Catholic Charities Psychological Services  
 Chaffey College, Rancho Cucamonga, California  
 Cherokee Health System  
 Child and Family Guidance Center, Northridge, California  
 Child Welfare Training, Riverside, California  
 Children's Hospital, Los Angeles, California  
 Children's Hospital of Orange County  
 Community Hospice of Victor Valley, Apple Valley,  
 California  
 Doctors Hospital of West Covina, California

East Valley Selpa

Family Services Association, Riverside, California  
 Family Solutions Collaborative, Ontario, California  
 Forest Institute of Professional Psychology  
 Foster Family Network, San Bernardino, California

Growing Fit

Harbor-UCLA Medical Center  
 Health and Human Services Department of Aging, San  
 Bernardino County, California  
 Hesperia Unified School District, Hesperia, California  
 Highlander Children's Services, Riverside, California  
 Huntington Memorial Hospital, Pasadena, California

Illinois School of Professional Psychology  
 Inland Regional Center, Colton, California  
 Inland Temporary Homes, Loma Linda, California

Jerry L. Pettis Memorial VA Medical Center  
 JFK Memorial Hospital, Indio, California  
 Jurupa Unified School District, Riverside, California

Kaiser Permanente Hospital, Riverside, California  
 Kaiser Permanente Medical Care Program, Psychiatry  
 Department

Lackland Air Force Base, San Antonio, Texas  
 Loma Linda University Adult Day Services  
 Loma Linda University Marriage and Family Therapy Clinic  
 Loma Linda University Medical Chaplain's Office  
 Loma Linda University Neuropsychology Department  
 Loma Linda University Psychiatric Medical Group  
 Los Angeles city Department of Child Assessment Center  
 Los Angeles County Child Services  
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 Lutheran Social Services, Apple Valley, California  
 Moreno Valley Community Hospital, Moreno Valley,  
 California  
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Riverside County Department of Mental Health, Riverside,  
California  
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California

SACH-Norton Mental Health Clinic  
San Bernardino City Unified School District  
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Santa Ana College Health and Wellness Center Psychology  
Services  
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University of Riverside  
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Wilford Hall Medical Center, Lackland Air Force Base

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School of Dentistry

School of Medicine

School of Nursing

School of Pharmacy

School of Public Health

School of Science and Technology

Faculty of Graduate Studies

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Representative from the clinical area of medicine in a LLUAHSC health care entity

Representative from the clinical area of nursing in a LLUAHSC health care entity

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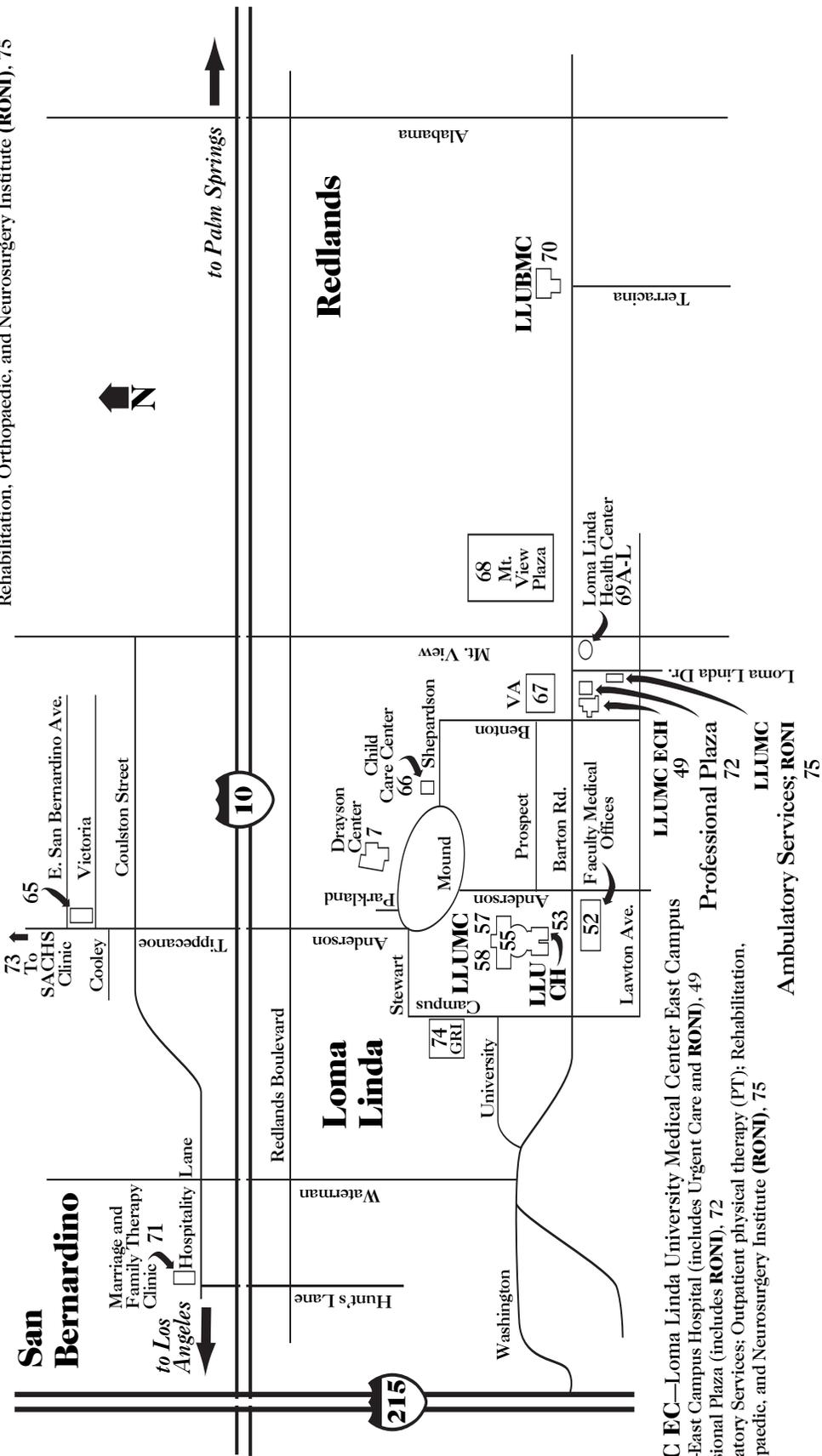
Anthony Zuccarelli



**Area Map  
and numerical legend**

- 1-64 (see Campus Map)
- 65 – Material Supply and Distribution Support Services Center
- 66 – Loma Linda Children’s Center Medical Center (VA Hospital)
- 67 – Jerry L. Pettis Memorial Veterans Medical Center (VA Hospital)

- 68 – Mountain View Plaza
- 69 – Loma Linda Health Center
- 70 – LLU Behavioral Medicine Center (BMC)
- 71 – Marriage and Family Therapy Clinic
- 72 – Professional Plaza
- 73 – SACHS Norton Clinic
- 74 – Geoscience Research Institute
- 75 – LLUMC East Campus—Ambulatory Services; Outpatient Rehabilitation; Rehabilitation, Orthopaedic, and Neurosurgery Institute (RONI), 75



- #LLUMC EC—Loma Linda University Medical Center East Campus
- ECH—East Campus Hospital (includes Urgent Care and RONI), 49
- Professional Plaza (includes RONI), 72
- Ambulatory Services; Outpatient physical therapy (PT); Rehabilitation, Orthopaedic, and Neurosurgery Institute (RONI), 75

**Key to abbreviations and symbols**  
(See also key to Schools, on Campus Map)

- X = Nearest cross street
- > = See Area Map
- LLU/AHSC = Loma Linda University  
Adventist Health Sciences Center
- LLU = Loma Linda University
- LLUBMC = Behavioral Medicine Center
- LLUCH = Children's Hospital
- LLUMC = Medical Center
- LLUMC EC = East Campus (see Area Map<sup>#</sup>)

Campus Map (numerical)

1. Gentry Gymnasium
2. Educational Support Services (University, MC)
3. Housekeeping (University); Radiation/Hazardous Materials Safety
4. Campus Engineering (maintenance shops); Lock and Key; Campus Receiving (University)
5. Purchasing (University); Campus Engineering
6. University Printing Services and Design Department; Construction; Architectural Services
7. Drayson Center: volleyball/basketball gym, intramurals, tennis, badminton, racquetball, cardio and weight rooms, aerobics studios, tracks, pools, arts and crafts; chaplain's office; Superfield; Student Union; Student Association
8. Speech and Hearing Clinic (AH)
9. Nichol Hall; School of Public Health (PH); School of Allied Health Professions (AH)
  - 9A = Annex—AH and PH; Nutrition and Dietetics
  - 9C = Cottages; #60 ("Blue")—Marketing and Retention (AH)
  - #70 ("Brown")—OT field work office (AH)
  - #80 ("Green")—SIMS (PH)
10. Daniels Residence (men; graduate women)
11. Lindsay Hall (women's residence)
12. Campus Hill SDA Church
13. Linda Hall (Campus Hill SDA Church)
14. Evans Hall—Upper level: Adventist Health Studies (AHS); Center for Health Research (CHR); Lower: Cutler Amphitheater (CA); Student Health Service (SHS); Center for Health Promotion (CHP)
15. Shroyok Hall: Anatomy; Embryology Museum
16. Alumni Hall for Basic Sciences; Microbiology; Pathology; Courville Museum (pathology)
17. Risley Hall; Physiology; Pharmacology; Kellogg Amphitheater
18. Burden Hall; Academic Publications, room B14; University Relations; Physical therapy lab (AH)
19. Research: orthopaedic, bioengineering, natural sciences
20. Randall Visitors Center: Amphitheater

51. University Kidney Center (dialysis)
52. Faculty Medical Offices (FMO\* and SM)
53. LLU CHILDREN'S HOSPITAL: Helpport, H South; Cafeteria
54. Proton Treatment Center
55. LLU MEDICAL CENTER: School of Medicine; Helpport, H North; Lost and Found, B404; Cafeteria; Amphitheater; Lobby-1506, A512; Transplantation Institute; Employee health and immunizations, A800A
56. Schuman Pavilion: International Heart Institute
57. Chan Shun Pavilion: Cancer Research Institute; LLUAHSC
58. Coleman Pavilion: School of Medicine; Center for Christian Bioethics; Center for Spiritual Life and Wholeness; Vice-chancellor—spiritual life and wholeness
59. Wong Kerlee International Conference Center
- 60-61. Emergency Department, LLUMC
62. Mail Service (University, MC)
63. Nelson House: School of Science and Technology; Faculty of Graduate Studies
64. West Hall: Schools of Nursing and Pharmacy

Area Map (numerical)

65. Material Supply and Distribution Support Services Center (Receiving, Mercantile, etc.) (MC), 1269 E. San Bernardino Ave., SB (X Tippecanoe)
66. Loma Linda Children's Center, 25228 Sheppardson Dr. (VA Hospital), Benton St. (X Barton Rd.)
67. Veterans Medical Center, Jerry L. Pettis Memorial (VA Hospital), Benton St. (X Barton Rd.)
68. Mountain View Plaza (X Barton Rd.): Diabetes Treatment Center (MC); Osteoporosis Research Center; Hospice (MC); LL Medical Supply (MC); Home Care Services (respiratory, family) (MC); Judkins Library (MC)
69. Loma Linda Health Center ("Cape Cod" buildings), Mountain View Ave. (X Barton Rd.); A-11306 Providence: LL Community Medical\* B-11314 Cambridge: LLU medical staff administration (BMC, CH, CMC, MC); Compliance Department
- C-11320 Gloucester: Women's Fitness Center
- D-11326 Worcester: Special Projects (MC); Physician Referral and Circle of Care
- E-11332 Weststerly: Medical\*
- F-11354 Walden: Medical\*
- G-11360 Hartford: LLU Cancer Institute; Cancer Data Center; Administration; Research
- H-11346 Concord: Marketing (MC); Medical\*
- I-11368 Springfield: LLU Cancer Institute; Region 5 Cancer Surveillance Program
- J-11374 Dover: Psychiatry/Behavioral Medicine (SM)

- K-11382 Danbury: Loma Linda Health Pharmacy; Dental\*
- L-11340 Bridgeport: LLU Cancer Institute; Cancer information

- 32, 69-72: Counseling and chemical dependency treatment centers (students, employees);
32. Counseling services
69. G-11360 Hartford, Suite A: Employee Assistance Program
- J-11374 Dover: Student psychological counseling services (MC); Medical faculty\*
70. LLU BEHAVIORAL MEDICINE CENTER, 1710 Barton Road (X Terracina Blvd.); Partial hospitalization (days only); Inpatient
71. Marriage and Family Therapy Clinic, 164 W. Hospitality Lane., Suite 15, (X Hunt's Lane SB) Professional Plaza, 25455 Barton Frontage Rd. (X Loma Linda Drive; X Benton St.); Neurosurgery Clinic (MC), Suite 108A; Loma Linda Pharmacy; MC / SM teaching, administrative; LLU/LLUMC occupational health: work-related health/injury—suite 106A; dental\*/medical\*
73. SACHS Norton clinic (E. 3rd St. X Tippecanoe)
74. Geoscience Research Institute [of SDA General Conference] (Ortner Building)
75. LLUMC East Campus Ambulatory Services: Out-patient physical therapy; Rehabilitation, Orthopaedic and Neurosurgery Institute—RONI; Orthopaedic Research Center/Tribology laboratory

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**To update information on maps or legends, please contact Academic Publications, ext. 4-4525.**

# Alumni Associations

## SCHOOL OF DENTISTRY

Graduates of the School of Dentistry organized the Alumni Association in 1957. Membership is extended to those who have earned degrees at this School. Student membership is extended to students of the School.

The primary purposes of the association are to promote the interests of the School, to secure unity among alumni, to foster an attachment to its alma mater, to enlist members as continuing participants in the association and as active participants in Christian activities and interests, to aid members in attaining to the highest ethical and scientific standards in the practice of their profession, and to aid in general charitable and educational purposes. Major interests of the association include:

1. Conducting the Alumni-Student Convention. Included in the activities of this annual spring session are lectures, refresher courses, and religious and social programs.
2. Advancing the Century Club. Members include alumni and others of the dental profession who contribute a qualifying amount annually to promote and support interests of the alumni and the School.
3. Preparing and distributing alumni news pertaining to members and faculty, and School activities.

The School of Dentistry Alumni Association, through its Century Club Annual Fund, has made an ongoing commitment to students in the predoctoral program by supporting a student loan fund, which is administered by the University.

## SCHOOL OF MEDICINE

Graduates of the School of Medicine organized their Alumni Association in 1915 when only two classes totaling eighteen members had been graduated, and the organization has functioned continuously since that time. Membership is extended to alumni who have graduated with the Doctor of Medicine degree from this University and to graduates of the American Medical Missionary College, operated by Seventh-day Adventists in Battle Creek, Michigan, from 1895 to 1910. Associate membership is extended to students of the School of Medicine, and affiliate membership is extended to faculty who have earned degrees from other institutions. During the 1986-87 school year, membership was extended to the basic science faculty.

### Statement of mission and purpose

The Alumni Association of the School of Medicine of Loma Linda University is a nonprofit organization composed both of alumni and affiliate members. The association is organized to support the School, to promote excellence in worldwide health care, and to serve its members in the following ways:

1. EDUCATION—To encourage continuing education among its members by organizing and offering graduate education and related programs at the Annual Postgraduate Convention and at other health care seminars.

2. COMMUNICATION—To publish newsworthy, factual information about alumni and developments at the School of Medicine in the alumni journal, in the annual directory, and in journals of organizations under the umbrella of the association.

3. HEALTH CARE—To foster improved health care and preventive medicine throughout the world by conducting postgraduate seminars; demonstrations; and people-to-people, health care interactions with Christian concern and compassion.

4. PHILANTHROPY—To encourage the contribution of funds for the support of undergraduate and graduate education at the School, including funds for student loans, research, and professorial chair endowments; and funds to provide for improvement in the School's physical plant. To encourage donations of money, equipment, and supplies for educational centers and health care facilities in areas of need worldwide.

5. MEDICAL RESEARCH—To support medical research among the faculty and students of the School, thereby enhancing the association's ability to respond to the needs of its alumni and to advance medical knowledge.

6. FRATERNITY—To promote and provide gatherings, in an atmosphere of Christian and professional friendship, which foster unity and advance the foregoing objectives.

## SCHOOL OF NURSING

The Loma Linda University School of Nursing Alumni Association (LLUSNAA) has an office in West Hall. A board of officers and directors carries out the goals and ongoing activities of the association. At the time of graduation, new graduates are welcomed into the association. Associate membership may be extended to graduates of other accredited schools who are members of the profession in good standing and who share the interests, ideals, and purposes of the alumni association.

### Purpose

The purpose of the LLUSNAA is to foster alumni unity, mobilize their support, and assist in an organized fashion to encourage continued interest in and commitment to the programs of the School of Nursing. The association promotes the missions of the Seventh-day Adventist church, the School of Nursing, and the University. The goals of the association are to:

1. Promote communication among alumni of the School of Nursing and Graduate School nursing majors.
2. Foster the advancement of education and science within the programs of the School of Nursing.
3. Support alumni nurses in mission programs at home and abroad.

4. Recognize excellence in students and alumni through awards.
5. Provide financial aid to students in School of Nursing programs.
6. Encourage professional growth by providing a quality, annual continuing education program.
7. Operate the HOUSE OF THRIFT, 24871 Redlands Boulevard, Loma Linda, to relieve poverty within the community and to provide a source of funds to finance the above objectives.

**Activities**

Alumni have a long and distinguished record of professional service, both in the United States and in many foreign countries. Included among the positions and activities of graduates are the following.

- Administration and supervision of nursing services.
- Deans and faculties of schools of nursing.
- Staff nursing in hospitals and community health agencies.
- Primary care services.
- Office nursing.
- Health services in colleges, secondary schools, and primary schools.
- United States military service.
- International health services.
- Church-sponsored and voluntary community-health activities.



# Accreditation Status

## THE UNIVERSITY

**F**ounded as College of Evangelists 1905-06. Chartered as College of Medical Evangelists by the state of California December 13, 1909. Accredited by Northwest Association of Secondary and Higher Schools April 7, 1937. Accredited by WASC (Western Association of Schools and Colleges) (prior to January 1962, Western College Association) February 24, 1960. Became Loma Linda University July 1, 1961. Professional curricula started and approved as indicated.

## THE PROFESSIONS

**FACULTY OF GRADUATE STUDIES:** Started in 1954 as the Graduate School, with accreditation through the University accreditation; continued through 2004; restructured as the Faculty of Graduate Studies in 2005.

**SCHOOL OF SCIENCE AND TECHNOLOGY:** Started in 2004, combining programs established one-to-five decades ago. Programs accredited through the University accreditation and/or through their professional accrediting bodies.

## SCHOOL OF ALLIED HEALTH PROFESSIONS:

**CLINICAL LABORATORY SCIENCE (formerly, Medical Technology):** Started in 1937. Approved by the Council on Medical Education of the American Medical Association since August 28, 1937. Currently approved by the Commission on Accreditation of Allied Health Education Programs in collaboration with the National Accrediting Agency for Clinical Laboratory Sciences.

**CYTOTECHNOLOGY:** Started in 1982. Initial approval by the Commission on Accreditation of Allied Health Education Programs in collaboration with the Cytotechnology Programs Review Committee January 20, 1983.

**DIAGNOSTIC MEDICAL SONOGRAPHY:** Started in 1976 as diagnostic medical sonography. Approved by the Joint Review Committee on Education in Diagnostic Medical Sonography October 24, 1985.

**DIETETIC TECHNOLOGY:** Started in 1988. The Dietetic Technology Program is currently granted continuing accreditation by the Commission on Accreditation for Dietetics Education of the American Dietetic Association April 25, 1988.

**EMERGENCY MEDICAL CARE:** Started in 1993 as a baccalaureate degree program for paramedics, respiratory therapists, and other allied health professionals desiring education, science, or management credentials in emergency medical services.

**HEALTH INFORMATION MANAGEMENT:** Started as medical record administration in 1963. Approved by the Council on Medical Education of the American Medical Association since December 1, 1963. Currently approved by the Commission on

Accreditation of Allied Health Education Programs in collaboration with the American Health Information Management Association.

**MEDICAL RADIOGRAPHY:** Started in 1941 as radiological technology. Approved by the Council on Medical Education of the American Medical Association November 19, 1944. Currently approved by the Joint Review Committee on Education in Radiologic Technology and the California State Department of Health Services.

**NUCLEAR MEDICINE TECHNOLOGY:** Started in 1970. Approved by the Council on Medical Education of the American Medical Association June 23, 1973. Currently approved by the Joint Review Committee on Educational Programs in Nuclear Medicine Technology.

**NUTRITION AND DIETETICS:** Started in 1922 as a certificate program; baccalaureate degree conferred 1932-54; graduate program offered since 1954. Internship program continuously approved by The American Dietetic Association from 1957 through 1974; reestablishment of baccalaureate degree program authorized October 1971. Since 1974 the Coordinated Program in Dietetics has been granted accreditation by the Commission on Accreditation for Dietetics Education of the American Dietetic Association.

**OCCUPATIONAL THERAPY:** Started in 1959. Initial approval by the Council on Medical Education of the American Medical Association June 10, 1960. Full approval March 30, 1962. Currently approved by the Accreditation Council for Occupational Therapy Education.

**OCCUPATIONAL THERAPY ASSISTANT:** Started in 1988. Approved by the Commission on Accreditation of Allied Health Education Programs in collaboration with The American Occupational Therapy Association (AOTA) April 13, 1989. Currently accredited by the Accreditation Council for Occupational Therapy Education of the AOTA.

**PHLEBOTOMY:** Started in 1994. Accredited/ approved April 1997 both by the California Department of Health, Laboratory Field Services and by the National Accrediting Agency for Clinical Laboratory Science (NAACLS); with continuing state approval, reaccredited April 2001 by NAACLS.

**PHYSICAL THERAPIST ASSISTANT:** Started in 1989. Approved by the American Physical Therapy Association April 4, 1990.

**PHYSICAL THERAPY:** Started in 1941. Initial approval by the Council on Medical Education of the American Medical Association June 6, 1942. Currently approved by the American Physical Therapy Association.

**PHYSICIAN ASSISTANT SCIENCES:** Started in 2000. Provisional accreditation granted October 20, 2000, by the Commission on Accreditation of Allied Health Education Programs (CAAHEP). Effective January 1, 2001, CAAHEP was succeeded by the Accreditation Review Commission on Education for the Physician Assistant, Inc. (ARC-PA). Accredited March 2002 by ARC-PA.

**RADIATION THERAPY:** Approved by the Council on Medical Education of the American Medical Association December 1, 1974. Currently approved by

the Joint Review Committee on Education in Radiologic Technology.

**RESPIRATORY CARE:** Started in 1971. Initial approval by the Council on Medical Education of the American Medical Association September 1972. Full approval June 1973. Currently approved by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) in collaboration with the Committee on Accreditation for Respiratory Care (CoARC) (formerly known as: Joint Review Committee for Respiratory Therapy Education [JRCRTE]).

**SPEECH-LANGUAGE PATHOLOGY AND AUDIOLOGY:** Approved by the American Speech-Language-Hearing Association June 1, 1991.

**SCHOOL OF DENTISTRY:** Started in 1953. Approved by the Commission on Dental Accreditation of the American Dental Association since May 23, 1957.

**DENTAL HYGIENE:** Started in 1959. Approved by the Commission on Dental Accreditation of the American Dental Association since September 7, 1961.

**ENDODONTICS:** Started in 1967. Approved by the Commission on Dental Accreditation of the American Dental Association since December 1969.

**ORAL AND MAXILLOFACIAL SURGERY:** Started in 1964. Approved by the Commission on Dental Accreditation of the American Dental Association since 1967.

**ORTHODONTICS AND DENTOFACIAL ORTHOPEDICS:** Started in 1960. Approved by the Commission on Dental Accreditation of the American Dental Association since May 1965.

**PEDIATRIC DENTISTRY:** Started in 1993. Approved by the Commission on Dental Accreditation of the American Dental Association since December 1993.

**PERIODONTICS:** Started in 1961. Approved by the Commission on Dental Accreditation of the American Dental Association since December 1967.

**PROSTHODONTICS:** Started in 1993. Approved by the Commission on Dental Accreditation of the American Dental Association since February 1995.

**SCHOOL OF MEDICINE:** Started in 1909. Approved by the Association of American Medical Colleges and the Council on Medical Education of the American Medical Association since November 16, 1922.

**SCHOOL OF NURSING:** Hospital school started at Loma Linda in 1905. Hospital school added at Los Angeles in 1924. Collegiate program in nursing organized in 1948. Accredited by the National Nursing Accrediting Service December 10, 1951, with approval continuing under the National League for Nursing until 2001. Initial 1917 approval of the California State Board of Health extended until college program approved July 1, 1952, by the California Board of Registered Nursing. California Board of Registered Nursing approval since 1952. Public health nursing preparation recognized in 1959. School accredited by the Commission on Collegiate Nursing Education (CCNE) since 1999.

**SCHOOL OF PHARMACY:** Started in 2002. Currently operating under Candidate status, granted by the Accreditation Council for Pharmacy Education in 2003. Full accreditation will be applied for in 2006.

**SCHOOL OF PUBLIC HEALTH:** Started in 1948; reorganized in 1964. Approved by the American Public Health Association June 23, 1967. Currently accredited by the Council on Education for Public Health.

## Accrediting Agencies

### THE UNIVERSITY

Loma Linda University is accredited by WASC.

Accrediting Commission for Senior Colleges and Universities of the Western Association of Schools and Colleges (WASC)  
985 Atlantic Avenue, Suite 100  
Alameda, CA 94501  
Phone: 510 / 748-9001  
FAX: 510 / 748-9797  
Web site: [www.wascweb.org](http://www.wascweb.org)  
E-mail: [wasesr@wascsenior.org](mailto:wasesr@wascsenior.org)

WASC is an institutional accrediting agency recognized by the U.S. Secretary of Education and the Commission on Recognition of Postsecondary Accreditation.

All entry-level degrees are accredited by their respective professional accrediting associations.

In addition to WASC, the following agencies accredit specific University schools or programs\*:

### SCHOOL OF ALLIED HEALTH PROFESSIONS

#### Cardiopulmonary Sciences

##### Respiratory Care

Committee on Accreditation for Respiratory Care  
1248 Harwood Road  
Bedford, TX 76021-4244  
Phone: 800 / 874-5615 or 817 / 283-2835  
FAX: 817 / 354-8519 or 817 / 252-0773  
Web site: [www.coarc.com](http://www.coarc.com)  
E-mail: [richwalker@coarc.com](mailto:richwalker@coarc.com)

#### Clinical Laboratory Science

##### Phlebotomy Certificate

National Accrediting Agency for Clinical Laboratory Sciences (NAACLS)  
8410 West Bryn Mawr Avenue, Suite 670  
Chicago, IL 60631-3415  
Phone: 773 / 714-8880  
FAX: 773 / 714-8886  
Web site: [www.naacls.org](http://www.naacls.org)  
E-mail: [naaclsinfo@naacls.org](mailto:naaclsinfo@naacls.org)  
California Department of Health, Laboratory Field Services  
2151 Berkeley Way, Annex 12  
Berkeley, CA 94707-1011  
Phone: 510 / 873-6449

Clinical Laboratory Science  
(formerly Medical Technology)  
National Accrediting Agency for Clinical Laboratory  
Sciences (NAACLS)  
8410 West Bryn Mawr Avenue, Suite 670  
Chicago, IL 60631-3415  
Phone: 773 / 714-8880  
FAX: 773 / 714-8886  
Web site: [www.naacls.org](http://www.naacls.org)  
E-mail: [naaclsinfo@naacls.org](mailto:naaclsinfo@naacls.org)

California Department of Health, Laboratory Field  
Services  
2151 Berkeley Way, Annex 12  
Berkeley, CA 94707-1011  
Phone: 510 / 873-6449

**Cytotechnology**  
Commission on Accreditation of Allied Health  
Education Programs (CAAHEP)  
35 East Wacker Drive, Suite 1970  
Chicago, IL 60601-2208  
Phone: 312 / 553-9355  
FAX: 312 / 553-9616  
Web site: [www.caahep.org](http://www.caahep.org)  
E-mail: [caahep@caahep.org](mailto:caahep@caahep.org)

**Health Information Management**  
Health Information Administration  
Commission on Accreditation of Allied Health  
Education Programs (CAAHEP)  
35 East Wacker Drive, Suite 1970  
Chicago, IL 60601-2208  
Phone: 312 / 553-9355  
FAX: 312 / 553-9616  
Web site: [www.caahep.org](http://www.caahep.org)  
E-mail: [caahep@caahep.org](mailto:caahep@caahep.org)

**Nutrition and Dietetics**  
Dietetic Technician Program—A.S.  
Nutrition and Dietetics Program—B.S.  
Commission on Accreditation for  
Dietetics Education (CADE) of the  
American Dietetic Association  
120 South Riverside Plaza, Suite 2000  
Chicago, IL 60606-6995  
Phone: 312 / 899-0040, ext. 5400 or  
800 / 877-1600, ext. 5400  
FAX: 312 / 899-4817  
Web site: [www.eatright.org/CADE](http://www.eatright.org/CADE)  
E-mail: [education@eatright.org](mailto:education@eatright.org)

**Occupational Therapy**  
The Accreditation Council for Occupational  
Therapy Education (ACOTE)  
American Occupational Therapy Association, Inc.  
(AOTA)  
P.O. Box 31220  
Bethesda, MD 20824-1220  
Phone: 301 / 652-2682  
or toll free 800 / 377-8555  
FAX: 301 / 652-7711  
Web site: [www.aota.org](http://www.aota.org)  
E-mail: [accred@aota.org](mailto:accred@aota.org)

**Physical Therapy**  
Commission on Accreditation in Physical  
Therapy Education  
American Physical Therapy Association  
(APTA)  
1111 North Fairfax Street  
Alexandria, VA 22314  
Phone: 703 / 706-3245  
FAX: 703 / 838-8910  
Web site: [www.apta.org](http://www.apta.org)  
E-mail: see Web site

**Physician Assistant Sciences**  
Accreditation Review Commission on Education for the  
Physician Assistant (ARC-PA)  
Medical Education Department 1R6  
1000 North Oak Avenue  
Marshfield, WI 54449-5778  
Phone: 715 / 389-3785  
FAX: 715 / 387-5163  
Web site: [www.arc-pa.org](http://www.arc-pa.org)  
E-mail: [mccartyj@mflclin.edu](mailto:mccartyj@mflclin.edu)

**Radiation Technology**  
Medical Radiography—A.S.  
Radiation Therapy Technology—Certificate  
Joint Review Committee on Education in  
Radiologic Technology (JRCERT)  
20 North Wacker Drive, Suite 900  
Chicago, IL 60606-2901  
Phone: 312 / 704-5300  
FAX: 312 / 704-5304  
Web site: [www.jrcert.org](http://www.jrcert.org)

Diagnostic Medical Sonography—Certificate  
Commission on Accreditation of Allied Health  
Education Programs (CAAHEP)  
35 East Wacker Drive, Suite 1970  
Chicago, IL 60601-2208  
Phone: 312 / 553-9355  
FAX: 312 / 553-9616  
Web site: [www.caahep.org](http://www.caahep.org)  
E-mail: [caahep@caahep.org](mailto:caahep@caahep.org)  
Joint Review Committee on Education in  
Diagnostic Medical Sonography (JRCE-DMS)  
1248 Harwood Road  
Bedford, TX 76021-4244  
Phone: 817 / 685-6629  
FAX: 817 / 354-8519  
Web site: [www.jredms.org](http://www.jredms.org)  
E-mail: [sharonworthin@coarc.com](mailto:sharonworthin@coarc.com)

Nuclear Medicine Technology—Certificate  
California Department of Health Services  
Radiologic Health Branch  
P. O. Box 942732  
Sacramento, CA 94234-7320  
Phone: 916/322-5096  
FAX: 916/324-3610  
Web site: [www.csrt.org](http://www.csrt.org)  
E-mail: [RKubiak@dhs.ca.gov](mailto:RKubiak@dhs.ca.gov)

**Speech-Language Pathology and Audiology**  
American Speech-Language-Hearing  
Association  
10801 Rockville Pike  
Rockville, MD 20852  
Phone: 301 / 897-5700  
FAX: 301 / 571-0481  
Web site: [www.asha.org](http://www.asha.org)  
E-mail: [accreditation@asha.org](mailto:accreditation@asha.org)

### Speech-Language Pathology

Speech-Language Pathology  
Educational Standards Board  
American Speech-Language-Hearing  
Association  
10801 Rockville Pike  
Rockville, MD 20852  
Phone: 301 / 897-5700  
FAX: 301 / 571-0457  
Web site: [www.asha.org](http://www.asha.org)  
Email: [accreditation@asha.org](mailto:accreditation@asha.org)

### SCHOOL OF DENTISTRY

Commission on Dental Accreditation  
of the American Dental Association  
211 East Chicago Avenue  
Chicago, IL 60611  
Phone: 800 / 621-8099  
FAX: 312 / 440-2915  
Web site: [www.ada.org](http://www.ada.org)  
E-mail: [accreditation@ada.org](mailto:accreditation@ada.org)

### SCHOOL OF MEDICINE

Liaison Committee on Medical Education  
Association of American Medical Colleges  
2450 N Street NW  
Washington, DC 30037  
Phone: 202 / 828-0596  
FAX: 202 / 828-1125  
Web sites: [www.lcme.org](http://www.lcme.org); [www.aamc.org](http://www.aamc.org)  
E-mail: [lcme@aamc.org](mailto:lcme@aamc.org)

### SCHOOL OF NURSING

Board of Registered Nursing  
1170 Durfee Avenue, Suite G  
South El Monte, CA 91733  
Phone: 626 / 575-7080  
FAX: 626 / 575-7090  
Web site: [www.rn.ca.gov](http://www.rn.ca.gov)

Commission on Collegiate Nursing Education  
(CCNE)  
One Dupont Circle NW, Suite 530  
Washington, DC 20036-1120  
Phone: 202 / 887-6791  
FAX: 202 / 887-8476  
Web site: [www.aacn.nche.edu/accreditation](http://www.aacn.nche.edu/accreditation)

### SCHOOL OF PHARMACY

Accreditation Council for Pharmacy Education  
20 North Clark Street, Suite 2500  
Chicago, IL 60602-5109  
Phone: 312/664-3575  
FAX: 312/664-4652  
E-mail: [info@acpe-accredit.org](mailto:info@acpe-accredit.org)

### SCHOOL OF PUBLIC HEALTH

Council on Education for Public Health  
800 Eye Street NW, Suite 202  
Washington, DC 20001-1397  
Phone: 202 / 789-1050  
FAX: 202 / 789-1895  
Web site: [www.ceph.org](http://www.ceph.org)  
E-mail: [jconklin@ceph.org](mailto:jconklin@ceph.org)

### Health Promotion and Education

#### Certified Health Education Specialist (CHES)

National Commission for Health Education  
Credentialing, Inc.  
944 Marcon Boulevard, Suite 310  
Allentown, PA 18109  
Phone: toll free 888 / 624-3248 or 673-5445  
FAX: 800 / 899-4817  
Web site: [www.nchec.org](http://www.nchec.org)  
E-mail: [nchec@fast.net](mailto:nchec@fast.net)

### Environmental and Occupational Health

#### Registered Environmental Health Specialist

State of California  
Environmental Health Specialist  
Registration Program  
601 North 7th Street, MS 396  
P.O. Box 942732  
Sacramento, CA 94234-7320  
Phone: 916 / 324-8819  
FAX: 916 / 323-9869  
Web site: [www.dhs.ca.gov](http://www.dhs.ca.gov)  
or [www.dhs.cahwnet.gov](http://www.dhs.cahwnet.gov)  
E-mail: [rhook1@dhs.ca.gov](mailto:rhook1@dhs.ca.gov)

### Nutrition

Commission on Accreditation for  
Dietetics Education (CADE) of the  
American Dietetic Association  
120 South Riverside Plaza, Suite 2000  
Chicago, IL 60606-6995  
Phone: 312 / 899-0040, ext. 5400 or  
800 / 877-1600, ext. 5400  
FAX: 312 / 899-4817  
Web site: [www.eatright.org/cade](http://www.eatright.org/cade)  
E-mail: [education@eatright.org](mailto:education@eatright.org)

**SCHOOL OF SCIENCE AND TECHNOLOGY****Drug and Alcohol Counseling**

California Association of Alcoholism and Drug  
Abuse Counselors (CAADAC)  
3400 Bradshaw Road, Suite A5  
Sacramento, CA 95827  
Phone: 916 / 368-9412  
FAX: 916 / 368-9424  
Web site: [www.caadac.org](http://www.caadac.org)  
E-mail: [caadac@jps.net](mailto:caadac@jps.net)

**Marital and Family Therapy**

Commission on Accreditation for Marriage and  
Family Therapy Education of the American  
Association for Marriage and Family Therapy  
1133 15th Street NW, Suite 300  
Washington, DC 20005-2710  
Phone: 202 / 467-5111 or 452-0109  
FAX: 202 / 223-2329  
Web site: [www.aamft.org](http://www.aamft.org)  
E-mail: [coamfte@aamft.org](mailto:coamfte@aamft.org)

**Psychology**

American Psychological Association  
750 First Street NE  
Washington, DC 20002-4242  
Phone: 202 / 336-5500  
FAX: 202 / 336-5978  
Web site: [www.apa.org](http://www.apa.org)  
E-mail: [education@apa.org](mailto:education@apa.org)

**Social Work**

Council on Social Work Education  
Division of Standards and Accreditation  
1600 Duke Street, Suite 500  
Alexandria, VA 22314-3457  
Phone: 703 / 683-8080  
FAX: 703 / 683-8099  
Web site: [www.cswe.org](http://www.cswe.org)  
E-mail: [info@cswe.org](mailto:info@cswe.org)

## TO COMMUNICATE WITH LLU . . .

## MAIL:

Loma Linda University  
11060 Anderson Street  
Loma Linda, CA 92350

## WORLDWIDE WEB:

<http://www.llu.edu>

## PHONE:

For information about LLU 1/800-422-4LLU  
dialing from Canada 1/800-548-7114

Area Code: 909/

Switchboard: 558-1000, 558-4300

Off-campus PHONE:	On-campus PHONE:		Off-campus FAX:	On-campus FAX:
558-4540	44540	Chancellor	558-0242	80242
558-4787	44787	Diversity	558-0140	80140
558-4510	44510	Student Affairs	558-4879	44879
		Student welfare, housing, visas		
558-4955	44955	International Student Services	558-4879	44879
558-4520	44520	Student Finance	558-4879	44879
558-4509	44509	Student Financial Aid	558-7904	87904
558-4508	44508	University Records	558-4879	44879
558-8770	88770	Student Health Service	558-0433	80433
558-6028	66028	Student Counseling	558-6090	66090
558-6050	66050	Student Assistance Program	558-6051	66051
		Spiritual Counseling		
558-8348	88348	Campus Chaplain/Campus Ministries	558-0347	80347
558-4570	44570	University Church	558-4186	44186
809-1049	44270	Campus Hill Church	796-1992	
558-9200	39200	LLU Behavioral Medicine Center	558-9243	39243
		<b>Faculty of Graduate Studies</b>		
555-1800	41800	Admissions	558-7967	87967
558-4528	44528	Dean	558-0441	80441
		<b>Faculty of Religion</b>		
558-4536	44536	Dean	558-4856	44856
558-8434	88434	Dean	558-4856	44856
558-4956	44956	Biomedical and Clinical Ethics	558-0336	80336
558-4956	44956	Center for Christian Bioethics	558-0336	80336
558-7786	87786	Center for Spiritual Life and Wholeness	558-7988	87988
558-8433	88433	Clinical Ministry	558-4856	44856
558-8433	88433	Religion and the Sciences	558-4856	44856
		<i>The Schools:</i>		
		<b>Allied Health Professions</b>		
558-4599	44599	Admissions	558-4291	44291-attn. Admissions
558-4545	44545	Dean	558-4291	44291-attn. Dean
558-4932	44932	Cardiopulmonary Sciences	558-4701	44701-attn. CPSC
558-4966	44966	Clinical Laboratory Science	558-0458	80458-attn. CLSC
558-4976	44976	Health Information Management	558-0404	80404-attn. HLIN
558-7389	87389	Health Science (B.S., Japan only)	558-0982	80982-attn. HSCI
558-4593	44593	Nutrition and Dietetics	558-4291	44291-attn. DTCS
558-4628	44628	Occupational Therapy	558-0239	80239-attn. OPTH
558-4948	44948	Occupational Therapy Assistant	558-0239	80239-attn. OCTA
558-4632	44632	Physical Therapy	558-0459	80459-attn. PPTH
558-4634	44634	Physical Therapist Assistant	558-0459	80459-attn. PAST
558-4931	44931	Radiation Technology	558-4291	44291-attn. RTCH
558-4998	44998	Speech-Language Pathology/Audiology	558-4291	44291-attn. SPPA
558-4998	47224	Speech-Language Pathology Assistant	558-4291	44291-attn. SLPA

PHONE:	PHONE:		FAX:	FAX:
558-4222	1616	<b>Dentistry</b>		
558-4621	44621	Admissions	558-0195	80195
558-4683	44683	Dean	558-0483	80483
558-8624	88624	Advanced Dental Education Programs	558-0122	80122
558-4601	44601	Dentistry Program	558-0195	80195
558-4631	44631	Dental Hygiene Program	558-0313	80313
558-4669	44669	International Dentist Program	558-0133	80133
558-4790	44790	SD Student Affairs	558-4790	44790
558-4601	44601	SD Academic Affairs	558-4211	44211
558-4462	44462	<b>Medicine</b>	558-4146	44146
558-4467	44467	Admissions	558-0359	80359
558-4481	44481	Dean	558-4146	44146
558-1000	44360	<b>Nursing</b>	558-4134	44134
558-4923	44923	Admissions	558-0175	80175
558-4517	44517	Dean	558-0225	80225
558-8061	88061	Graduate	558-0719	80719
558-8060	88060	Undergraduate	558-0643	80643
558-7122	87122	International Nursing	558-0224	80224
		<b>Pharmacy</b>		
558-1300	41300	Admissions	558-4859	44859
558-7442	87442	Interim Dean	558-7973	87973
558-4546	44546	<b>Public Health</b>	558-4087	44087
558-4918	44918	Addiction Medicine Fellowship	558-4087	44087
558-4694	44694	Admissions/Academic Records	558-4087	44087 attn. Admissions
558-4578	44578	Dean	558-4087	44087 attn. Dean
558-8750	88750	Environmental and Occupational Health	558-0493	84493 attn. ENVH
558-8750	44590	Epidemiology and Biostatistics	558-0126	80126 attn. EPDM/STAT
558-4902	44902	Global Health	558-0389	80389 attn. GLBH
558-4573	44573	Health Administration	558-0469	80469 attn. HADM
558-4575	44575	Health Promotion and Education	558-0471	80471 attn. HPRO
558-4575	44575	Maternal and Child Health	558-0471	80471 attn. MCH
558-4598	44598	Nutrition	558-4095	44095 attn. NUTR
558-4918	44918	Occupational Medicine Residency Program	558-4087	44087
558-4918	44918	Preventive Medicine Residency Program	558-4087	44087 attn. PMR
		<b>Science and Technology</b>		
558-1900	41900	Admissions and Records	558-7967	87967
558-4528	44528	Dean	558-0441	80441

	WEB SITE:	EMAIL:
<b>Student Services</b>	<a href="http://www.llu.edu/ssweb">www.llu.edu/ssweb</a>	
<b>University Records</b>	<a href="mailto:registrar@univ.llu.edu">registrar@univ.llu.edu</a>	
<b>Faculty of Graduate Studies</b>	<a href="http://www.llu.edu/llu/grad/">http://www.llu.edu/llu/grad/</a>	<a href="mailto:azuccarelli@llu.edu">azuccarelli@llu.edu</a>
<b>Admissions</b>	<a href="http://www.llu.edu/llu/grad/">http://www.llu.edu/llu/grad/</a>	<a href="mailto:admissions.gs@llu.edu">admissions.gs@llu.edu</a>
<b>The Faculty of Religion</b>	<a href="http://www.llu.edu/llu/fr/">http://www.llu.edu/llu/fr/</a>	
Coordinator of M.A. in Bio- medical and Clinical Ethics	<a href="http://ethics.llu.edu/">http://ethics.llu.edu/</a>	<a href="mailto:mcarr@llu.edu">mcarr@llu.edu</a>
Coordinator of M.A. in Clinical Ministry	<a href="http://ministry.llu.edu/">http://ministry.llu.edu/</a>	<a href="mailto:ssorajjakool@llu.edu">ssorajjakool@llu.edu</a>
Coordinator of M.A. in Religion and the Sciences	<a href="http://religionandscience.llu.edu">http://religionandscience.llu.edu</a>	<a href="mailto:rrice@llu.edu">rrice@llu.edu</a>
Center for Christian Bioethics	<a href="http://www.llu.edu/llu/bioethics/">http://www.llu.edu/llu/bioethics/</a>	<a href="mailto:bioethics@llu.edu">bioethics@llu.edu</a>
Center for Spiritual Life and Wholeness	<a href="http://www.llu.edu/llu/wholeness/">http://www.llu.edu/llu/wholeness/</a>	<a href="mailto:innerweave@llu.edu">innerweave@llu.edu</a>
<b><i>The Schools:</i></b>		
<b>Allied Health Professions</b>	<a href="http://www.llu.edu/llu/sahp/">http://www.llu.edu/llu/sahp/</a>	
Admissions		<a href="mailto:admissions@sahp.llu.edu">admissions@sahp.llu.edu</a> attn. admissions
Cardiopulmonary Sciences		<a href="mailto:admissions@sahp.llu.edu">admissions@sahp.llu.edu</a> attn. CPSC
Clinical Laboratory Science		<a href="mailto:admissions@sahp.llu.edu">admissions@sahp.llu.edu</a> attn. CLSC
Health Information Management		<a href="mailto:admissions@sahp.llu.edu">admissions@sahp.llu.edu</a> attn. HLIN
Nutrition and Dietetics		<a href="mailto:nutrition@sahp.llu.edu">nutrition@sahp.llu.edu</a> attn. DTCS
Occupational Therapy		<a href="mailto:admissions@sahp.llu.edu">admissions@sahp.llu.edu</a> attn. OPTH
Physical Therapy		<a href="mailto:admissions@sahp.llu.edu">admissions@sahp.llu.edu</a> attn. PPTH
Radiation Technology		<a href="mailto:admissions@sahp.llu.edu">admissions@sahp.llu.edu</a> attn. RTCH
Speech-Language Pathology/ Audiology		<a href="mailto:admissions@sahp.llu.edu">admissions@sahp.llu.edu</a> attn. SPPA
<b>Dentistry</b>	<a href="http://www.llu.edu/llu/dentistry/">http://www.llu.edu/llu/dentistry/</a>	
Admissions	<a href="http://www.llu.edu/llu/dentistry/">http://www.llu.edu/llu/dentistry/</a>	<a href="mailto:admissions.sd@llu.edu">admissions.sd@llu.edu</a>
<a href="http://www.llu.edu/llu/grad/">http://www.llu.edu/llu/grad/</a>	<a href="mailto:bripon@univ.llu.edu">bripon@univ.llu.edu</a>	
Admissions	<a href="http://www.llu.edu/llu/grad/">http://www.llu.edu/llu/grad/</a>	<a href="mailto:gradschool@univ.llu.edu">gradschool@univ.llu.edu</a>
<b>Medicine</b>	<a href="http://www.llu.edu/llu/medicine/">http://www.llu.edu/llu/medicine/</a>	<a href="mailto:ledwards@som.llu.edu">ledwards@som.llu.edu</a>
<b>Nursing</b>	<a href="http://www.llu.edu/llu/nursing/">http://www.llu.edu/llu/nursing/</a>	<a href="mailto:admissions_sn@sn.llu.edu">admissions_sn@sn.llu.edu</a>
<b>Pharmacy</b>	<a href="http://www.llu.edu/llu/sps/">http://www.llu.edu/llu/sps/</a>	
Admissions		<a href="mailto:rxadmissions@llu.edu">rxadmissions@llu.edu</a>

**Public Health**

Public Health		<a href="http://www.llu.edu/llu/sph">http://www.llu.edu/llu/sph</a>
Admissions and Academic Records	<a href="http://www.llu.edu/llu/sph">http://www.llu.edu/llu/sph</a>	<a href="mailto:admissions.sph@llu.edu">admissions.sph@llu.edu</a>
Distance Learning	<a href="mailto:distancelearning@llu.edu">distancelearning@llu.edu</a>	
Environmental and Occupational Health	<a href="http://www.llu.edu/llu/sph/envh">http://www.llu.edu/llu/sph/envh</a>	<a href="mailto:envhdept@llu.edu">envhdept@llu.edu</a>
Epidemiology and Biostatistics	<a href="http://www.llu.edu/llu/sph/epibio">http://www.llu.edu/llu/sph/epibio</a>	<a href="mailto:epibiodept@llu.edu">epibiodept@llu.edu</a>
Global Health	<a href="http://www.llu.edu/llu/sph/gln">http://www.llu.edu/llu/sph/gln</a>	<a href="mailto:globalhealthdept@llu.edu">globalhealthdept@llu.edu</a>
Health Administration	<a href="http://www.llu.edu/llu/sph/hadm">http://www.llu.edu/llu/sph/hadm</a>	<a href="mailto:hadmdept@llu.edu">hadmdept@llu.edu</a>
Health Promotion and Education	<a href="http://www.llu.edu/llu/sph/hpro">http://www.llu.edu/llu/sph/hpro</a>	<a href="mailto:hprodept@llu.edu">hprodept@llu.edu</a>
Nutrition	<a href="http://www.llu.edu/llu/sph/nutr">http://www.llu.edu/llu/sph/nutr</a>	<a href="mailto:nutritiondept@llu.edu">nutritiondept@llu.edu</a>
Public Health Practice	<a href="mailto:publichealthpractice@llu.edu">publichealthpractice@llu.edu</a>	
Recruitment and Marketing	<a href="http://www.llu.edu/llu/sph">http://www.llu.edu/llu/sph</a>	<a href="mailto:sphinfo@llu.edu">sphinfo@llu.edu</a>

**Science and Technology**

<a href="http://www.llu.edu/llu/sst/">http://www.llu.edu/llu/sst/</a>	<a href="mailto:admissions.sst@llu.edu">admissions.sst@llu.edu</a>
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