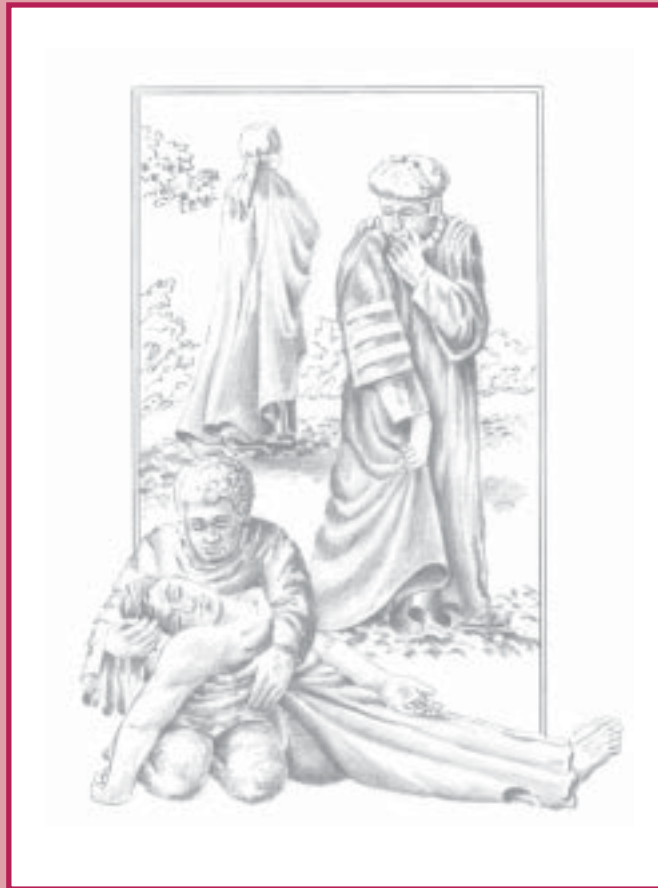


*LOMA LINDA UNIVERSITY*



SCHOOL OF ALLIED HEALTH PROFESSIONS

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This BULLETIN is the definitive statement of the School of Allied Health Professions on the requirements for admission, enrollment, curriculum, and graduation. The School of Allied Health Professions reserves the right to change the requirements and policies set forth in this BULLETIN at any time upon reasonable notice. In the event of conflict between the statements of this BULLETIN and any other statements by faculty or administration, the provisions of this BULLETIN shall control, unless express notice is given that the BULLETIN is being modified.

The information in this BULLETIN is made as accurate as is possible at the time of publication. Students are responsible for informing themselves of and satisfactorily meeting all requirements pertinent to their relationship with the University. The University reserves the right to make such changes as circumstances demand with reference to admissions, registration, tuition and fees, attendance, curriculum requirements, conduct, academic standing, candidacy, and graduation.

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**School of**  
**Allied Health**  
**Professions**

**2002-2003**

This is a one-year BULLETIN,  
effective beginning Summer Quarter 2002.

**Loma Linda University**

Loma Linda, CA 92350

a health-sciences university

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Welcome to Loma Linda University School of Allied Health Professions, housed in Nichol Hall (formerly Loma Linda Sanitarium).

# I

## LOMA LINDA UNIVERSITY

University Foundations

Our Mission

Nondiscrimination Policy

Affirmative Action

The Calendar

# University Foundations

## HISTORY

**L**oma Linda University has grown out of the institution founded at Loma Linda, California, by the Seventh-day Adventist church in 1905. The original schools—Nursing and Medicine—have been joined by Allied Health Professions, Dentistry, Public Health, the Graduate School, and the Faculty of Religion.

The University, operated by the Seventh-day Adventist church, is committed to the vision of its founders and is sustained by its close association with the church.

Loma Linda University is a Seventh-day Adventist coeducational, health-sciences institution located in inland southern California. It is part of the Seventh-day Adventist system of higher education. Professional curricula are offered by the Schools of Allied Health Professions, Dentistry, Public Health, Medicine, and Nursing. Graduate programs in various biomedical sciences are offered by departments of the schools. The professional curricula of the University are approved by their respective professional organizations.

The most current campus census figures (July 1, 2002) indicate that the core of the combined faculties consists of 1070 full-time teachers. Part-time and voluntary teachers, largely clinicians in the professional curricula, bring the total to 2484. As of Autumn Quarter 2001, students from 83 countries are represented in the enrollment of 3,403.

## 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.



# Our Mission

**L**oma 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

**O**ur 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

**W**e 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

**W**e 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

**W**e 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.

# Nondiscrimination Policy

**T**he University was established by the Seventh-day Adventist church as an integral part of its teaching ministry. It 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.

Any student with a documented disability (e.g., physical, learning, or psychological) who needs to arrange reasonable accommodation must contact the dean, or designee, of the School of Allied Health Professions. All discussions will remain confidential.

To this end, the University is in compliance with Titles VI and VII of the Civil Rights Act of 1964 as amended, and 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 USC Secs. 2000e-1, 2000e-2; Sec. 6-15 of Federal Executive Order 11246; 41 CFR Sec. 60-1.5(5); 20 USC 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.

# Affirmative Action

**T**he University routinely monitors its educational and employment practices regarding women, minorities, and the handicapped 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 handicap. 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.



Karen Reiley (administrative secretary) and Charles Dart (director)—the team for marketing and retention at LLU's School of Allied Health Professions—discuss upcoming recruitment events.

# The Calendar

## 2002

### JUNE

S	M	T	W	T	F	S
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2	3	4	5	6	7	8
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30						

### JULY

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28	29	30	31			

### AUGUST

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18	19	20	21	22	23	24
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### SEPTEMBER

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21	22	23	24	25	26	27
28	29	30				

MAY 20

MAY 20

MAY 30–JUN 14

10-SEP 20

16

17

17

17

17-JUL 23

17-AUG 30

4

24–AUG 30

29

One week after course begins

One week after course begins

One week before end of course

One week before end of course

5–12

12

13

19–SEP 13

19

19

19

19

19

30

2

3

3–20

3–20

12

15–OCT 15

19

22

23

23–DEC 13

23

23

### SUMMER SESSIONS 2002

Registration for Cytotechnology certificate classes  
 Instruction begins for Cytotechnology certificate classes  
 (MAY 21–AUG 17)

General registration  
 Nutrition and Dietetics summer practicum  
 Student/Family welcome for MPT/DPT, PMPT, PTA, OT  
 (6:30 p.m., Randall Visitors Center)  
 Last day to obtain financial clearance for standard term  
 Instruction begins  
 Instruction begins for MPT/DPT, PMPT, PTA, and OT **Juniors**  
 First five-week session: 26 days  
 Eleven-week session: 54 days (including examinations)

Independence Day recess  
 Second five-week session: 28 days  
 Instruction begins for MPT/DPT and MOT **Seniors**  
 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

Registration for Clinical Laboratory Science **Seniors**  
 Orientation for Clinical Laboratory Science **Seniors**  
 Term I practicum begins for Clinical Laboratory Science  
**Seniors**

Nutrition and Dietetics prerequisite block classes  
 Registration for Cytotechnology certificate  
 Instruction begins for Cytotechnology certificate  
 Registration for Clinical Laboratory Science **Juniors**  
 Orientation for Clinical Laboratory Science **Juniors**  
 Instruction begins for Clinical Laboratory Science **Juniors**  
 Summer Quarter ends

Labor Day recess  
**POST-SUMMER SESSIONS 2002**  
 Instruction begins (unless otherwise noted in class schedule)  
 Fourteen-day session: Nutrition and Dietetics  
 Registration for Autumn Quarter  
 PTA Summer Quarter ends  
 Hispanic Heritage Month  
 University Fall Faculty Colloquium  
 Student/Family Welcome (5:45 p.m., Campus Hill Church)  
 SAHP Student Orientation (Randall Visitors Center 8 a.m.-noon)

**AUTUMN QUARTER 2002**  
 Autumn Quarter total days (including examinations): 57  
 Last day to obtain financial clearance for standard term  
 Instruction begins for AH, FR, GS, SD, SN

# The Calendar

## 2002

### OCTOBER

S	M	T	W	T	F	S
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27	28	29	30	31		

1	Last day to enter a course or change from audit to credit/credit to audit
3	Campus /Chamber of Commerce Connection
6	Welcome-back party
7-11	Fall Week of Devotion
7	Diversity new-student orientation
8	Last day to withdraw with no record of course registration on transcript
10	Physician Assistant jacketing
16	ALAS chapel
23	University convocation

### NOVEMBER

S	M	T	W	T	F	S
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24	25	26	27	28	29	30

4	Registration for Cytotechnology (Winter Quarter)
4	Instruction begins for Cytotechnology
5	SAHP counselor open house (Drayson Center 4:15)
11	Term II practicum begins for Clinical Laboratory Science <b>Seniors</b>
15-16	Annual BALL/BHPSA student retreat
25	Last day to withdraw with a W grade or to submit S/U petition
27-DEC 1	Thanksgiving recess

### DECEMBER

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	Instruction resumes
2-DEC 20	Registration for Winter Quarter
9-13	Final examinations
13	Autumn Quarter ends
14-JAN 5	Christmas recess: 23 days
17	Grades due from faculty
23	Instruction begins for Radiation Technology: Medical Radiography (A.S. degree, 2nd year); Radiation Therapy Technology, Diagnostic Medical Sonography, Nuclear Medicine Technology, Special Imaging Technology

## 2003

### JANUARY

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11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

WINTER QUARTER 2003	
6-MAR 21	Winter Quarter total days (including examinations): 53
6	Instruction begins (all schools, unless otherwise noted)
6	Instruction begins for Radiation Technology B.S. degree; and for Medical Radiography A.S. degree 1st year
6	Last day to obtain financial clearance
13-18	Mission Emphasis Week
14	Last day to enter a course or change from audit to credit/credit to audit
15	Martin Luther King, Jr., Symposium for Diversity in Health Care
20	Martin Luther King, Jr., Day recess
21	Last day to withdraw with no record of course registration on transcript
21-24	Student Week of Spiritual Emphasis

# The Calendar

## 2003

### FEBRUARY

S	M	T	W	T	F	S
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2	3	4	5	6	7	8
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16	17	18	19	20	21	22
23	24	25	26	27	28	

1-28	Black History Month
5	BHPSA chapel
17	Registration for Cytotechnology
17	Instruction begins for Cytotechnology
17	Presidents' Day recess

### MARCH

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2	3	4	5	6	7	8
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23	24	25	26	27	28	29
30	31					

3	Last day to withdraw with a W grade or to submit S/U petition
3-28	Registration for Spring Quarter
5	Term III practicum begins for Clinical Laboratory Science
	<b>Seniors</b>
17-21	Final examinations
21	Winter Quarter ends
22-30	Spring recess: 9 days
25	Grades due from faculty
27	PTA Winter Quarter ends
29	SAHP faculty and staff retreat
	<b>SPRING QUARTER 2003</b>
31-JUN 13	Spring Quarter total days (including examinations): 54
31	Last day to obtain financial clearance
31	Instruction begins (unless otherwise noted in class schedule)

### APRIL

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

7-11	Spring Week of Devotion
8	Last day to enter a course or change from audit to credit/credit to audit
15	Last day to withdraw with no record of course registration on transcript record
18-19	ALAS student retreat
24-27	SAHP alumni weekend

### MAY

S	M	T	W	T	F	S
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25	26	27	28	29	30	31

17	Diversity consecration service
26	Memorial Day recess
26	Registration for Cytotechnology
26	Instruction begins for Cytotechnology
27-AUG 15	Instruction for Cytotechnology certificate
27	Last day to withdraw with a W grade or to submit S/U petition
28-JUN 20	Registration for summer sessions

# The Calendar

## 2003

### JUNE

S	M	T	W	T	F	S
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15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

9-13	Final examinations
13	<i>Focus on Graduates</i> Vespers: AH, GS, PH, SN
13	Spring Quarter ends
14	Baccalaureate: AH, GS, PH, SN
14	Dietetics Pinning Service
15	Occupational Therapy and Occupational Therapy Assistant Pinning Service
15	Conferring of Degrees: AH, GS, PH, SN
17	Grades due from faculty
	<b>SUMMER SESSIONS 2003</b>
23-JUL 29	First five-week summer session
23-SEP 5	Eleven-week summer session (53 days)

### 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	Independence Day recess
30-SEP 5	Second five-week summer session

### AUGUST

S	M	T	W	T	F	S
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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						

18	Registration for Cytotechnology
18	Instruction begins for Cytotechnology

### 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	31			

1	<b>POST SUMMER SESSIONS 2003</b>
	Labor Day recess
8-26	Total days of instruction: 15
	<b>AUTUMN QUARTER 2003</b>
29-DEC 12	Total days of instruction (including examinations): 52

### OCTOBER

S	M	T	W	T	F	S
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11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

3	SAHP stampede
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Welcome! We are very pleased, indeed, that you are considering a career in the allied health professions. The faculty, administrative personnel, and staff are here to help in the decisions for your future in whatever way we can.

# II

## THE SCHOOL OF ALLIED HEALTH PROFESSIONS

Letter from the Dean

School Foundations

Mission and Goals

General Information

Admissions Information

Student Life

Policies and General Regulations

Financial Information



**W**e at the School of Allied Health Professions, Loma Linda University, thank you for your interest in our programs. The faculty and students believe we offer a quality education in all of the allied health professions, and we trust you will consider joining us in pursuit of a career in one of them.

We are dedicated to providing opportunity for academic excellence and development of clinical competence. 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. Additionally the School maintains clinical affiliations with more than 1,300 health care facilities throughout the United States, affording a wide variety of experience options.

At Loma Linda University we believe you will find a caring faculty, an attractive setting, excellent academic and clinical facilities, and a stimulating spiritual environment.

Joyce W. Hopp, Ph.D., M.P.H.

Dean

# School Foundations

**T**he 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 in the University earlier: 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. 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 the departments in division III of this BULLETIN.



2002 Master of Occupational Therapy graduates proudly display their commencement attire. Occupational therapy students have been a part of Loma Linda University's School of Allied Health Professions tradition since 1959.

# Mission and Goals

## OUR MISSION

**T**he 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

**T**he goals of the School of Allied Health Professions are as follow:

1. To 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. To help the student accept responsibility for integrity, ethical relationships, and empathic attitudes that can contribute to the welfare and well-being of patients.
3. To help the student develop a background of information and attitudes conducive to interprofessional understanding and cooperation.
4. To encourage the student to cultivate habits of self-education that will foster lifelong growth.
5. To 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 an entry-level bachelor’s, master’s, or doctoral degree program within the School of Allied Health Professions are for the graduate 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.



Checking on the day's calendar of events Dr. Joyce Hopp, dean, gives a thumbs up to assistant, Beverly deForest.

# General Information

## ACCREDITATION

**T**he programs are approved 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 the professional organizations. Details of accreditations are given in the individual sections and in the accreditation sections of division VI of this BULLETIN.

## ADMINISTRATION

**T**he dean, the chief administrative officer of the School, presides over the Administrative Council, which meets regularly during the school year. The chairs of the departments direct the teaching of the programs. Advisory committees of outstanding professionals in the fields of education and the allied health professions assist the department chairs in the continuing study of the curricula and in the preparation of recommendations.

## INSTRUCTIONAL FACILITIES

**T**he academic resources and the affiliated clinical facilities of the University constitute a rich educational environment for the health-professions student, both in classroom instruction and in guided experience in hospitals and clinics. Major facilities utilized for clinical affiliations and internships include the University Medical Center; the Jerry L. Pettis Memorial Veterans Medical Center; and other hospitals and community agencies located in the Redlands, San Bernardino, Riverside, and Los Angeles areas, as well as throughout the United States.

# Admissions Information

**I**n 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, sex, 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 departmental sections of this BULLETIN.

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 \$50 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 departmental sections of this BULLETIN. Students are required to furnish evidence of completion (official transcript) of high school 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 nonscience 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.

#### **Test requirement**

Upon acceptance, a self-study syllabus will be sent to the student in preparation for a mathematics screening examination that will be given immediately following registration. Those scoring below

the acceptable minimum will be required to do remedial work and retake the test.

A writing skills pretest is also administered. The scores for the Wholistic Grading Rubric (WGR) are shown below. Any student scoring less than 4 will be required to do remedial work during the program and retake the test. The pretest is graded on the following criteria:

- 6= Demonstrates clear competence in writing on both the rhetorical and syntactic levels, though the essay may have occasional errors.
- 5= Demonstrates competence in writing on both the rhetorical and syntactic levels, though the essay will probably have occasional errors.
- 4= Demonstrates minimal competence in writing on both the rhetorical and syntactic levels.
- 3= Demonstrates some developing competence in writing, but the essay remains flawed on either the rhetorical or syntactic level, or both.
- 2= Suggests incompetence in writing.
- 1= Demonstrates incompetence in writing.

#### **Accommodation for disability**

A student may apply for accommodation for disability by obtaining a form provided for this purpose from the program director or department chair and deliver the completed form and supporting documentation to the Office of the Dean.

#### **Immunizations**

New students are required to have certain immunizations before registration. Forms for providing documentation of the required immunizations are provided for the physician in the acceptance packet sent to the student by the School. It is expected that necessary routine dental and medical care and elective surgery will have been attended to before the student registers.

#### **Pre-entrance health requirement (Immunization/Skin test)**

As part of registration, accepted students will be asked to file with Student Health Service a medical history with evidence of certain immunizations:

- Read carefully, complete, and return to the Admissions Office the pre-entrance health requirement form.
- Have immunizations updated as necessary.
- Students residing in the area can have their immunizations updated at Student Health Service (ext. 88700) in the Center for Health Promotion:
  - MMR—measles (rubeola), mumps, German measles (rubella)
  - PPD (TB) skin test
  - Tetanus/Diphtheria booster
  - Hepatitis-B vaccine\*

Students who know themselves to 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.

Chickenpox blood test and/or immunization:

If no known history of chickenpox, then student may choose blood test (which may reveal pre-existing immunity) and/or immunization (if no prior immunity).

\*The series of three vaccinations can be completed at this University after admission, even if it was begun elsewhere. In order to avoid having a hold placed on the registration packet, students are encouraged to return the documentation forms to the Office of University Records in the provided envelope *no later than six weeks prior to the beginning of classes*.

For further information, consult the *Student Handbook*, Section V—University Policies: Communicable disease transmission prevention policy.

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 six months after the assignment begins.

Mandatory screening for HBV, HCV, or HIV is not warranted. Infected students or faculty members will not be prohibited from providing client-care activities. If students or faculty members know that they are a source of significant client exposure through blood or body fluids, however, they are ethically obligated to undergo testing for infection or treatment.

Nonadherence to infection-control practices within clinical settings may create serious hazards for the student or the client. Adherence to these practices will be a significant factor in the continued enrollment of the student. Appropriate disciplinary action—including but not limited to restriction of clinical practice or to dismissal—will be imposed for nonadherence. The action will be determined on a case-by-case basis.

#### Re-entrance

A student who discontinues a program of study at the University must meet the entrance requirements in force at the time of re-entrance.

#### TRANSFER CREDIT

Applicants must file with the Office of Admissions and Records of the School of Allied Health Professions complete records of all studies taken on the high school and college levels. 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. Remedial and high school-level courses are not accepted for transfer.

#### Junior colleges

A maximum of 70 semester units or 105 quarter units of credit is accepted from accredited junior colleges. Subject and unit requirements for admission to a professional curriculum are outlined in the respective departmental sections.

#### International, unaccredited schools

Credits submitted from a college outside the United States or from an unaccredited college are evaluated on an individual basis and are recorded only after the student has earned at least 12 units of credit, with a grade-point average of 2.0 or higher, at this University.

#### 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 the 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* and/or recommendation of the California Committee for the Study of Education.

#### 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. 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. No credit is granted for the CLEP general examinations in English composition, mathematics, or science courses requiring a laboratory.

#### INTERNATIONAL STUDENTS

International applicants must provide suitable recommendations, give evidence of ability to meet all financial obligations, and furnish English translations of all transcripts. Regardless of nationality or citizenship, an applicant whose native language is not English is required to pass the Michigan Test of English Language Proficiency (MTELP), or the Test of English as a Foreign Language (TOEFL) and the Test of Written English (TWE); or their equivalents. Prior to admission, all of the School's professional programs require any applicant whose native language is not English to pass the Test of Spoken English-A. If satisfactory results are not achieved on all of the tests, remedial course work should be taken and the appropriate test repeated until a

satisfactory grade is achieved. A personal interview is also encouraged to verify acceptable verbal and written skills. An applicant must successfully pass all components of this process prior to acceptance into a professional program.

The MTELP requirements are as follows: undergraduate, a score at the 90th percentile; graduate (humanities and social sciences), 90th percentile or above; graduate (science), 85th percentile or above; professional graduate, 90th percentile or above. A minimum score is 550 (paper based) or 213 (computer based) on TOEFL.

Applicants with scores below 550 (paper based) or 213 (computer based) on TOEFL must complete an English-as-a-second-language program before enrolling in the professional program.

For nonclinical programs, applicants must score a minimum of 173 (computer based) on TOEFL with a goal of 213 prior to graduation.

#### Foreign transcripts

Foreign transcripts must be sent to an approved evaluation center of the National Association of Credential Evaluation Services, Inc. Results must be sent directly from the center to Loma Linda University, School of Allied Health Professions.

#### Study load

A person entering the United States on a student visa (F-1) must carry successfully a full study load during each quarter of each academic year (12 units for the undergraduate, 8 units for the graduate student).

#### Finances, employment

The applicant must be prepared to provide an advance deposit, as required by the University,

and must give assurance that additional funds will be forthcoming to meet school expenses. Scholarships and assistantships available to international students are scarce, and employment is limited by regulations of the Immigration and Naturalization Service to no more than twenty hours per week.

#### Exchange visitor

Through the U. S. Information Agency, the University has a program for exchange visitors. A person entering the United States on an exchange visitor visa (J-1) is subject to the same regulations of study load and work limitations as is the F-1 student. Further information may be obtained from the international student adviser in the Student Affairs Office.

#### Visa forms

The international student adviser in the Student Affairs Office will provide visa forms for either the F-1 or the J-1 status after the applicant's acceptance and after financial arrangements have been made.

### EXTENDED-CAMPUS PROGRAM

The School currently operates extended-campus programs. The master's degrees in occupational therapy and in physical therapy are offered in Mayaguez, Puerto Rico. A B.S. degree in health science is offered in Yokkichi, Japan. An A.S. degree in occupational therapy assistant, a B.S. degree in radiation technology and a certificate in nuclear medicine are offered in Fresno, California.



Probably the first staff any applicant to the School of Allied Health Professions sees are Office of Admissions personnel: (left to right) Shirley Sing, Helen Greenwood (Director of Admissions), Emmalein Dharmaraj, and Leah Natividad-Beck (seated).

# Student Life

The information on student life contained in this BULLETIN 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.

## 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 the 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 his/her academic performance is below standard; s/he neglects other student duties; his/her social conduct is unbecoming; or his/her 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 each School's section of the *Student Handbook*. Grievances regarding both academic and nonacademic matters must be processed according to the grievance procedures in the *Student Handbook*. 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—

- cosmopolitan, in that historically the University's global mission has promoted bonds and opportunities in education and service without regard to sex, national or racial origin, or geographical origin; and
- comprehensive, in that the University's concern for the welfare of the student traditionally has been an integrated concern for assisting the student in balanced development.

The University offers opportunities for students to complement their formal learning through participation in a variety of recreational, cultural, and other activities that can enrich group interaction and leadership experiences, increase interests in fields outside one's profession, develop talents, and enhance wholesome and memorable association with others.

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

## SPIRITUAL HEALTH

Opportunities for personal development and spiritual enrichment are provided in the regular schedule of religious exercises and activities and in informal association with others who cherish spiritual values.

Through the Faculty of Religion, required and elective classes are offered—in foundational studies (biblical, theological, historical, and mission); in personal, professional, and social ethics; and in relational studies (applied theology, clinical ministry, and psychology of religion).

## SOCIAL HEALTH

Situated within easy access of the ocean, mountains, and desert, the University provides numerous opportunities for social and recreational activities. A variety of University-, School-, and group-sponsored events encourage students to relax and become better acquainted with one another.

## TEACHING LEARNING CENTER

Academic life at this University is rigorous, and inefficient study skills can add to the stress and strain. The Teaching Learning Center works with students to develop the reading, writing, analytical, and study skills needed to succeed in professional education.

The center offers three ABLÉ programs that will help students face academic challenges by:

- A**ssessing their learning style and augmenting reading skills.
- B**reaking through in reading speed and comprehension.
- L**earning analytical and memory techniques and skills.
- E**nhancing their ability to take tests and examinations.

If a student is having scholastic difficulties, the center will assess the student and tailor a program designed to increase and/or improve his/her reading speed and comprehension, writing clarity, analytical abilities, and other study skills—using the student's own course materials.

The center is located on campus in West Hall, Room B12. There is no charge to the student for assessment and evaluation. The regular student tuition package does not include the TLC tuition. However, TLC tuition is lower than regular tuition. For additional information, please call 909/558-8625.

## UNIVERSITY STUDENT/FAMILY COUNSELING CENTER

The University Counseling Center offers a variety of confidential services to students and their families, including: individual, premarital, marital, family, and group counseling regarding issues of adjustment, anxiety, depression, etc.; skills in time management, studying, and test-taking; and 24-hour emergency crisis intervention. The center is located at 11374 Mountain View Avenue, Loma Linda. Full-time students may receive up to nine free visits. Call 909/558-4505 (or, on campus: 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. LLSAP clinicians will develop a treatment plan that may include free short-term counseling, up to eight sessions. If more extensive treatment is appropriate, clients are 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. LLSAP clinicians will not release information without the written consent of the student, with the exception of matters that fall under mandatory reporting laws.

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.

LLSAP appointments may be scheduled during office hours (on-campus telephone—66050; off-campus—558-6050): Monday through Wednesday 8 a.m.-5 p.m.; Thursday 8 a.m.-8 p.m.; Friday 8 a.m.-1 p.m. Additional appointment times may be available upon request. All LLSAP services are free of charge. LLSAP is located at:  
11360 Mountain View Avenue  
Hartford Building, Suite A  
Loma Linda, CA 92354.

## PHYSICAL HEALTH

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

### The Drayson Center

The Drayson Center, the University's recreation and wellness center, is a state-of-the-art fitness facility.

The center includes a 21,000-square-foot multipurpose gymnasium, which may accommodate three full-size basketball courts or five volleyball courts or nine badminton courts. Circling the gymnasium's inside perimeter is a three-lane, elevated, rubberized 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 large, ten-lane lap pool is designed to accommodate scuba diving classes. 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 multi-use 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, scuba diving, tennis, weight training, and wilderness survival. Physical assessments are also available.

## 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. It 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 8 A.M.-5 P.M. Monday through Thursday and 8 A.M.-2 P.M. on Friday. 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 which 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 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 provision only during open enrollment

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.

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 Risk Management.

#### **Buy-in rates per quarter**

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

#### **Student responsibility for payment**

Neither Student Finance nor the Department 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 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 following pre-existing-condition exclusion 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 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 Risk Management.

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 Risk Management. For additional health plan information, phone the Department of Risk Management at 909/558-4386.

### **MALPRACTICE COVERAGE**

**S**tudents are covered by malpractice coverage while acting within the course and scope of any approved clinical assignment.

### **GOVERNING PRACTICES**

#### **Residence hall**

The School 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 dean of students 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 University's dean of students.

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 give the Office of the Dean advance written notice in order to keep the School's records correct and up to date.

#### **Professional apparel**

Student uniforms 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. Students are to maintain their uniforms in clean, presentable condition. Information on the required professional apparel is furnished by the School.

#### **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 by the School and in this BULLETIN in the section Policies and General Regulations, under PROFESSIONAL STANDARDS.

#### **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**

Students are responsible for transportation arrangements and costs for off-campus assignments and clinical affiliations. All vehicles used to transport fellow students for off-campus assignments must be registered with Campus Safety 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 University Department of Safety and Security. Student vehicles used on campus must be registered with the University Department of Safety and Security. Returning students must go to the University Department of Safety and Security to renew registration each quarter.

#### **Student identification card**

All students will be assigned University ID numbers and issued student ID cards. The University student ID card will be used for library, health, and other services.

In some cases, students are also required to have Medical Center ID badges. Information regarding this requirement can be obtained from the Office of the Dean of the School.

#### **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 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 School 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 LLU drug-free environment—as well as information regarding prevention, detection, assessment, treatment and relapse prevention, confidentiality, and discipline—see the Loma Linda University *Student Handbook 2002*, 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 careers, educational experience, and well-being 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 *2002 Loma Linda University Student Handbook, Section V, University Policies*.

#### **Dismissal, grievance**

Students who are involved in dismissal proceedings or who wish to file a grievance are referred to the grievance procedure as outlined—

- in the Student Life section of this BULLETIN (see FROM UNIVERSITY TO STUDENT, par. 3);
- in the School section of the *Student Handbook*.

#### **Employment**

It is recommended that students refrain from assuming work obligations that divert time, attention, and strength from the arduous task of training in their chosen career. A student wishing to work during the school year may petition for permission from the Office of the Dean. The decision of the Office of the Dean regarding such an employment request will be based on grades, class load, health, and School policy.



# Policies and General Regulations

**S**tudents of the School of Allied Health Professions are responsible for informing themselves of and satisfactorily meeting the policies and regulations pertinent to registration, matriculation, and graduation.

## ACADEMIC AUTHORITY

**T**he 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

**A**cts of dishonesty—such as but not limited to theft; plagiarism; knowingly giving, obtaining, or falsifying information during examinations or other academic or professional practice assignments—can be cause for dismissal from the School. Instructors and students are charged with the responsibility of reporting instances of such behavior to the department chair for investigation. Substantiated violations are to be brought before the dean for disciplinary action.

The minimum disciplinary actions to be taken for plagiarism include:

- first offense—a failing grade on the assignment;
- second offense—failure in the course without possibility of withdrawal.

Cheating will result in failure in the course without possibility of withdrawal and may result in dismissal from the program.

## REGISTRATION AND ATTENDANCE

### Registration

The student must register on the dates designated in the *Loma Linda University Course Schedule and Registration Instruction* booklet published each quarter, as well as on dates designated in the quarterly Student Information Sheet available from the Office of University Records. Autumn Quarter registration procedure includes recording information on forms furnished by the Office of University Records, clearing financial arrangements with the Student Accounting Office, and having a student identification picture taken.

A late-registration period of five days is provided to accommodate students who have been unable to return to campus by the beginning of the term. A late-registration fee of \$50 will be charged during this period. The student may not attend class without being registered.

### 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.

### Withdrawal from school

A student who withdraws from a program of study must file a Withdrawal from All Classes form. Tuition is refunded according to the practice outlined in the Financial Information section of this BULLETIN.

### 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.

### NonLLU courses as part of total load for financial aid

Correspondence, extension, independent study, and course work taken at any other institution constitute part of the student's study load. Only when the student enrolls in such courses using the "consortium agreement" form (from the Office of Financial Aid) will the course(s) count in 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 and immigration purposes. The student must be carrying IP (in progress) units or registered for a minimum of 1 new unit of research, dissertation, or thesis for the quarter. The academic work load is counted as follows:

- full load—minimum of 36 clock hours/week
- three-quarter load—minimum of 27 clock hours/week
- one-half load—minimum of 18 clock hours/week
- one-quarter load—minimum of 9 clock hours/week.

A student may simultaneously earn more than one baccalaureate degree, provided there is a minimum of 20 units unique to each degree and provided all other degree requirements are met.

#### Graduate-level courses

Seniors who meet prerequisites may, with approval of the instructor and consent of the dean of the School of Allied Health Professions and the dean of the school offering the course, enroll for a limited number of graduate-level courses (500-level or above). Only with special permission may credit be applied to the undergraduate degree, in which case the credit will not apply toward a graduate degree.

#### Attendance

Regular attendance at all appointments (class, clinical, laboratory, special assignment, chapel) is required beginning with the first day of each term. Voluntary absences from laboratory assignments are not permitted.

#### Special examination

It is expected that the student will take quizzes and examinations at the regularly scheduled time. To take an examination at a time other than when it is scheduled, the student must secure the consent of the instructor and the chair of the department and must file with the instructor a permit obtained from the Office of the Dean. A fee is charged for a special examination. (See the Schedule of Charges in the Financial Information section of this BULLETIN.)

#### 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.

#### Leave of absence

A student who requires a temporary discontinuance of studies must request in writing a leave of absence after one quarter's absence. The maximum term for a leave is one year. A student who is not registered after one quarter's absence (summer excluded in most cases) and has not requested a leave of absence will be considered no

longer in the program. In this case the student who seeks re-entry must meet the entrance requirements in force at the time of re-entrance and will enter under the new BULLETIN.

## PROFESSIONAL STANDARDS

It is important that students portray a professional image to those with whom they come in contact. Inappropriate dress, grooming, or conduct often detracts from patients' confidence in the quality of their care. In addition, Loma Linda University's affiliating hospitals have standards that are reflected in the guidelines below. For these reasons the following standards are provided. Students are required to adhere to these standards while enrolled in the program.

A student failing to observe these dress and grooming codes may be dismissed by a faculty member from a class or building. Students will be allowed to return to the class/building when the problem is eliminated.

#### 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:

1. Men's hair must be neatly trimmed and not fall below the collar. Ponytails, spikes, and dreadlocks are not acceptable.
2. Mustaches and beards, if worn, must be neat and closely trimmed.
3. Women's hair, if long, may be required to be tied back. Spikes and dreadlocks are not acceptable.
4. The wearing of hats indoors is not acceptable.
5. Words, pictures, and/or symbols displayed on clothing should be consistent with a Christian institution and sensitive to a diverse student population.
6. Excessive makeup and fragrances are not appropriate.
7. 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.
8. 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.

#### General attire

Modest, casual wear is appropriate on campus and in class. Shorts must be neat and at least mid-thigh in length. Bare feet, bare midriffs, low necklines, or skin-tight clothing are not acceptable.

**Laboratory attire**

For many classes, students will have to "dress down" for laboratories. Instructors will specify appropriate attire, which is to be worn only for laboratories and is not appropriate in other classrooms, on the main floor of Nichol Hall, or in any clinical facility.

**Clinical attire**

Professional dress is required for all clinical assignments, chapel attendance, any class that is held in a clinical facility, and any class where patients are present. Professional dress includes: skirts/dresses of modest length or long pants (dress pants are recommended—no jeans), closed-toe shoes, and name tags. Laboratory coats may be required in some clinical settings.

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

1. 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 malpractice litigation.
2. 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.

**SPECIAL COURSE WORK/CREDIT****Correspondence course**

As a general rule, the student may not register for a correspondence course that duplicates a course offered at the University. If the student is a candidate for graduation, the course must be completed a month before graduation. Information and application forms for Griggs University Home Study International (the Seventh-day Adventist correspondence school) in Washington, D.C., may be obtained at the Office of University Records.

**Extension study**

To be acceptable for credit, an extension course must be evaluated as to its equivalence to an accepted course. Registration for it requires the approval of the department chair and the consent of the dean.

**Independent study**

Independent study may be undertaken subject to the consent of the department chair. The student is responsible for completion of the Directed/Independent Study Title Request form in addition to the regular registration. Credit is normally limited to 2 units during the program of study. Under special circumstances, more than 2 units may be taken. The work is to be completed in adequate time before graduation to allow recording in the Office of University Records.

**Waiver/Equivalency**

A requirement may sometimes be waived on the basis of prior course work, experience, or licensure. If certain conditions are met, credit may be given. In either case, an examination may be required.

An examination in a given subject may be taken only once. The grade for any credit granted is recorded as an S after the student has earned at least 12 units of acceptable credit at this University. Credit cannot be earned in this way to make up for a course in which an unsatisfactory grade was received. All examinations must be taken before the last quarter of the program of study.

Requests are made to the dean on the Petition to Obtain Credit by Examination form. There is a fee for an examination. (See Schedule of Charges in the Financial Information section of this BULLETIN.)

**REGISTRATION CLASSIFICATIONS****Regular**

A regular student has satisfied 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**

An applicant who is accepted for entrance into a School of Allied Health Professions program and permitted to remove quantitative and/or qualitative deficiencies in order to qualify for regular standing is classified as a provisional student during the transition period.

**Probational**

A student whose academic and/or clinical performance does not meet the minimum standards of the program in which s/he is enrolled is classified as a probational student.

**Special**

A qualified individual who may enroll for selected courses is classified as a special student. Consent for enrollment as a special student is granted by the department, with the endorsement of the dean, and is subject to classroom and laboratory space. Tuition is paid at the applicable rate.

**Audit**

Certain courses (excluding laboratory courses) may be audited. Consent for enrollment as an auditor is granted by the department, with the endorsement of the dean, and is subject to classroom space. Change of classification from audit to credit

or from credit to audit may be done only during the first seven calendar days of the quarter for courses following the general University calendar. For other courses, the change may be made with the consent of the dean. (For tuition rates, see the Schedule of Charges in the Financial Information section of this BULLETIN.)

**Academic standing**

A student's standing in the School is classified either as regular standing or academic probation, depending on his/her scholastic performance.

**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 a degree in nursing will 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; certificate—1st, 2nd, or 3rd year; as well as freshman, sophomore, junior, senior, as is appropriate for the degree program.)

**SCHOLASTIC STANDING**

**Grades and grade points**

The following grades and grade points are used in this University. Each course taught in this School has been approved for either a letter grade or an S/U grade, and deviations from this are not allowed.

A	4.0	Outstanding performance.
A-	3.7	
B+	3.3	
B	3.0	Very good performance for undergraduate credit; satisfactory performance for graduate credit.
B-	2.7	
C+	2.3	
C	2.0	Satisfactory performance for undergraduate credit.
C-	1.7	
D+	1.3	
D	1.0	Minimum performance for which undergraduate credit is granted.
F	0.0	Failure—given for not meeting minimal performance.
S	none	Satisfactory 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 examina-

tion week. Once filed, the grade is not subject to change.

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

**Notations**

W	Withdrawal—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 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 president 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 nursing or named cognate course that s/he is failing at the time of withdrawal.
UW	Unofficial Withdrawal—indicates that the student discontinued class attendance after the close of registration but failed to withdraw officially.

- I Incomplete**—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 the use of the petition form, 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 will then report the I notation on the grade-report form, as well as the grade that 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 In Progress**—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 Audit**—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 summer session. (This does not address short summer courses lasting only a week or two.)
- AUW Audit Withdrawal**—given for withdrawing from the course or to indicate that the 80 percent class attendance requirement was not observed.

### 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 of the faculty permission 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 BULLETIN 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 BULLETIN 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 BULLETIN 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 him-/herself from the program.

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

Students must complete their degree programs within the following maximum time frameworks from their initial enrollment in the program:

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

#### Dismissal, grievance

A student who is involved in dismissal proceedings or who has an academic or clinical grievance may proceed as follows:

1. The student should first discuss the problem or grievance with the instructor. If, following discussion with the instructor, the student is not satisfied and continues to believe that s/he has not been dealt with fairly, the student may discuss the grievance with the chair of the department or with the program director involved.
2. If the matter is not resolved at this level, the student has recourse to the Office of the Dean.
3. As a final appeal, the student may request the dean to appoint a faculty review committee to evaluate the situation and make a recommendation to the dean. This request should be presented in writing and include pertinent information regarding the situation. The student may request to meet with the review committee for discussion of the case. The student must file for the grievance proceeding within one quarter following the alleged grievance. A grievance is ineligible for review if not filed within this time frame.

### GRADUATION REQUIREMENTS

A candidate for a degree shall have met the following conditions:

1. Completed all requirements for admission to the respective program, as well as all General Education requirements of the University.
2. Completed all requirements of the program, including specified attendance, level of scholarship, and number of credit units.
3. Completed a minimum of 96 quarter units for the associate degree or 192 quarter units for the baccalaureate degree, with a minimum grade-point average of 2.0 (2.5 for the Master of Occupational Therapy and the Master of

Physical Therapy degree) and with no grade less than C (2.0).

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.

### GRADUATION CEREMONIES

Graduation events include formal ceremonies identified as conferring of degrees, awarding of diplomas, and recognition of candidates for degrees. Other related graduation events include the baccalaureate and vesper services. The conferring of degrees ceremony(ies) occurs at the close of the Spring Quarter and includes an academic procession, the formal conferring of degrees by the president, and the presentation of diplomas by the dean of the school. Candidates who complete the requirements for degrees and certificates are invited, with families and friends, to attend and participate in these colorful events.

To be eligible to participate in graduation events, candidates must have completed all requirements for the degree, including prerequisites/corequisites, as specified by the School. In certain degree programs, upon authorization of the dean, exceptions will be made for candidates who:

- have only clinical experience requirements to complete and can project completion by the end of the calendar year;
- can complete remaining degree requirements by the end of the Summer Quarter; or
- are in a block program.

The course work may not exceed 8 units for graduate students or 12 units for undergraduate students.

A student who completes the requirements for a degree or certificate (other than clinical experience) at the end of the Summer, Autumn, or Winter Quarter is invited to participate in the subsequent June commencement events. The official date of graduation on the diploma is ordinarily the last day of the term in which the requirements for a degree are completed.

Superior academic performance and achievement in scholarship and leadership are recognized in the printed graduation program. Superior academic performance is recognized for persons who complete their baccalaureate degree and who at the end of the quarter preceding their final term have acquired a cumulative grade-point average for all college work (includes course work taken at other colleges/universities, except for remedial courses) as follows:

- 3.5 Graduation cum laude
- 3.8 Graduation magna cum laude
- 3.9 Graduation summa cum laude

Although the official commencement program indicates names of graduates who qualify for honors on the basis of their grade-point average as of the end of the quarter preceding their final term, the subsequently issued diploma and transcript may indicate graduation with honors if the student's final quarter's record has increased the grade-point average sufficiently to qualify for honors at that time.

### TRANSCRIPTS OF CREDIT

The University provides transcripts to other institutions or to the student or graduate only on the written request of the student or graduate (\$2 per copy). Transcripts, statements of completion, diplomas, and certificates are issued only when financial obligations to the University have been met.

### 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 **Chair's Scholarship Award** is given for highest scholastic attainment in professional studies and performance in the Christian context.

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 **Louisa Jezerinac Cardiopulmonary Scholarship Award** is given to a student whose patient care exemplifies the qualities of compassion and dedication.

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 **PA Faculty Award** is presented to a student in the physician assistant program 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.

#### CLINICAL LABORATORY SCIENCE

The **Chair's Scholarship 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 whose intent it is 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 student in the Health Information Administration Program 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 in the Autumn Quarter and is 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 **Faculty Award** is presented to a senior occupational therapy student and to an occupational therapy assistant 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 occupational therapy and occupational therapy assistant students in recognition of excellent academic and clinical performance.

The **Occupational Therapy Alumni Association Award** recognizes outstanding scholastic and professional achievement in occupational therapy. The award is presented to a senior occupational

therapy student and an occupational therapy assistant student.

The **Southern California Consultants Scholarship Award**, presented annually to two occupational therapy assistant 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 a financial need and 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 in the pursuit of and dedication to 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.



# Financial Information

**T**he 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.

## GENERAL PRACTICES

**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 be settled prior to registration.

### Student identification

New students are assigned a confidential identification "A" number. This number must be referenced in all correspondence and financial transactions.

### Advance payment and refunds

Tuition and fees are payable in full at the beginning of each term. If the student withdraws from a course or all courses up to the 60 percent point (in time) of the quarter, tuition will be refunded on a pro-rata basis, with refunds of not less than the portion of tuition assessed equal to the remaining portion of the enrollment period as of the last day of attendance (rounded down to the nearest 10 percent of that period.)

To withdraw from a course(s), the student must complete a Change of Program form; or a Total Withdrawal form to completely withdraw from School. The date the properly completed form is submitted to the Office of University Records will be the date of withdrawal used in calculating tuition refunds. These forms should be completed and submitted on the last day of class attendance.

### Monthly statement

The monthly statement is sent to the student. The student may request that an additional statement copy be sent to a parent or sponsor monthly. The amount of the monthly statement is due and payable in full within thirty days after presentation. An account that is more than thirty days past due is subject to a service charge of .833 percent per month (10 percent per year). Failure to pay scheduled charges or to make proper arrangements, which is reported to the Office of the Dean, 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;
- 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 Student Finance Office, the student must have a zero (-0-) balance due on account. To obtain financial clearance from the Student Loan Collection Office, the student must be current on all 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 social security number to ensure that the correct account is credited.

### Acceptance deposit

Upon notification of acceptance, the applicant makes a deposit with the Office of Admissions and Records in order to hold a place in the class. This amount is deducted from the tuition and fees due at the initial registration. The deposit is nonrefundable.

### Room and key deposit

Residence hall room and key deposits are required by the residence hall dean and must be 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.

**International students**

International 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.

Scholarships and assistantships for international students are scarce, and employment is limited by regulations of the Immigration and Naturalization Service to no more than twenty hours per week. Unless special permission is given by immigration authorities, international students are restricted to employment on campus.

**Veteran's 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 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>>.

**Health service**

All full-time students taking at least 7 paid units who have enrolled in the Student Health Plan through Risk Management are automatically covered by health-service provisions. Students enrolled for fewer than 7 units per quarter may request and pay for health-service coverage. Hospital and medical expenses outlined in the *Student Health Plan* booklet are covered. Items not covered by the terms of the plan are payable by the student in all cases, and payment is expected at the time these services are given. Students may purchase family coverage through the Department of Risk Management. (See also Student Health Plan paragraphs in the Student Life section of this BULLETIN.)

**SCHEDULE OF CHARGES (2002-2003)**

(Subject to change by Board of Trustees action)

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

**Tuition information: by columns; 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

**CARDIOPULMONARY SCIENCES**

**Respiratory Care—Bachelor of Science**

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
JR	51		\$17,595	
SR	61		\$21,045	

**Respiratory Care—Post-Professional Bachelor of Science**

New	51	\$17,595
Cont.	4	\$ 1,380

**Polysomnography—Certificate**

(contact department for tuition information)

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

JR	37	\$12,765
SR	33	\$11,385

**CEMSER—Center for EMS Education and Research**

(contact EMS department for instructor- and certificate-program tuition information)

**Physician Assistant—Master of Physician Assistant**

1	56	\$24,080
2	41	\$21,070
3	8	\$ 3,440

**CLINICAL LABORATORY SCIENCE**

**Cytotechnology—Certificate; Bachelor of Science**

1	48	\$16,560	Certificate
2	16	\$ 5,520	Certificate
JR	48	\$16,560	B.S.
SR	56	\$19,320	B.S.

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

JR	59	\$20,355
SR	62	\$21,390

Track A, B, C

**Phlebotomy—Certificate**

\$ 294 per unit

**HEALTH INFORMATION MANAGEMENT**

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

1	37	\$15,910	full-time
2	17	\$ 7,310	full-time
1	18	\$ 7,740	part-time
2	25	\$10,750	part-time
3	11	\$ 4,730	part-time

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

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

**Health Information Administration—Certificate; Bachelor of Science**

JR	52	\$17,940
SR	48	\$16,560

Part-time: units and tuition vary.

**Coding Specialist—Certificate**

1	10	\$ 1,620
2	15	\$ 2,430
3	6	\$ 972

**NUTRITION AND DIETETICS**

Dietetic Technology—Associate in Science; Certificate

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
Soph	53		\$13,568	
Cert	60		\$20,528	

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

JR	61	\$20,873	B.S.
SR	50	\$17,078	B.S.

**OCCUPATIONAL THERAPY**

Occupational Therapy Assistant—Associate in Arts

1	51	\$13,056
2	6	\$ 1,536

Occupational Therapy—Entry-Level Master of Occupational Therapy; Post-Professional Master of Occupational Therapy

Entry-Level M.O.T.

JR	69	\$23,805	
SR	44	\$15,180	
Grad	36	\$12,420	
JR	65	\$22,425	Track
SR	42	\$14,490	Track
Grad	36	\$12,420	Track

Post-Professional M.O.T.

JR	58	\$20,010
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**PHYSICAL THERAPY**

Physical Therapist Assistant—Associate in Science

1	57	\$14,592	regular
2	6	\$ 1,536	regular

(Two-year track program varies)

Physical Therapy—Entry-Level Master of Physical Therapy.; Progression Master of Physical Therapy; Post-Professional Master of Physical Therapy

Entry-Level M.P.T.

1	72	\$24,840
2	64	\$22,080
3	34	\$11,730

Progression M.P.T.

1	82	\$28,118
2	64	\$22,080
3	9	\$ 3,105
4A	8	\$ 2,760
4C	5	\$ 1,725

Post-Professional M.P.T.

1	36	\$15,480
2	9	\$ 3,870

Physical Therapy—Entry-Level Doctor of Physical Therapy; Post-Professional Doctor of Physical Therapy

Entry-Level D.P.T.

1	82	\$29,520
2	68	\$24,480
3	34	\$12,240
4	5	\$ 1,800

**1            2            3            4**

Post-Professional D.P.T.

1	36	\$15,480
2	9	\$ 3,870

Physical Therapy—Doctor of Physical Therapy Science

Post-Professional D.P.T.Sc.

1	36	\$15,480
2	3	\$ 1,290

**RADIATION TECHNOLOGY**

Medical Radiography—Associate in Science

New	40	\$10,240
Cont	23	\$ 5,888

Radiation Sciences—Bachelor of Science

New	32	\$11,040
Cont	10	\$ 3,450

Medical Sonography—Certificate

Cont	3	\$ 1,290	
New	17	\$ 7,310	Track 1
Cont	18	\$ 7,740	Track 1
Cont	23	\$ 1,290	Track 1
New	21	\$ 9,030	Track 2
Cont	5	\$ 2,150	Track 2

Nuclear Medicine Technology—Certificate

New	15	\$ 6,450
Cont	3	\$ 1,290

Radiation Therapy Technology—Certificate

New	27	\$11,610
Cont	2	\$ 860

Special Imaging Technology: CT/MRI—Certificate; CVI—Certificate

New	18	\$ 7,740
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**SPEECH-LANGUAGE PATHOLOGY AND AUDIOLOGY**

Speech-Language Pathology Assistant—Associate in Science

(contact department for tuition information)

Speech-Language Pathology and Audiology—Bachelor of Science

JR	48-49	\$16,560 to \$16,905
SR	48	\$16,560

Speech-Language Pathology—Post-Bachelor of Science Certificate

51	\$17,595
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**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
50	Per eighty clock hours (\$125 minimum) to repeat a clinical-experience course when the program of study is 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 M.P.T/D.P.T. degrees, nonrefundable (applied on tuition)
- 500 Acceptance deposit M.P.A. degree, nonrefundable (applied on tuition)
- 200 Acceptance deposit emergency medical care-B.S. degree, non-refundable (applied on tuition)
- 50 Late registration (beginning first day after the published first day of each quarter)
- 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 \$10 charge); or if student gives a post-dated 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)
- 10 Returned-check charge
- 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)
- \$125 Cytotechnology, ASCP Board of Registry
- 80 Dietetic Technology, American Association Registration
- 125 Dietetics, American Association Registration
- 195 Health Information Management AHIMA Registry Examination (member)
- 245 Health Information Management, AHIMA Registry Examination (nonmember)

- 250 Health Information Management Certified Coding Specialist (CCS), through AHIMA (member)
- 295 Health Information Management Certified Coding Specialist (CCS), through AHIMA (nonmember)
- 125 Medical Technology, ASCP Board of Registry—National
- 89 Clinical Laboratory Scientist License—California
- 145 Clinical Laboratory Scientist License—National
- 395 National Board for Certification in Occupational Therapy (NBCOT)
- 395 National Board for Certification in Occupational Therapy Assistant (NBCOT)
- 425 National Commission on Certification of Physician Assistant (NCCPA)
- 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
- 15 California Health Information Association (CHIA) student membership

**MISCELLANEOUS EXPENSES**

**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
- 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

## STUDENT AID

For all allied health professions programs, inquiries about loans and other student financial matters should be made to the Office of Financial Aid. The new or returning student must file the following completed documents with the Office of Financial Aid:

1. Undergraduate LLU financial aid application.
2. Photocopies of parents' and student's most recent federal tax return(s).
3. Financial aid transcripts from each institution previously attended since high school, regardless of whether or not aid was received.
4. Income Tax Affirmation (ITA)/Statement of Registration Compliance (SRC).
5. Other documents as requested, if
  - the student or the student's parents receive nontaxable income,
  - the student is self-supporting, or
  - the student is a permanent resident.

Applicants anticipating need of financial assistance should apply for aid early. It is not necessary to have received an acceptance before applying. Priority will be given to those applicants whose completed applications are received by March 15 of each year. Late applications will be funded as long as aid is available.

Financial assistance is determined without regard to gender, race, religion, national or ethnic origin, age, or physical disability. Only U.S. citizens and permanent residents qualify for financial aid.

### Financial aid applications

Loma Linda financial aid applications for the 2002–2003 academic year (Summer through Spring quarters) are available in the Office of Financial Aid in January. They are also available on line at [www.llu/ssweb](http://www.llu/ssweb). FAFSA applications are

available on line at [www.fafsa.edu.gov](http://www.fafsa.edu.gov). Financial aid applications must be renewed annually. Cal Grant deadline is March 2.

### Special grants (WICHE)

The University participates in the student-exchange program of the Western Interstate Commission for Higher Education. 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 also may be made at the Office of Student Financial Aid. The application deadline is October 15 prior to the year aid is needed.

### Loans

The University participates in a number of government loan programs. Loan funds, in limited amounts, are also available for senior students in the final two quarters of the program, upon the recommendation of the dean. Limited scholarship funds are available from the School's Scholarship Endowment Fund. Students who complete the Loma Linda University financial aid application will be considered for all available funds.

The Student Loan Collection Office 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.”**



“Numbers speak louder than words,” says assistant dean of finance, Kent Chow, shown here with Janel Said, administrative secretary.

# III

## THE DEPARTMENTS

### General Information

#### Cardiopulmonary Sciences

RESPIRATORY CARE—Certificate; Bachelor of Science;  
Post-Professional Bachelor of Science  
EMERGENCY MEDICAL CARE—Bachelor of Science  
PHYSICIAN ASSISTANT—Master of Physician Assistant  
POLYSOMNOGRAPHY—Certificate

#### Clinical Laboratory Science

PHLEBOTOMY—Certificate  
CYTOTECHNOLOGY—Certificate; Bachelor of Science  
CLINICAL LABORATORY SCIENCE (FORMERLY MEDICAL TECHNOLOGY)—Bachelor of Science

#### Health Information Management

HEALTH INFORMATION SYSTEMS—Master of Health Information Systems; Post-Master's Certificate  
in Health Information Systems  
HEALTH INFORMATION ADMINISTRATION—Certificate; Bachelor of Science  
CODING SPECIALIST—Certificate

#### Nutrition and Dietetics

DIETETIC TECHNOLOGY—Associate in Science; Certificate  
NUTRITION AND DIETETICS—Bachelor of Science; Certificate

#### Occupational Therapy

OCCUPATIONAL THERAPY ASSISTANT—Associate in Arts  
OCCUPATIONAL THERAPY—Entry-Level Master of Occupational Therapy; Post-Professional Master  
of Occupational Therapy

#### Physical Therapy

PHYSICAL THERAPIST ASSISTANT—Associate in Science  
PHYSICAL THERAPY—Entry-Level Master of Physical Therapy; Progression Master of Physical  
Therapy; Post-Professional Master of Physical Therapy  
PHYSICAL THERAPY—Entry-Level Doctor of Physical Therapy; Post-Professional Doctor of Physical  
Therapy; Post-Professional Doctor of Physical Therapy Science

**Radiation Technology**

MEDICAL RADIOGRAPHY—Associate in Science

RADIATION SCIENCES—Bachelor of Science

RADIATION THERAPY TECHNOLOGY—Bachelor of Science; Certificate

DIAGNOSTIC MEDICAL SONOGRAPHY: GENERAL/VASCULAR; CARDIAC; OR VASCULAR—  
Certificate

NUCLEAR MEDICINE TECHNOLOGY—Certificate

SPECIAL IMAGING TECHNOLOGY: CT/MRI (COMPUTED TOMOGRAPHY / MAGNETIC RESONANCE  
IMAGING)—Certificate

**Speech-Language Pathology and Audiology**

SPEECH-LANGUAGE PATHOLOGY—Certificate

SPEECH-LANGUAGE PATHOLOGY ASSISTANT—Associate in Science

SPEECH-LANGUAGE PATHOLOGY AND AUDIOLOGY—Bachelor of Science

# General Information

The sections that follow provide information regarding:

- codes and terms;
- educational experiences as applied in the laboratory, practicum, and/or affiliation;
- continuing education;
- conjoint and cognate courses;
- the Bachelor of Science degree in health science; and
- the portfolio practicum, which—over a one-to-two year period—documents growing competence in the chosen profession while helping the student evaluate and integrate personal goals with the wholistic mission and goals of the University and School.

## CODES AND TERMS

### Unit of credit

Credit is granted in terms of the quarter unit, which represents 10 to 12 class hours together with the requisite study, preparation, and practice; or a minimum of 20 laboratory hours; or the equivalent in pre- and/or postlaboratory studies.

### Continuing education unit

A continuing education unit (CEU) is defined as 10 contact hours in lecture, conference, or a combination of laboratory practice and administration.

### Course number

Ordinarily, course numbers reflect the year in which the courses are taken:

001-099	remedial
101-199	freshman
201-299	sophomore
301-399	junior
401-499	senior
501-599	graduate

### Code letters

The subject areas are indicated by code letters as follows:

ACCT	Accounting
AHCJ	Allied Health Conjoint
ANAT	Anatomy
BCHM	Biochemistry
BIOL	Biology
CHEM	Chemistry
CLSC	Cytotechnology
CLSM	Clinical Laboratory Science
DTCH	Dietetic Technology
DTCS	Nutrition and Dietetics
EDCI	Curriculum and Instruction
EDFO	Educational Foundations and Research
EDPC	Educational Psychology and Counseling
EMMC	Emergency Medical Care
ENGL	English
HLCS	Coding Specialist
HLIN	Health Information Management
MATH	Mathematics

MGNT	Management
OCTA	Occupational Therapy Assistant
OCTH	Occupational Therapy
PAST	Physician Assistant
PATH	Pathology
PHRM	Pharmacology
PHSL	Physiology
PTH	Physical Therapy
PMPT	Progression Physical Therapy
PSYC	Psychology
PTAS	Physical Therapist Assistant
RELB	Biblical Studies
RELE	Christian Ethics
RELR	Professional Ministry
RELF	Theological and Historical Studies
RESC	Rehabilitation Science
RSTH	Respiratory Therapy
RTCH	Radiation Technology
RTMR	Medical Radiography
RTMS	Medical Sonography
RTNM	Nuclear Medicine
RTSI	Special Imaging
RTTH	Radiation Therapy
SPPA	Speech-Language Pathology and Audiology

The schools are indicated by code letters as follows:

AH	School of Allied Health Professions
GS	Graduate School
SD	School of Dentistry
SM	School of Medicine
SN	School of Nursing
PH	School of Public Health
SP	School of Pharmacy
FR	Faculty of Religion

## APPLIED EDUCATIONAL EXPERIENCES

The following terms—**laboratory**, **practicum**, and **affiliation**—are used to describe the applied educational experiences during the course of professional training.



**Laboratory**

A laboratory is an application of theory and principles to real-life situations to develop skill and proficiency and a deeper understanding of the workings of theory.

**Practicum**

A practicum is a supervised practical application of theoretical studies to the clinical situation. Practica may occur concurrently with specific courses or may follow the completion of one or more theory courses.

**Affiliation**

An affiliation is a full-time experience in a clinical setting in which the student functions as a junior staff member with supervised, assigned responsibilities. The affiliation usually comes after the completion of all theoretical or preclinical studies; but in some instances, affiliations may also occur at the end of the junior year.

**CONTINUING EDUCATION**

The School of Allied Health Professions offers continuing education. Information is available from the appropriate department.

**CONJOINT COURSES****AHCJ 105 Procedures in Phlebotomy (3)**

Designed for individuals who are interested in laboratory medicine and would like to become certified phlebotomists. 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 129 Basic Communication Skills (1-2)**

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 (1-2)**

Advanced ESL oral communication designed to provide students with the opportunity to develop and practice basic oral communication techniques in professional and academic contexts, e.g., research and case presentations. Additionally, overall non-native speech patterns facilitated within these contexts to increase speech intelligibility. (Course not taught every year.) For Humanitec students only. Instructor consent required.

**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. (Prerequisite to many certificate and associate degree programs, e.g., coding specialist/certificate, occupational therapy assistant/ A.A.). Lecture and laboratory required.

**AHCJ 240 Microbiology (4)**

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, thirty hours; laboratory, thirty hours. Course covers two quarters.

Prerequisite: A college-level chemistry course.

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

An 8-unit (4 units Winter Quarter plus 4 units Spring Quarter) course 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. Riyadh, Saudi Arabia.

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 312 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 318 Physiology I (4)**

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

**AHCJ 321 Dynamics of Communication (2)**

Survey of 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 multi-person health care-delivery system.

**AHCJ 324 Psycho-Social 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 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)**

Introduction of SAHP goals for graduates. 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 329 Organic Chemistry with Laboratory (5)**

Study of 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 343 Neuroanatomy I (4)**

Basic anatomy and function of the central, peripheral, and autonomic nervous systems and related structures. Gross anatomy of brain and spinal cord. Functional consideration of cranial nerves, tracks, and nuclei of major systems. Lecture, slides, and laboratory with specimens.

**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: Score at or above the 75th percentile on the mathematics competency examination.

**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)**

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)**

Introduction to pharmacology, including study of pharmacokinetics, pharmacodynamics, and actions of pharmaceuticals commonly encountered in various allied health professions.

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

Examination of the theories of learning applied to teaching process. Includes evaluation of 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.

**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 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. Analysis of the teaching process, including setting of objectives, selection of content, and design of classroom and clinical teaching strategies, with emphasis on alternatives to lecturing.

**AHCJ 414 Foundations of Health Information Systems (3)**

Survey course for students interested in pursuing a master's degree in health information systems, business majors, and others who anticipate working with databases and computer systems in health care settings. Course includes introduction to the vocabulary and the principles of health information systems, specifically, the value of information, reasons for adopting the systems approach, general systems theory, scope of a system, structure and classification of systems, and the systems life cycle.

Prerequisite: Introduction to computers.

**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 419 Physiology II (3)**

Detailed study of neuromuscular physiology.

Prerequisite: AHCJ 318.

**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 (1-3)**

Hands-on instruction in Word, Excel, and Power-Point. Lectures, laboratory assignments, quizzes, projects, and a written and practical examination.

(Course not taught every quarter.) Number of units determined by challenge test given by instructor.

**AHCJ 428 Computer Applications (3)**

Review of current computer applications for health care professionals, including software/hardware for office management, graphics, educational presentations, literature acquisitions, and adaptive devices. (Course may not be taught every quarter.)

Prerequisite: AHCJ 426 or demonstrated competency in content of AHCJ 426.

**AHCJ 431 Database Management I (3)**

Introduction to database management concepts, with emphasis on medical information. Microsoft Excel used as a flat database. Data management and presentation using the sorting, reporting, and charting functions of Excel.

Prerequisite: Introductory computer course.

**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.

Prerequisite: AHCJ 431 or consent of instructor.

**AHCJ 433 Special Projects in Computer Applications (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.

Prerequisite: AHCJ 431, 432.

**AHCJ 444 Neuroanatomy II (2)**

Study of neuroanatomical systems, structures, and pathways, with application to lesions of the human nervous system.

**AHCJ 459 Current Issues: National and Global Perspectives (3)**

Review and discussion of concerns relative to the health field, i.e., legislation, regulations, and professional organizations. Project or paper required.

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

Introduction to 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)**

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)**

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 466 Advanced Studies in Selected Physical Therapy Topics (5)**

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.

**AHCJ 485 Technology in Education (3)**

Introduction to 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 clock hours per term)**

Advanced clinical experience in selected areas of professional practice.

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

Development of 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 501 Advanced Clinical Practice I (3)**

Demonstration and practice of advanced examination, assessment, and treatment of the lumbar spine, pelvic girdle, and lower extremities. Lecture and demonstration.

**AHCJ 502 Advanced Clinical Practice II (3)**

Emphasizes the skills utilized by clinical specialists in neurophysical therapy. Content based on the description of AHCJ 501.

**AHCJ 503 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.

**AHCJ 505 Educational Psychology for Health Professionals (3)**

Study of psychological development as it relates to the learning process in professional and higher education. Particular emphasis on the role of development, gender and learning, communication skills in learning settings, objectives setting and course design, stimulating higher-level thinking, motivation, and retention.

**AHCJ 506 Educational Evaluation and Clinical Assessment (3)**

Introduction to 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)**

Study of the 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 presentations 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 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 inter-relationship of general and specialized education in higher education.

**AHCJ 516 Clinical Imaging (3)**

Study of the etiology, pathogenesis, and clinical manifestations as related to the imaging of selected bone and joint pathologies. Discussion of current literature for selected pathologies.

**AHCJ 518 Neurobiology (3)**

Study of neurobiology, including current neuroscience literature, as related to selected pathologies.

**AHCJ 519 Graduate Portfolio (1)**

Development and preparation of materials collected throughout the instructional and internship period that demonstrate the student's knowledge of and training in health information systems. Projects, letters of recommendation, and records of directed practice. Attendance at University professional seminars required. Specialized training in areas of communication, diversity, ethics, balanced living, and compassion.

**AHCJ 521 Advanced Orthopaedic Procedures I (3)**

Demonstration and practice of advanced examination and treatment of the lumbar spine, pelvic girdle, and lower extremities.

**AHCJ 522 Advanced Orthopaedic Procedures II (3)**

Demonstration and practice of advanced examination and treatment of the cervical spine, shoulder girdle, and upper extremities.

**AHCJ 523 Advanced Orthopaedic Procedures III (3)**

Demonstration and practice of advanced examination and treatment of the lumbar spine, thoracic spine, and ribcage.

**AHCJ 525 Biostatistics (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. Introduction to computer analysis for solution of statistical problems.

**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 non-neuromusculoskeletal origins for the musculoskeletal complaints of patients who commonly seek rehabilitation. Particular emphasis on 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 529 Hemiparetic Upper Extremity (1)**

A manual-therapy approach to management of the CVA upper extremity. Taught systematically using clinical reasoning as a model.

**AHCJ 530 Research and Statistics I (3)**

In-depth study of research designs: their advantages and disadvantages, including pretest/posttest designs, post-test-only control-group designs, time-series designs, factorial designs, randomized block and repeated-measures designs, and incomplete block designs. Introduction to clinical trials, sequential research designs, and single-case experimental designs. Measurement and analysis of validity and reliability. Design of survey instruments. Use of power calculations for choosing appropriate sample sizes.

**AHCJ 531 Research and Statistics II (3)**

Analysis of data using one-way ANOVA with multiple comparisons, factorial ANOVA designs, randomized complete and incomplete block designs, and repeated measures. Introduction to multiple correlation and regression and model building using multiple regression techniques. Evaluation of research literature that uses multivariate analysis for data analysis. Introduction to nonparametric statistics. Interpretation of multivariate analysis computer output.

**AHCJ 532 Research and Statistics III (3)**

Selection of a research topic, literature review, proposal writing and approval. Collection of research data after proposal approval. Limited to students who are in the doctoral program in physical therapy.

Prerequisite: AHCJ 531 and consent of instructor.

**AHCJ 533 Research and Statistics IV (3)**

Individual arrangements for doctoral students to work with the instructor on analysis and presentation of research data. Preparation of manuscript presenting results of doctoral research study.

Prerequisite: AHCJ 532 and consent of instructor.

**AHCJ 534 Advanced Neurological Rehabilitation (3)**

In-depth study of the patient with spinal cord injury, including etiology, current treatment techniques in acute and outpatient settings, and principles of exercise physiology. Review of 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)**

Focus 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. Application of concepts and principles to normal and disabled human conditions.

**AHCJ 536 Health Care Financial Management (3)**

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.

**AHCJ 538 Histology (2-3)**

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)**

Exploration of the direct and indirect impacts of technology on health care systems. Technology examined 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)**

Analysis and application of neuroanatomy to lesions of the human nervous system, and 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 546 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).

**AHCJ 547 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.

**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 557 Professional Systems in Management (3)**

Administering the academic department: personnel selection, development, and evaluation; finance; team development; and leadership theories.

**AHCJ 558 Stress and Health Behavior (3)**

Evaluation of effects of stress on individuals, families, students, and health professionals in the educational setting. Biopsychological foundations, social systems, technological influences, life-development factors, and unique aspects of health-professional education analyzed. Coping strategies—such as nutrition, exercise, humor, time management and organization, cognitive therapies, relaxation, and imagery—explained.

**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. Emphasis on counseling techniques, nondefensive communication, and increased communications awareness.

**AHCJ 569 Computers and Electronics for Clinicians (3)**

Thorough understanding of the roles of computers and electronics in a clinical setting. Equipment used in a classroom setting.

**AHCJ 574 Behavioral Modification and Personal Change (3)**

Exploration and application of health-behavior change models. Educational, psychosocial, behavioral issues, with emphasis on leadership, decision making, group process, and persuasion.

**AHCJ 585 Technology in Education (3)**

Introduction to 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. Application of the research process to problems in related specific allied health fields. Development of a research proposal. Pilot testing of a research proposal. Testing of procedures and data forms. Implementation of the research proposal in a practice setting.

**AHCJ 592 Research II (3)**

Computer data analysis and preparation of a research report. Preparation of a poster appropriate for a professional meeting. Graphics, tables, and abstract.

**AHCJ 599 Directed Teaching (3)**

Specialty module developed and presented in 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 Online Learning (3)**

Online course (organized around the AVLL standard for online 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)**

Preparation of a research proposal, including components essential for submission to the Institutional Review Board. Emphasis on 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 (3)**

Evaluation of 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 629 Lower-Quarter Biomechanical Relationships (3)**

Advanced examination procedures for performing a biomechanical assessment of the lower extremities. Emphasis on identifying the causes, compensations, and complications of movement dysfunctions associated with lower-extremity musculo-skeletal-pain syndromes. Physical therapy management of gait abnormalities.

**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, other special projects. Minimum of thirty hours required for each unit of credit.

**COGNATE COURSES**

Cognate courses meet professional course requirements outside the core curricula for programs in the School of Allied Health Professions and are offered both by departments within the School and by departments of other schools of this University.

## EVALUATION OF MISSION AND GOALS—Portfolio Development Practicum

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, 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 Section II, 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.



The portfolio is a tool by which students develop and personally achieve goals established by the School of Allied Health Professions. Here to help are Bette Husted, Ardis Wazdatskey (director of evaluation and portfolio), Laura Alipoon, and Lolita Davidson.



These are some of the smiling, friendly faces of SAHP staff around Nichol Hall who are here to help you.



# The Allied Health Professions

## DEPARTMENTS AND PROGRAMS OF THE SCHOOL

**T**he sections that follow give the setting for each of the programs offered by the School of Allied Health Professions. In each department the subject and unit requirements for admission and for the professional programs are outlined, and the courses offered are described.

**HEALTH SCIENCE—Bachelor of Science**

The B.S. degree in health science requires completion of the General Education requirements (see section V) and a major area of emphasis in one of the University's health-science programs. A minimum of 192 quarter units must be completed, with a minimum of 45 units or the last 32 units taken through Loma Linda University. The appropriate number of units from the major field will be determined by the school granting the degree.

Upon completion of the B.S. program 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 is offered via distance education in cooperation with Humanitec Rehabilitation College, Yokkaichi, Japan.

**ADMISSION**

On-campus students must be accepted into a degree program at Loma Linda University and not already possess a bachelor's degree. A letter of recommendation from the program of concurrent enrollment is required.

**B.S. IN HEALTH SCIENCE for distance education of students at Humanitec Rehabilitation College, Japan**

**BLOCK CURRICULUM**

Freshman and Sophomore years are completed at Humanitec Rehabilitation College (HRC).

**JUNIOR YEAR April to September (beginning)**

ENGL	111	Freshman English (basic writing)	3	
ENGL	112	Freshman English	3	
AHCJ	311	Medical Terminology	2	
AHCJ	328	Junior Portfolio (continues until March)	1	
RELF	440	World Religions	2	
		<b>TOTAL UNITS</b>		<b>11</b>

**September (end of) to March**

SPPA	377	Bilingualism and Biculturalism I	2	
ENGL	113	Freshman English (professional writing)	2	
AHCJ	498	Senior Portfolio (continues until December)	1	
AHCJ	504	Current Issues in Health Care/Global (may be offered separately for PT and OT)	3	
		<b>TOTAL UNITS</b>		<b>8</b>

**SENIOR YEAR April to July**

Clinical externship in communities surrounding HRC (0)

**September to December**

PSYC	460	The Exceptional Individual	3	
AHCJ	131	Communication Skills	1	
RELF	423	Loma Linda Perspective	2	
		<b>SUBTOTAL</b>	<b>6</b>	<b>6</b>

**PLUS Occupational OR Physical Therapy selections, as below (5):**

**For Occupational Therapy students:**

OCTH	418	Occupational Therapy Practicum IV (concurrent with OCTH 441)	1-2	
OCTH	441	Fundamentals of Case Management	4	
		<b>SUBTOTAL</b>	<b>5-6</b>	

**For Physical Therapy students:**

PHTH	466	Fundamentals of Physical Therapy and Research	5	
		<b>SUBTOTAL</b>	<b>5</b>	<b>5</b>

**TOTAL UNITS** **11**

**January to March: board examinations**

**March: graduation**

## REHABILITATION SCIENCE—Doctor of Philosophy

GRENITH J. ZIMMERMAN, Associate Dean, Director for Research and Statistics, and Coordinator for Doctor of Philosophy, Rehabilitation Science Program

The Graduate School in cooperation with 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.

Doctoral degree students will have access to academic, clinical, and research opportunities with the Loma Linda University Adventist Health Science Center.

Please consult the Graduate School Bulletin for complete program information.

Dr. Grenith Zimmerman, associate dean and director for research and statistics, welcomes the opportunity to coordinate the doctoral degree in rehabilitation science for the School of Allied Health Professions.



## CARDIOPULMONARY SCIENCES

**RESPIRATORY CARE—Certificate; Bachelor of Science; Post-Professional Bachelor of Science**

**EMERGENCY MEDICAL CARE—Bachelor of Science**

**PHYSICIAN ASSISTANT—Master of Physician Assistant**

**POLYSOMNOGRAPHY—Certificate**

ROBERT L. WILKINS, Chair

N. LENNARD SPECHT, Medical Director for Respiratory Care Program

ARTHUR B. MARSHAK, Program Director for Post-Professional Bachelor of Science, Respiratory Care; and for Certificate, Polysomnography

DAVID M. STANTON, Program Director for Certificate, Respiratory Care; and for Bachelor of Science, Respiratory Care

DAVID LOPEZ, Director of Clinical Education for Bachelor of Science, Respiratory Care Program

JEFF T. GRANGE, Medical Director for Bachelor of Science, Emergency Medical Care Program

EHREN B. NGO, Program Director for Bachelor of Science, Emergency Medical Care; Director, Center for Emergency Medical Services Education and Research (CEMSER)

TRACI L. MARIN, Director of Clinical Education for Bachelor of Science, Emergency Medical Care Program

KENRICK C. BOURNE, Program Director for Master of Physician Assistant, Physician Assistant

BENNY HAU, Medical Director for Master of Physician Assistant, Physician Assistant Program

ALLAN BEDASHI, Didactic Coordinator for Master of Physician Assistant, Physician Assistant Program

FRANK SIRNA, Academic Coordinator of Clinical Education for Master of Physician Assistant, Physician Assistant Program

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Robert L. Wilkins  
Grenith J. Zimmerman

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Bachelor of Science**

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Tamara L. Thomas

\*ex officio

**TUITION**

**F**or tuition information, please see section II,  
Financial Information, SCHEDULE OF CHARGES.

## RESPIRATORY CARE

**R**espiratory 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

**R**espiratory 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). CoARC publishes standards and guidelines that 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 meet general and respiratory care education with course 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; perinatal-pediatric specialist certification; 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

**T**he 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, 11030 Ables Lane, Dallas, TX 75229; 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 505 North Brand Boulevard, Suite 740, Glendale, CA 91203; telephone 818/247-2053; FAX 818/247-2348; or Web site <<http://www.csrc.org>>.

**RESPIRATORY CARE—Certificate****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, 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.

**Prerequisites for Respiratory Care, Certificate**

Human anatomy and physiology **or** general biology **or** general zoology—complete sequences, with laboratory

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; email: [nbrc-info@nbrc.org](mailto:nbrc-info@nbrc.org) or Web site <http://www.nbrc.org>.

**PROGRAM OF INSTRUCTION****RESPIRATORY CARE—Certificate****YEAR ONE (Course work to be taken while in the BSRC 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	2
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	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

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).



Students in the Department of Cardiopulmonary Sciences are fortunate, indeed, to have a professional and personable faculty and staff with whom they will be able to maximize their educational experience. Pictured above are Bob Wilkins, department chair (back row, center); department secretary, Barbara Parton (front row, center); and some of the faculty.

## RESPIRATORY CARE—Bachelor of Science

**L**oma 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 non-invasive), 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 the following list:
  - Neonatal/pediatric critical care
  - Adult critical care
  - Cardiopulmonary diagnostics
  - Hyperbaric medicine
  - Sleep disorders medicine
  - Cardiopulmonary rehabilitation
  - Extended care

### CPR CERTIFICATION

Students are required to have current cardio-pulmonary resuscitation (CPR) certification (adult and child) for all scheduled clinical experience. Classes are available on campus at Life Support Education, University Arts, 24887 Taylor Street, Suite 102.

### ADMISSION

#### Prerequisites for Respiratory Care, B.S.

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 V).

**PROGRAM OF INSTRUCTION  
RESPIRATORY CARE—Bachelor of Science**

**YEAR ONE (Course work to be taken while in the BSRC 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	2
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	2
AHCJ 328	Portfolio Practicum I	1
AHCJ 402	Pathology I	3
AHCJ 403	Pathology II	3
EMMC 316	12-Lead ECG Interpretation	2
REL_ ___	Religion elective	2

**YEAR TWO**

RSTH 421	Perinatal/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	2
RSTH 466	Advanced Diagnostic Techniques	2
RSTH 471	Instructional Techniques	2
RSTH 474	CP Health Promotion and Disease Prevention	2
RSTH 481	Research in Cardiopulmonary Sciences	1
RSTH 494	Respiratory Therapy Practicum IV	2
RSTH 495	Respiratory Therapy Practicum V	2
RSTH 496	Respiratory Therapy Practicum VI	3
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
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—Post-Professional Bachelor of Science

**L**oma 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 Post-Professional Bachelor of Science degree in respiratory care.

### THE PROGRAM

**T**he 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

1. To provide therapists to the respiratory care and medical communities who have advanced postprofessional training in cardiopulmonary care and fundamental knowledge in the areas of leadership and education.
2. To 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

**U**pon 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.

### CPR CERTIFICATION

**S**tudents 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, 24887 Taylor Street, Suite 102.

### ADMISSION

**T**o 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).

### Prerequisites for Respiratory Care, Post-Professional B.S.

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, 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, 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 V).**

**PROGRAM OF INSTRUCTION**

**RESPIRATORY CARE—Post -Professional Bachelor of Science core**

**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
RSTH	461	Seminars in Leadership	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	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	2
EMMC	454	Research Methods	3
AHCJ	402	Pathology I	3

**Spring Quarter (17)**

RSTH	432	Senior Project II	2
RSTH	447	Geriatric Respiratory Care	2
RSTH	464	Case Management	2
RSTH	481	Research in Cardiopulmonary Sciences	1
EMMC	315	Cardiology	3
EMMC	316	12-Lead ECG Interpretation	2
AHCJ	403	Pathology II	3
RELE	457	Christian Ethics and Health Care	2

**Summer Quarter (4)**

RSTH	433	Senior Project III*	4
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.

## LIFE SUPPORT EDUCATION—Basic /Advanced cardiac emergency care

**L**ife Support Education offers basic and advanced classes related to cardiac emergency care, as listed below. Life Support Education is located in University Arts at 24887 Taylor Street, Suite 102, Loma Linda, CA 92350; telephone (909) 558-4977.

### **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 course

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 course

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 having life-threatening cardiopulmonary problems.

Neonatal Resuscitation Provider

Neonatal Resuscitation Provider Instructor course

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 Course



Open to LLU students and LLUMC employees, and available to individuals and groups from the surrounding communities—Life Support Education classes are coordinated with the help of Ruel Alipoon (director), Janine Davis, and Monica Noutfia.

## EMERGENCY MEDICAL CARE—Bachelor of Science

### THE PROGRAM

The two- to three-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:

1. Demonstrate leadership skills through advanced and multilevel thinking, providing options and alternatives for the care of patients.
2. Demonstrate leadership in the emergency medical care field by sharing the knowledge attained through the Emergency Medical Care Program with members of other professional disciplines.
3. Develop and refine critical thinking skills to enhance ability to analyze and develop the most effective means of caring for patients.
4. Compare and contrast the different disciplines of prehospital health care providers that contribute to emergency medical care.
5. Differentiate 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.
6. Effectively modify practice within the discipline, using the knowledge learned in the emergency medical care program.

### ADMISSION

To be eligible for the junior year of the Emergency Medical Care (EMC) Program, applicant must:

1. be an EMT\*, paramedic, registered nurse, or respiratory therapist;

\*An emergency medical technician (EMT) must also have completed the following prerequisites before being considered: a year of work experience and certification in advanced cardiac life support (ACLS).

2. complete the subject requirements listed as prerequisites (students who have not completed these requirements may be accepted on a provisional basis);
3. arrange for an interview at the University by appointment.

All applicants to the EMC program must 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.

### Prerequisites for Emergency Medical Care, B.S.

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, 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

Electives to meet minimum total requirement of 96 quarter units

To be eligible for the junior year of this program, the student must be an EMT, paramedic, RN, or respiratory therapist; and must complete the prerequisites listed above.

#denotes EMC Progression Program prerequisites

For total unit requirements for graduation, see **Division of General Studies, LLU GENERAL EDUCATION REQUIREMENTS (section V)**.

**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 an inability to access a computer. Specific computer hardware specifications may be obtained from the cardiopulmonary department secretary.

**PORTFOLIO REQUIREMENT**

In addition to the requirements listed under PROGRAM OF INSTRUCTION (below), 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.



Making learning a pleasant experience, Ehren Ngo (EMC program director) often moves his classes outside to the front lawn of the “historic cottages” behind Nichol Hall.

**PROGRAM OF INSTRUCTION**

**EMERGENCY MEDICAL CARE—Bachelor of Science core**

EMMC 204	Introduction to Theories of Emergency Medical Services	2
EMMC 308	Pharmacology	3
EMMC 314	Introduction to ECG Interpretation	1
EMMC 315	Cardiology	3
EMMC 316	12-Lead ECG Interpretation	2
EMMC 321	Theories of Emergency Medical Services	2
EMMC 325	Current Issues in 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 406	Adventist Beliefs and Life	2
RELF 416	God and Human Suffering	3

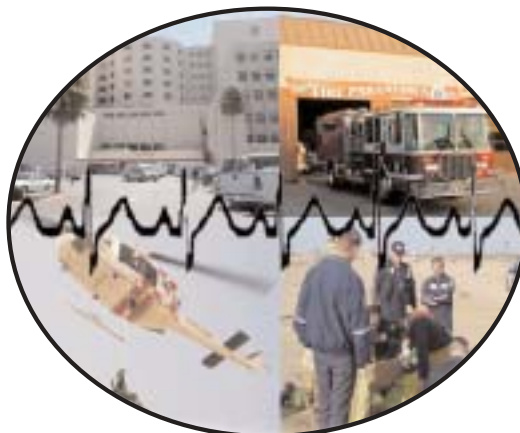


## Center for Emergency Medical Services Education and Research

EHREN B. NGO, CEMSER Director

### ADMINISTRATIVE COMMITTEE

Ruel Alipoon  
 Jeff Grange  
 Joyce Hopp  
 Ehren Ngo



**T**he Emergency Medical Care (EMC) Bachelor of Science degree program, Life Support Education (LSE), and the Loma Linda University Medical Center Emergency Department (ED) contribute to the Center for Emergency Medical Services Education and Research (CEMSER). CEMSER provides these three constituents and the emergency and critical care community with access to resources needed to advance research and educational goals. CEMSER's primary affiliation is with the School of Allied Health Professions.

### MISSION STATEMENT

**T**he Center for EMS Education and Research seeks to advance the mission and goals of Loma Linda University within the prehospital and critical care communities by:

- Providing emergency and critical care health care providers with access to quality Christian education that focuses on personal, spiritual, intellectual, and professional development.
- Providing and expanding comprehensive and ethical research focused on fostering professionalism, leadership, and quality patient care.
- Developing leaders with decision-making skills that reflect spiritual, moral, ethical, and compassionate insight.
- Developing and enhancing managers capable of addressing the needs of today's dynamic health care industry with regard to finance, human-resource management, and quality patient care.
- Fostering compassion and patient advocacy among emergency health care providers.

**CEMSER COURSES AND PROGRAMS**

**T**he Center for EMS Education and Research offers one of the largest selections of continuing-education courses available through a single center in the Western United States. The center's course and program roster includes:

**Basic Life Support (CPR)**

- Basic Life Support
- Basic Life Support Instructor
- Basic Life Support Renewal

**Advanced Cardiac Life Support (ACLS)**

- Advanced Cardiac Life Support
- Advanced Cardiac Life Support Instructor
- Advanced Cardiac Life Support Renewal

**Pediatric Advanced Life Support (PALS)**

- Pediatric Advanced Life Support
- Pediatric Advanced Life Support Instructor
- Pediatric Advanced Life Support Renewal
- Pediatric Education for Pre-hospital Providers

**Neonatal Resuscitation Program**

- Neonatal Resuscitation Provider
- Neonatal Resuscitation Provider Instructor
- Neonatal Resuscitation Provider Renewal

**Heartsaver Automated External Defibrillator (AED)**

- Automatic External Defibrillation

**Grand Rounds and Lectures**

- Grand Rounds
- Lectures for Emergency Medicine Residents

**B.S. in EMC program**

- Bachelor of Science degree in Emergency Medical Care Program

**Dispatcher, EMT, paramedic, trauma life support, leadership certification, and other offerings**

- Bay Station Dispatcher
- Critical Care Transport
- National Registry EMT Refresher Program
- EMT to Paramedic Transition
- National Registry Paramedic Refresher Program
- Paramedic Skill Update
- Basic Trauma Life Support
- Clinical Preceptor Training Certificate
- Leadership Certificate Courses
- ICEMA (Inland Counties Emergency Medical Agency) Protocol Update
- Field-Care Audits
- Wilderness Medicine Certificate
- Mass Gathering Certificate

**CONTACT INFORMATION**

For more information on course offerings, please contact CEMSER at:  
 Center for EMS Education and Research  
 Nichol Hall, room 1926  
 Loma Linda University  
 Loma Linda, CA 92350  
 (909) 558-7076 phone  
 (909) 558-4701 FAX  
 cemser@sahp.llu.edu

## PHYSICIAN ASSISTANT—Master of Physician Assistant

**P**hysician assistants (PAs) are health professionals licensed to practice medicine under physician supervision. Physician assistants are qualified by graduation from an accredited physician assistant educational program and 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

**L**oma Linda University offers a professional course of study leading to a Master of Physician Assistant (M.P.A.) degree. The program consists of a twelve-month didactic phase that provides a foundation of biological, behavioral, and medical sciences. This is followed by a twelve-month clinical phase of clerkships in a variety of medical specialties that are designed to provide diverse and intensive patient-care experience. Graduate physician assistants are professionals trained to participate as members of a health care team. They are prepared to manage common health care needs typically encountered in primary-care settings.

#### Accreditation

The program has full accreditation by the Accreditation Review Commission on Education for the Physician Assistant, Inc. (ARC/PA).

### PROGRAM OBJECTIVES

**U**pon 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.

### CPR CERTIFICATION

**S**tudents 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, 24887 Taylor Street, Suite 102.

### ADMISSION

**T**he following are the criteria for admission to the Master of Physician Assistant program:

1. Completion of a baccalaureate degree in a health care field; **or** a baccalaureate degree in any field of study **plus** an associate degree in a health care field. All degrees must be from accredited institutions.
2. One year (2000 hours) of documented patient-care experience preferred, but not required, prior to admission into the program.
3. Cumulative G.P.A. of at least 3.0 on a 4.0 scale for all college work.
4. G.P.A. of 3.0 on a 4.0 scale for all science courses completed.
5. Three letters of recommendation (including one from a physician assistant, medical doctor, or osteopath).
6. Autobiographical sketch (one-to-three double-spaced, typed pages).
7. Selected applicants will be invited for an interview prior to acceptance into the program.
8. Preference for admission will be given to applicants who meet one or more of the following criteria:
  - a Seventh-day Adventist graduate of Loma Linda University
  - from an underrepresented population
  - has previous clinical experience, and
  - has documented community-service experience.

**Prerequisites for Physician Assistant, M.P.A.**

A baccalaureate degree in a health-related field is preferred. An associate degree in a health-related field with a baccalaureate degree in any field is acceptable. All degrees must be from accredited institutions.

**College-level prerequisite courses:**

**Sciences**

Human anatomy and physiology (complete sequence with laboratory)

Microbiology (with laboratory)

Physics (with laboratory), high school or college-level course

General chemistry or Organic, Inorganic and Biochemistry (complete sequence)

**Humanities**

General psychology

Introductory sociology or Cultural anthropology

College English

College algebra

**Recommended courses:**

Medical terminology

General statistics



Second-year Physician Assistant Program student Chris Clark (right) observes as classmate Saurabh Ashier (left) demonstrates the proper procedure for monitoring blood pressure. They will qualify to receive the Master of Physician Assistant degree in June 2003.

**PROGRAM OF INSTRUCTION**

**PHYSICIAN ASSISTANT—Master of Physician Assistant**

The program of instruction outlined as follows is for students enrolled during the 2002-2003 academic year.

**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	305	HIV/AIDS and the Health Provider	1
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 I	3
PAST	501	Clinical Medicine for PAs I	5
PAST	514	Physical Diagnosis I	3
PAST	522	Research II	2
AHCJ	519	Graduate Portfolio	(in progress)

**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
AHCJ	519	Graduate Portfolio	(in progress)

**FOURTH QUARTER (SUMMER)**

PAST	504	Primary Care Pediatrics	2
PAST	505	Women's Health Care	2
PAST	506	Clinical Skills for PAs	2
PAST	516	PA Professional Issues	2
PAST	___	Clinical Rotations I	8
AHCJ	519	Graduate Portfolio	(complete)

**FIFTH QUARTER (AUTUMN)**

PAST	516	PA Professional Issues	(in progress)
PAST	523	Research III	2
PAST	___	Clinical Rotations II	12

**SIXTH QUARTER (WINTER)**

PAST	516	PA Professional Issues	(in progress)
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	8
		Incomplete Work	(complete)

\*One unit of this course includes a physician-led practicum in diagnosis.

\*\*Research projects are presented during this quarter.



They share a common goal—excellence in the Physician Assistant Program. Front row: Kenrick Bourne, program director; Frank Sirna, clinical coordinator; Beverley Stocker; back row: Vicki McClintock, staff; Allan Bedashi, didactic coordinator; and Julie Lee, assistant didactic coordinator.



Department of Cardiopulmonary Science students in the Respiratory Therapy Program practice adjusting a respirator. Pictured here (left to right) are Claudine Caballero, Sophea Johansen, and Justin Love.

## **POLYSOMNOGRAPHY—Certificate**

**T**he Department of Cardiopulmonary Sciences in the School of Allied Health Professions and the Department of Respiratory Care at Loma Linda University Medical Center are developing an education program in polysomnography. The program should be available beginning 2003 and will lead to a certificate in polysomnography.

Sleep apnea affects approximately 4 percent of women and 9 percent of men. Polysomnography is used by highly skilled therapists to diagnose patients with this disorder. Students accepted into the program will be graduates of accredited A.S. degree programs in respiratory care who are licensed to practice in the state of California. Classes and clinical rotations will be held at Loma Linda University Medical Center and Loma Linda Veterans Administration Hospital, which have two adult sleep centers and one pediatric sleep center currently operating. Students who gain further clinical experience will be eligible to sit for the board examination in polysomnography.

For more information, please contact the Department of Cardiopulmonary Sciences.

## COURSES

For information about units of credit and course numbers, see the beginning of section III of this BULLETIN.

### **RSTH 301, 302, 303 Advanced Respiratory Therapy Science I, II, III (3, 3, 2)**

Comprehensive review of patient-care techniques. In-depth presentation and discussion of clinical application of respiratory therapy devices and their influences on patient care. Reports and discussions of current and advanced developments. Designed to integrate experience with current concepts and to develop 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. Emphasis on 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. Emphasis on neonatal respiratory care. Review of current research related to high-frequency ventilation, extracorporeal membrane oxygenation, and surfactant therapy.

### **RSTH 315 Respiratory Care of the Critically Ill Newborn and Child (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)**

Evaluation of 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, 332 Pharmacology I, II (2, 2)**

Survey of pharmacologic agents currently used in medicine—including their kinetics, dynamics, and therapeutics. Special emphasis given to drugs and their effects on the respiratory, cardiovascular, and autonomic nervous systems. Topics include the broncho-dilators, 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. Assessment and evaluation of the patient with respiratory disease. Development of 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. Emphasis on methods of administration of the therapy, with special attention placed on the equipment used, as well as the application of 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. Introduction to mechanical ventilatory support, including beginning ventilators, support systems, comparison of methods, and respiratory monitoring. Emphasis on 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. Emphasis on methods of ventilatory support, with special attention to the mechanical ventilators commonly used in the students' clinical sites. Application of 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 (2)**

Continues the clinical use of diagnostic tests and procedures. Emphasis on evaluation of chest radiographs and monitoring hemodynamics.

Prerequisites: RSTH 304, 331.

### **RSTH 381, 382 Cardiopulmonary Diseases I, II (2, 2)**

Comprehensive study of 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. Development of 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.

Concurrent: RSTH 342.

**RSTH 392 Respiratory Care Practicum II (2)**

Application of 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.

Concurrent: RSTH 342, 381.

**RSTH 393 Respiratory Care Practicum III (4)**

Therapeutic techniques applied in continuous mechanical ventilation; special procedures, operation and post-anesthesia 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: 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. Discussion of 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 that are 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.

Prerequisite: RSTH 323.

**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 will be assigned to a mentor who will assist them with developing their paper/project.

**RSTH 432 Senior Project II (2)**

Development and expansion of research paper/project begun during previous quarter. Literature search, research question, and data collection methods developed.

**RSTH 433 Senior Project III (4)**

Data-collection completed, data analyzed, conclusions and findings written up for publication and for poster presentation.

**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.

**RSTH 441 Respiratory Therapy Science IV (3)**

In-depth presentation and discussion of the clinical application of respiratory therapy devices and their influences on patient care. Reports and discussions of current and advanced developments. Emphasis on the application of this information to the clinical setting. Co-listed with RSTH 301. (Not taught every year.)

Prerequisite: RSTH 341, 342, 343; or permission of instructor.

**RSTH 444 Case Studies in Neonatal/Pediatric Respiratory Care (2)**

Development of respiratory care-management skills of 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. Students present patients and explain implications of care. Assistance in presentation skills.

Prerequisite: RSTH 421.

**RSTH 447 Geriatric Respiratory Care (2)**

Course covers psychosocial issues, acute and chronic respiratory diseases, pharmacology, long-term care, end-of-life issues, and management of geriatric medical emergencies. Discussion of the current trends and needs of the aging population and viable health care-delivery models.

**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: California 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 422; California RCP licensure.

**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 postprofessional B.S. degree program in respiratory care.

Prerequisite: AHCJ 461; RSTH 452; California 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 postprofessional B.S. degree program in respiratory care.

Prerequisite: AHCJ 461; RSTH 452; California 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 postprofessional B.S. degree program in respiratory care.

Prerequisite: AHCJ 461; RSTH 452; California RCP licensure.

**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.)

**RRSTH 458 Physical Diagnosis II (1)**

Continued discussion of clinical assessment techniques and interpretation of findings in patients with cardiopulmonary disease. Emphasis on 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, 463 Management Practicum II, III (2, 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)**

A case management approach to patient care utilized 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.

Prerequisite: RSTH 366.

**RSTH 471, 472, 473 Instructional Techniques I, II, III (2, 2, 2)**

Development of units of instruction, instructional objectives, and evaluation procedures. Observation and participation in classroom management. Application of 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 precedes RSTH 472, 473.

**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 or physical activity, nutrition and immunization, and public health approaches to communicable diseases.

Prerequisite: RSTH 424.

**RSTH 481 Research in Cardiopulmonary Sciences (1)**

Application of the basic concepts of research specific to cardiopulmonary sciences. Development of a basic research proposal. Strongly recommended that the student complete most of the required core courses before registering for this course.

Prerequisite: AHCJ 351.

Concurrent: AHCJ 461.

**RSTH 491, 492, 493 Education Practicum I, II, III (2, 2, 2)**

Experience in clinical education, evaluation, and scheduling. Familiarization with hospital affiliation agreements and accreditation issues.

Prerequisite: Must be licensed in California as an RCP.

**RSTH 494 Respiratory Care Practicum IV (2)**

Development of 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.

**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 404, 494.

**RSTH 496 Respiratory Care Practicum VI (3)**

Continuation of 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.

**RSTH 499 Respiratory Therapy Independent Study (.5-2)**

Project or paper submitted 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.

**Enrollment in PAST courses is limited to Physician Assistant Program students.****PAST 401, 402, 403 Anatomy and Physiology I, II, III (3, 3, 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 404 Biochemistry for PAs (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. Emphasis on 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 PAs 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 PAs 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 PAs I (3)**

Part I of a two-part course that covers basic concepts of pharmaceuticals used in diagnosis, prevention, and treatment of disease—including a systematic presentation of the pharmacology and the therapeutic value of the 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 PAs II (3)**

Part II of a two-part course which covers basic concepts of pharmaceuticals used in diagnosis, prevention, and treatment of disease including a systematic presentation of the pharmacology and the therapeutic value of the drugs used in medicine. Related topics include drug legislation, PDR, routes of administration, pharmacokinetics, pharmacodynamics, adverse effects, drug interactions, drug toxicity, with special consideration to pediatric and geriatric pharmacology. An overview of responsibilities for prescribing and/or dispensing of pharmaceuticals by the Physician Assistant is also presented.

**PAST 501 Clinical Medicine for PAs I (5)**

Study of 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 PAs II (4)**

Study of 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)**

Common medical and surgical disorders encountered in pediatric medicine. Emphasis on primary-care concepts in the care of children. Introduction to 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 PAs (3)**

Introduction to 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, and use of various tubes and drains.

**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 PA Professional Issues (2)**

Acquaints the entering student with the history, development, and current status of the PA profession, and helps him/her formulate an appropriate perception of the PA role. 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, graduate certification and recertification; employment considerations; and professional liability.

**PAST 521 Research I (3)**

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. Critical evaluation of research literature.

**PAST 522 Research II (2)**

Application of the research process to problems in related specific allied health fields. Development of a research proposal. Pilot testing of procedures and data-collection forms.

Prerequisite: PAST 521.

**PAST 523 Research III (2)**

Implementation of a research proposal in a practice setting. Computer data analysis and preparation of a research report both in written and oral formats. Development or creation of a PowerPoint presentation, poster, and abstract for submission to a professional meeting.

Prerequisite: PAST 521, 522.

**PHYSICIAN ASSISTANT CLINICAL ROTATIONS****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—with emphasis on 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. This rotation provides 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 535 Geriatrics (2)**

A two-week rotation on a geriatric medicine service. Clinical experience with the special medical needs of the elderly. Forty hours per week.

**PAST 536 Elective I (2)**

A two-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.

**EMMC 204 Introduction to Theories of Emergency Medical Services (2)**

Introduction to 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 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. Emphasis on prehospital drug categories.

**EMMC 314 Introduction to ECG Interpretation (1)**

Development of basic ECG interpretation skills. Focus on anatomy and physiology, underlying pathophysiology, basic rhythm recognition, and overview of related treatments. Special emphasis on 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 to increase knowledge of medical management of the patient with acute and chronic cardiovascular disorders. Focus on anatomy and physiology, underlying pathophysiology, advanced history taking and physical assessment, cardiovascular pharmacology, electrical modalities, cardiac diagnostic testing, and current research. Special emphasis on 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. Special emphasis on 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, with emphasis on 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 321 Theories of Emergency Medical Services (2)**

Investigation of the dimensions of emergency medical services. Influence of environment on oxygen delivery. Development of paradigms for EMS. Decision making in the constrained environment. Stress models and role theories. Discussion of EMS as sequential environments from public health to critical care.

**EMMC 325 Current Issues in Emergency Medical Services (2)**

Seminar-style discussion regarding 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 351 Neonatal Resuscitation (1)**

Neonatal anatomy and physiology. Asphyxia and its effects in 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. Description of ventilators and relationship of therapeutic procedures to underlying pathology.

**EMMC 435 Disasters, WMD, and Terrorism (2)**

Introduction to EMS response involving large-scale natural disasters and weapons of mass destruction (WMD). Exploration of prehospital and hospital treatment. Evaluation of current issues facing EMS personnel. Crisis and consequence management, theories of terrorism response, and state and federal resources. Discussion of 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. Discussion of appropriate versus inappropriate child development and behavior—including developmental stages, temperaments, feeding disorders, sleep disorders, mentally challenged, 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. Discussion of clinical assessment techniques and interpretation of findings. Emphasis on 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. Discussion of 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 application of 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 and EMMC 452.

**EMMC 471 Senior Project I (2)**

Students develop, implement, and evaluate project 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)**

Continuation of project developed in Senior Project I. Prerequisite: EMMC 471.

**EMMC 484 Legal Issues in Health Care (2)**

Introduction to 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. Discussion of employment issues, including discrimination and sexual harassment. Development of 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)**

Discussion of issues of professionalism, portfolio development and refinement, short- and long-term goal setting, and development of resume/curriculum vitae.

Prerequisite: Senior-level academic status.

**CONJOINT**

See CONJOINT COURSES, section III General Information, for course descriptions.

**COGNATE****HPRO 543 Writing for Health Professionals (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. Preparation of camera-ready art. One publishable paper.

Prerequisite: Consent of instructor for nondoctoral students.

**RELE 457 Christian Ethics and Health Care (2)**

Ethical issues in modern medicine and related fields from the perspective of Christian thought and practice.

**RELE 505 Clinical Ethics (3)**

Case-based analysis of bioethics, with emphasis on Conceptual and historical readings in bioethics.

**RELF 423 Loma Linda Perspectives (2)**

History and philosophy of Loma Linda University as a Christian health-sciences institution that fosters human wholeness.

**RTCH 475 Curriculum Development in Health Science (2)**

Curriculum development theories and approaches applied to the health-science arena. Theories applied to development of a seminar, course, or curriculum. Development process includes 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.

# CLINICAL LABORATORY SCIENCE

**PHLEBOTOMY—Certificate**

**CYTOTECHNOLOGY—Certificate; Bachelor of Science**

**CLINICAL LABORATORY SCIENCE (formerly MEDICAL TECHNOLOGY)—Bachelor of Science**

KENNETH A. CANTOS, M.D., Chair

MONIQUE K. GILBERT, Program Director for Phlebotomy

MARLENE O. OTA, Program Director for Cytotechnology

DARRYL G. HEUSTIS, M.D., Medical Director for Cytotechnology

PAMELA J. WAT, M.D., Medical Co-director for Cytotechnology

RODNEY M. ROATH, Program Director for Clinical Laboratory Science

KATHERINE G. DAVIS, Clinical Coordinator for Clinical Laboratory Science

JAMES M. PAPPAS, M.D., Medical Director for Clinical Laboratory Science

## FACULTY

James A. Brandt  
Kenneth A. Cantos  
Katherine G. Davis  
Monique K. Gilbert  
Sally S. Greenbeck  
Darryl G. Heustis  
Ronald H. Hillock  
Thuan H. Nguyen  
Marlene M. Ota  
James M. Pappas  
Rodney M. Roath  
Teri J. Ross  
Grenith J. Zimmerman

## CLINICAL FACULTY

Craig E. Austin  
Douglas H. Barr  
Lee S. Berk  
Susan H. Bressler  
Linda S. Buckert  
Elizabeth Cea  
Jeffery G. Chambers  
Andy Cheung  
Andrew Chia  
Louis J. Cota  
Barbara J. Ganchingco  
Joel C. Gillmore  
LinaCel V. Gutierrez  
Kenneth M. Hartman  
J. Kapua Hollands  
Mary A. Hughes  
Ronald S. Johnson  
James D. Kettering

Sonia D. Laing  
Dorothy Lajom  
Tuyhoa T. Le  
John E. Lewis  
Phillip Liang  
Kelly Liu  
Jon A. Loriezo  
Claro Y. Masangcay  
Donald W. Miller  
Y. Kathleen Nowland  
Elaine M. Johnson Ortiz  
Gaile T. Rittenbach  
Carol D. Samsky  
Daisy Santa Maria  
Delfin T. Santos-Kho  
Carol L. Satterfield  
Stuart B. Schneider  
Linda J. Shain  
Benjamin J. Siapco  
Arthur J. Silvergleid  
Valerie T. Stevenson  
Terence Tay  
Evelyn T. Torres  
Pamela J. Wat  
Patricia A. Williams  
Reginald Yeo  
Jane N. Zappia

## TUITION

**F**or tuition information, please see section II, Financial Information, SCHEDULE OF CHARGES.

## PHLEBOTOMY—Certificate

**P**rocedures 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

**T**he program trains the modern phlebotomist to perform venipuncture, capillary puncture, and CPR; and to record the patient's vital signs, which 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; and by the National Accrediting Agency for Clinical Laboratory Science (NAACLS), 8410 West Bryn Mawr Avenue, Suite 670, Chicago, IL 60631-3415.

### PROFESSIONAL REGISTRATION

**U**pon 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.

### CPR CERTIFICATION

**S**tudents 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, 24887 Taylor Street, Suite 102.

### ADMISSION

**T**o be eligible for admission, the applicant must be eighteen 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 PHLEBOTOMY—Certificate

AHCJ 105 Procedures in Phlebotomy (3)

Corequisite: Current CPR certification or concurrent enrollment. CPR training and certification or renewal arranged during the program for students not already certified.

### ACADEMIC PROGRESSION

**A** minimum grade of C (2.0) is required for satisfactory performance in the program. A grade of C (2.0) or better is required for certification. C- grades are not acceptable. Unsatisfactory clinical performance will be cause for dismissal from the program. Students are responsible for transportation to clinical sites.



## CYTOTECHNOLOGY—Certificate; Bachelor of Science

**C**ytotechnology 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

**C**ytotechnologists 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

**T**he 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 the 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 AHCJ 402, 403 at this University; or by completing a minimum of 8 quarter units of upper-division course work in developmental biology or comparative animal physiology at an accredited college or university.

A writing-validation examination will be administered to all students. For those students achieving a score of less than 4 on the Wholistic Score Sheet, remedial writing must be taken

within the first academic year. Upon retest, the student must achieve a score of 4 or higher.

#### 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: 312 / 553-9355; FAX: 312 / 553-9616; Web site: [www.caahep.org](http://www.caahep.org); email: [caahep@caahep.org](mailto:caahep@caahep.org)

### PROFESSIONAL REGISTRATION

**U**pon 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

**U**pon 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.**

**Prerequisites for Cytotechnology, Certificate only**

- Baccalaureate degree from an accredited college/university
- General biology, complete sequence
- Human anatomy and physiology, complete sequence
- Microbiology with laboratory
- Introductory chemistry with laboratory, complete sequence
- College algebra
- English composition, complete sequence

**Prerequisites 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 this 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
- Introductory 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 Division of General Studies, LLU GENERAL EDUCATION REQUIREMENTS (section V).**

**How to apply—Cytotechnology**

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****CYTOTECHNOLOGY—Certificate; Bachelor of Science**

The program of instruction outlined as follows is for students enrolled during the 2002-2003 academic year.

**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	2
CLSC 491, 492	Cytology Affiliation I, II	6, 6
AHCJ 402, 403	Pathology I, II	4, 4
AHCJ 328	Portfolio Practicum I	1

A microscope rental fee and a usage and replacement fee are required for the Autumn, Winter, Spring, and Summer quarters.

**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
RELF ___	Adventist selective	4

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	Electron Microscopy	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	Personnel Management	3
AHCJ 426	Introduction to Computer Applications I	3
AHCJ 498	Portfolio Practicum II	1
RELE 457	Christian Ethics and Health Care	2
REL_ ___	Religion electives	4

Summer Quarter is the best time to take the religion units; 8 units of religion are required for graduation.



Meet some of the faculty and staff of the Department of Clinical Laboratory Science. Front row: Kelly Liu, Ron Hillock, and Marlene Ota; second row: Sally Greenbeck, Monique Gilbert, Margie Martinez, and Ken Cantos (department chair); third row: Cathy Davis, Rodney Roath, James Brandt, Thuan Nguyen, and Teri Ross.

## CLINICAL LABORATORY SCIENCE—Bachelor of Science (formerly MEDICAL TECHNOLOGY)

**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 (CLS) or a clinical laboratory technician (CLT).

Clinical laboratory scientists and technicians 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 analyzes these test results and discusses them with the medical staff. S/he also possesses the scientific and diagnostic skills required for DNA technology and genetic engineering applications.

### OPPORTUNITIES

**E**mployment of clinical laboratory workers is expected to parallel the growth of other health care occupations through the year 2006, particularly as the volume of laboratory tests increases with population growth and the development of new technology. This new technology will encourage more testing and spur employment. The 21<sup>st</sup> 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, and physicians' offices and private medical clinics. They also find employment in health information systems, DNA-technology and genetic engineering corporations, research laboratories, federal government agencies and facilities, veterans' hospitals, U.S. Public Health Service facilities, and in the areas of product development and of customer and patient education.

## THE PROGRAM

The Clinical Laboratory Science Program is a two-year professional program. The freshman and sophomore years, which are taken at any accredited college or university, afford the fundamentals of a liberal education. Entry is in the post-summer session at the junior-year level. 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 necessary for clinical laboratory science.

The senior year is a ten-month clinical practicum that provides professional clinical experience in the hospital laboratory environment. Emphasis is on technical proficiency, organization, the laboratory's relationship to patient care, financial management, and laboratory operations. 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. Transportation to supplemental training laboratories is the responsibility of the student. The senior schedule is a full-time week (forty clock hours), arranged with a Monday-through-Friday, day-shift schedule for lecture and laboratory requirements. On occasion, days or times outside of this typical schedule may be necessary to allow students exposure to unique procedures. 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, 8410 West Bryn Mawr Avenue, Suite 670, Chicago, IL 60631-3415; telephone: 773/714-8800; FAX: 773/714-8886; <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.

## 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 Board of Registry of Medical Technologists and the National Certification Agency for Medical Laboratory Personnel, P. O. Box 15945-289, Lenexa, KS 66155; 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 Loma Linda University 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 coworkers, 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

Prospective students should apply as soon after January 1 as possible for the 2002-2003 academic year. Preference will be given to applicants whose completed applications and official transcripts are received by May 1. To receive an application form or BULLETIN, call 800/422-4558. BULLETIN cost is \$10.00 per copy.

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. Applicants must complete prerequisite course work at any accredited college before being admitted to the School of Allied Health Professions.

Foreign applicants, other than those from Canada, must complete 45 quarter or 30 semester units of credit at an accredited college in the United States. If English is not the applicant's native language, s/he must submit a minimum score of 550 (undergraduate student) for the Test of English as a Foreign Language (TOEFL). Additionally, a minimum score of 5 on the TOEFL writing test (TWE) is required for acceptance (see section II, INTERNATIONAL STUDENTS).

#### Test requirement

Upon acceptance, a self-study syllabus will be sent to the student in preparation for a mathematics screening examination, which will be given immediately following registration. 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 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 cardiopulmonary resuscitation (CPR) certification (adult and child) for all scheduled clinical experience. Classes are available on campus at Life Support Education, University Arts, 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-minus grades not acceptable for transfer. A minimum G.P.A. of 2.75 for science is required. Natural and social sciences are required.

#### Prerequisites for Clinical Laboratory Science, B.S.

20 quarter units total or 14 semester units total selected from at least two areas: Art/Music (performing arts limited to 2 quarter units), Civilization/History, Foreign language, Literature, Philosophy

Of the above 20s/14q units, Religion (a maximum of 8 quarter units may be applied to Domain 1; 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.  
Pre-medical and pre-dental students should verify current admission requirements.

Quantitative analysis

General biology with laboratory, complete sequence.  
Pre-medical and pre-dental students should verify current admission requirements.

Cultural diversity or Cultural anthropology (one course); (select remainder of social 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)  
 Health education (personal health **or** nutrition)  
 Two physical education courses

Electives 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, LLU GENERAL EDUCATION REQUIREMENTS** (section V).

**PROGRAM OF INSTRUCTION**

**CLINICAL LABORATORY SCIENCE—Bachelor of Science**

The program of instruction outlined as follows is for students enrolled during the 2002-2003 academic year.

**JUNIOR YEAR**

**POST-SUMMER SESSION**

CLSM	301	Laboratory Mathematics Review*	1
CLSM	303	Urine and Body-Fluid Analysis I	1
CLSM	311	Clinical Laboratory Techniques	2
AHCJ	105	Procedures in Phlebotomy	3
AHCJ	328	Portfolio Practicum I	1

**AUTUMN QUARTER**

CLSM	307	Medical Parasitology	3
CLSM	321	Hematology I	3
CLSM	331	Biochemistry	5
AHCJ	318	Physiology	4
AHCJ	328	Portfolio Practicum I	(continued)
RELE	457	Christian Ethics and Health Care	2

**WINTER QUARTER**

CLSM	322	Hematology II	3
CLSM	324	Immunology I	4
CLSM	327	Clinical and Pathogenic Microbiology I	5
CLSM	332	Clinical Chemistry I	4
CLSM	341	Immunohematology I	3
AHCJ	328	Portfolio Practicum I	(continued)

**SPRING QUARTER**

CLSM	333	Clinical Chemistry II	4
CLSM	342	Immunohematology II	3
CLSM	328	Clinical and Pathogenic Microbiology II	5
CLSM	364	Statistics for Laboratory Medicine	2
REL	—	Adventist Selective	2
AHCJ	328	Portfolio Practicum I	(continued)



**SENIOR YEAR****POST-SUMMER SESSION#**

CLSM	431	Immunoassay I*	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

\* An examination is given during the first week of school. A student who passes the examination does not have to take this class.

#Clinical practicum begins

**SENIOR YEAR CLINICAL PRACTICUM\***

CLSM	471	Clinical Practicum I	6
		Corequisite:	(7 units)
		CLSM 411 Urine and Body-Fluid Analysis II	
		CLSM 422 Hematology III	

CLSM	472	Clinical Practicum II	6
		Corequisite:	(11 units)
		CLSM 413 Diagnostic Microbiology	
		CLSM 442 Immunohematology III	

CLSM	473	Clinical Practicum III	6
		Corequisite:	(9 units)
		CLSM 434 Clinical Chemistry III	
		CLSM 455 Special Procedures	

\*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 will be registered for through block registration and taken successively.

## COURSES

For information about units of credit and course numbers, see the beginning of section III of this BULLETIN.

### **CLSC 301, 302 Introduction to Radiographic Procedures I, II (2, 2)**

Nature and description of radiologic procedures for the nonradiologic technologist. Principles and medical techniques applied to the radiographic setting. Survey of 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 the 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 Cytogenetics (1)**

Meiosis, mitosis, 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. Review of 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. Evaluation and comparison of methodology. Emphasis on 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 Electron Microscopy I (3)**

Principles and techniques of electron microscopy, including basic cell ultrastructure and immunohistochemistry.

### **CLSC 432 Current Research Techniques (3)**

Introduction to current research applications and skills development. Techniques in immunocytochemistry and image and flow cytometry.

### **CLSC 481 Supervised Cytotechnology 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, 492 Cytology Affiliation I, II (6, 6)**

Six two-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.

### **CLSM 301 Laboratory Mathematics Review (1)**

Problem solving related to clinical determinations, including solution preparation and calculations necessary for generating laboratory-test results from raw data.

### **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 311 Clinical Laboratory Techniques (2)**

Introduction to clinical laboratory procedures, including theory and skill development in: specimen preparation and handling, microscopy, basic separation techniques, fundamentals of instrument design, spectrophotometry, analytical techniques, quality-control concepts. Applied physics, with emphasis on light and electricity. Thirty-two hours of clinical experience in specimen processing in a clinical laboratory. Lecture and laboratory.

**CLSM 321 Hematology I (3)**

Examination of normal hematologic physiology, cellular development, and hemostasis in the human. Introduction to 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. Stress on 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. Emphasis on 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 the 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. Lecture and laboratory.

**CLSM 327 Clinical and Pathogenic Microbiology I (5)**

Introduction to microbiological concepts, leading to an in-depth study of the major groups of pathogenic bacteria and their relationship to human disease. Emphasis on 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 at various anatomical sites. Emphasis on 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: carbohydrates and diabetes mellitus, proteins, lipids, lipoproteins, cardiovascular disease, enzymes, liver function, 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: fluids and electrolytes, acid-base balance, 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. Study of 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 364 Statistics for Laboratory Medicine (2)**

Statistical methods related to applications to medical technology and quality control. Introduction to fundamental procedures for collecting, summarizing, analyzing, and presenting data. Measures of central tendency and variation, probability, normal distribution, hypothesis testing and confidence intervals, t-tests, chi-square, correlation, and regression. Limited to medical technology students and others closely related to the clinical laboratory.

**CLSM 401 Immunology II (1)**

Correlation and application of theory and clinical experience with analytical techniques. Assessment and interpretation of data. Evaluation and comparison of methodologies. Directed study and review include standard serological techniques, nephelometry, and electrophoresis.

Prerequisite: CLSM 324.

Corequisite: CLSM 472.

**CLSM 411 Urine and Body-Fluid Analysis II (1)**

Correlation and application of theory and clinical experience with analytical techniques. Assessment and interpretation of data. Evaluation and comparison of 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 (8)**

Correlation and application of theory and clinical experience with analytical techniques. Assessment and interpretation of data. Evaluation and comparison of methodologies. Directed study and review of diagnostic bacteriology, mycology, parasitology, and virology. Emphasis on isolation and identification of pathogenic microorganisms. Susceptibility testing, instrumentation, and rapid identification methods included.

Prerequisite: CLSM 307, 327, 328.

Corequisite: CLSM 472.

**CLSM 422 Hematology III (6)**

Correlation and application of theory and clinical experience with analytical techniques. Assessment and interpretation of data. Evaluation and comparison of 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 I (2)**

Fundamentals and principles of radioisotopic and nonradioisotopic immunoassays. Methods discussed include fluorescence polarization, enzyme immunoassay, chemiluminescence, and radioassay. 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 (5)**

Correlation and application of theory and clinical experience with analytical techniques. Assessment and interpretation of data. Evaluation and comparison of 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 472.

**CLSM 442 Immunohematology III (3)**

Application of theory and techniques routinely used in transfusion medicine. Emphasis on 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. Assessment and interpretation of data. Overview of donor facilities: donor criteria, records management, component preparation, blood storage, and infectious disease testing.

Prerequisite: CLSM 341, 342.

Corequisite: CLSM 471.

**CLSM 451 Clinical Laboratory Management I (2)**

Introduction to 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. Integration and application of analytical techniques used in the service industries.

**CLSM 453 Clinical Laboratory Management III (2)**

Introduction to theories of quality management, organization, strategic planning, and the decision-making process. Review and analysis of government agencies, legislation, and regulatory bodies that impact laboratory management. Comparison of quality systems-management philosophies.

Prerequisite: Satisfactory completion of Clinical Laboratory Science Program junior-year courses.

**CLSM 455 Special Procedures (4)**

Correlation and application of theory and clinical experience requiring assessment and interpretation of data. Evaluation and comparison of methodologies. Directed study and review to 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 acid, assay, rapid detection testing for bacteria and viruses, polymerase and ligase chain reactions, Western blot assays, serology and current immunologic techniques.

Prerequisite: CLSM 324, 333.

Corequisite: CLSM 473.

**CLSM 471 Clinical Practicum I (6)**

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. Selected case studies included 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 (6)**

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. Special emphasis on 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 (6)**

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, to develop a degree of specialized technical ability.

**CLSM 496 Clinical Laboratory Science****Seminar I (1)**

Introduction to 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)**

Continuation of assigned capstone project. Presentation of relevant contemporary topics.

Prerequisite: CLSM 496 or consent of instructor.

**CLSM 498 Clinical Laboratory Science****Seminar III (2)**

Students meet 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 to provide the student with guidance and evaluation. Elected on the basis of need or interest.

**CONJOINT**

See CONJOINT COURSES, section III General Information, for course descriptions.

## HEALTH INFORMATION MANAGEMENT

**HEALTH INFORMATION SYSTEMS—Master of Health Information Systems; Post-Master's Certificate in Health Information Systems**

**HEALTH INFORMATION ADMINISTRATION—Certificate; Bachelor of Science**

**CODING SPECIALIST—Certificate**

MARILYN H. DAVIDIAN, Chair; Program Director for Health Information Systems and for Health Information Administration

JENNIFER L. GUERRERO, Coordinator for Clinical Education, Health Information Administration Program

DIANA S. MEDAL, Program Coordinator for Certificate, Coding Specialist

TERRI ROUSE, Recruitment Coordinator

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Betty Ann Wagner  
Ignatius Yacoub  
Grenith J. Zimmerman

\*ex officio

### TUITION

**F**or tuition information, please see section II, Financial Information, SCHEDULE OF CHARGES.

## HEALTH INFORMATION SYSTEMS—Master of Health Information Systems

**C**urrently 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.

### THE PROGRAM

**T**he 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

**T**o be eligible for admission, the applicant must have completed a baccalaureate degree with a G.P.A. of 3.0 or higher.

#### Prerequisites for Health Information Systems, M.H.I.S.

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 online access to the Internet.

### THE PROGRAM OBJECTIVES

**U**pon 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**

**HEALTH INFORMATION SYSTEMS—Master of Health Information Systems**

The program of instruction outlined as follows is for full-time students enrolled during the 2002-2003 academic year.

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 Theory	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	519	Graduate Portfolio	1
AHCJ	525	Biostatistics	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
REL_	___	Religion electives	3

**HEALTH INFORMATION SYSTEMS—Post-Master’s Certificate**

The 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 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, 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, and
- a proposed program of study selected from the specified courses. Approval by the M.H.I.S.-degree program committee is required before starting the program.

**Prerequisites for Health Information Systems, Post-Master’s Certificate**

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****HEALTH INFORMATION SYSTEMS—Post-Master's Certificate**

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 Theory	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 INFORMATION ADMINISTRATION—Certificate; Bachelor of Science**

**H**ealth 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**

**W**hile 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 equipment, 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—Certificate**

**ADMISSION**

**T**o be eligible for admission, the applicant must have completed a minimum of 96 quarter units at an accredited college or university.

**Prerequisites for Health Information Administration, Certificate**

- Bachelor's degree from an accredited college or university
- Human anatomy and physiology with laboratory, complete sequence
- Pathophysiology
- Medical terminology
- Intermediate algebra
- General psychology
- Accounting
- Introduction to computers
- Computer spreadsheet (MS Excel recommended)
- Word processing
- Research methods
- Statistics
- Principles of management

**Recommended:**

- Business communications
- 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**

**U**pon 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).

Enjoying a quiet moment alone in the Department of Health Information Administration lounge, student Jessica Thach catches up on studying her course notes.



**PROGRAM OF INSTRUCTION****HEALTH INFORMATION ADMINISTRATION—Certificate**

The program of instruction outlined as follows is for full-time students enrolled during the 2002-2003 academic year.

HLIN	301	Introduction to Health Record Science	4*
HLIN	303, 304	Basic Coding Principles and Techniques I, II	3, 3*
HLIN	305	Hospital Census and Administrative Statistics	2*
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	441	Legal Aspects of Health Information Administration	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-Management Practicum	1-5
HLIN	483	Long-Term and Alternative-Delivery Systems in Health Care	4
HLIN	484	Current Topics in Health Information Administration	3
HLIN	494	Health Information Management	5
HLIN	495	Health Information Affiliation	1-3
AHCJ	407	Financial Management	2
RELE	457	Christian Ethics in Health Care	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.



Marilyn Davidian (department chair), Debbie Hamada, Diana Medal, Martha Casey (department secretary), and Terri Rouse and Jennifer Guerrero (both seated) expect great things from their students—because they provide exceptional training and guidance.

## HEALTH INFORMATION ADMINISTRATION—Bachelor of Science

### THE PROGRAM

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 registered health information-record technicians. 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, the applicant must have completed a minimum of 96 quarter units at an accredited college or university.

**Prerequisites for Health Information Administration, B.S.**

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

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, LLU GENERAL EDUCATION REQUIREMENTS (section V).**

**PROGRAM OF INSTRUCTION****HEALTH INFORMATION ADMINISTRATION—Bachelor of Science**

The program of instruction outlined as follows is for full-time students enrolled during the 2002-2003 academic year.

**JUNIOR YEAR**

HLIN	301	Introduction to Health-Record 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	Professional Practice Experience I, II, III	1, 1, 1*
HLIN	395	Health Information Administration Practicum IV	2
HLIN	483	Long-Term and Alternative-Delivery Systems in Health Care	4
AHCJ	305	HIV/AIDS and the Health Provider	1
AHCJ	308	Professional Communications	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	431, 432	Database Management I, II	3, 2
REL	___	Religion electives	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	Professional Practice Experience V	1
HLIN	463	Professional Practice Experience VI	1
HLIN	484	Current Topics in Health Information Administration	3
HLIN	494	Health Information Management	5
HLIN	495	Health Information Affiliation	1-3
AHCJ	407	Financial 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
RELF	423	Loma Linda Perspectives	2

A minimum grade of C (2.0) is required for all courses in the program.

**CODING SPECIALIST—Certificate**

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 Program is a nine-quarter program. Classes meet once a week on Tuesday evenings. The last two quarters of the program consist of an internship-like laboratory experience, Coding Practica I and II. These practica courses 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 society guidelines for coding in health institutions.
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.

## ADMISSION

### Prerequisites for Coding Specialist, Certificate

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

Waiver/equivalency examination

Laboratory experience

## PROGRAM OF INSTRUCTION

### CODING SPECIALIST—Certificate

The program of instruction outlined as follows is for students enrolled during the 2002-2003 academic year.

HLCS	236	Pharmacology	3
HLCS	239	Introduction 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.

## COURSES

For information about units of credit and course numbers, see the beginning of section III of this BULLETIN. Multinumbered courses must be completed in sequence.

### **HLCS 236 Pharmacology (3)**

Introduction to 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)**

Survey of human diseases, including the etiology, pathogenesis, and clinical manifestations of commonly encountered diseases.

### **HLCS 239 Introduction to Coding and Medical Records (3)**

Introduction to 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: AHCJ 235 or equivalent.

### **HLCS 241 Medical Terminology (3)**

Prefixes, suffixes, and root words used in the language of medicine. Terms pertaining to pathology and surgery.

Prerequisite: Human anatomy and physiology.

### **HLCS 242 Coding I (4)**

Principles and conventions of ICD-9-CM Coding in diseases and procedures pertaining to infectious disease; and diseases of blood, endocrine, respiratory, digestive, genitourinary, skin, and musculoskeletal systems; and mental disorders.

Prerequisite: AHCJ 239, 241, 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.

Prerequisite: HLCS 242.

### **HLCS 245 Coding III (4)**

Principles of current procedural coding (CPT) at the intermediate level—including surgical coding for all body systems, conventions of CPT coding, and review and practice of CPT modified assignment.

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. Study of E & M coding conventions and modified assignments incorporating centers for medicare and medic-aid guidelines for professional service billing in outpatient, ER, inpatient, observation, home health, and other common professional practice settings.

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 designed to provide 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)**

A continuation of HLCS 261. Practicum II includes an additional 66 hours of coding laboratory experience under direct supervision of an instructor.

Prerequisite: HLCS 261.

### **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. Reporting requirements. Principles of indexes and registers, and retention of records. Overview of nomenclatures and classification systems. Philosophy of accreditation, certification, and licensure standards for hospitals. Introduction to health care-reimbursement systems. In-depth study of patient records, including content and documentation formats. Comparison of hospital vs ambulatory-care records.

### **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, symptoms, 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. Laboratory included to enhance coding proficiency.

Corequisite or Prerequisite: AHCJ 402.



**HLIN 304 Basic Coding Principles and Techniques II (3)**

Review of disease and operation coding ICD-9-CM continued. Special emphasis on obstetrical and newborn coding, trauma, poisonings, complication of surgical and medical care, diseases and procedures of the circulatory system, and neoplasms. History, principles, and purpose of other recognized systems of nomenclature and classification in health care included, with associated use of disease and operation indices. Laboratory designed to enhance student's coding proficiency using actual patient records.

Corequisite or Prerequisite: AHCJ 403.

Prerequisite: HLIN 303.

**HLIN 305 Hospital Census and Administrative Statistics (2)**

Basic census formulas and definitions. Development and use of statistics as required by health care facilities, clinics, and licensing and accrediting bodies.

**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 in outpatient, inpatient, ER, observation unit, home-health, and other common practice settings. Addresses principles of billing and third-party reimbursement in the health care field, including billing forms and the billing process.

Prerequisite: HLIN 303, 304.

**HLIN 325 Pharmacology for Health Information Administration (2)**

Introduction to 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.

**HLIN 361, 362, 363 Professional Practice Experience I, II, III (1, 1, 1)**

Supervised experience in health information departments and other areas of health care facilities.

**HLIN 395 Professional Practice Experience IV (2)**

Two-week, supervised clinical experience (eighty 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 include the development of database specifications, inputs, outputs, implementation schedules, and maintenance plans.

**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. Analysis of standards and accreditation movements affecting the implementation of health care standards. Evaluation of 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.

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-positive health documentation. Release of information in response to subpoena, court orders, and search warrants. Analysis of consent forms. Assignment for *The Federal Register*. The concept of improper disclosure and negligence. Introduction to the contents of the Health-Insurance Portability and Accountability Act (HIPAA) and its impact on health care.

**HLIN 444 Corporate Compliance in Health Care (3)**

Laboratory with application of research methodologies to health information administration, including evaluation of published research within the field. Directed experience in a research project.

**HLIN 445 Coding Seminar (3)**

Advanced coding concepts. Current procedural terminology (CPT) coding at the intermediate level. Issues in reimbursement using DRG and APC laws that govern the prospective payment system, and federally supervised coding auditing to assure that laws are followed. Requirements of state agencies, ethics of coding, coding quality, and coding compliance. Laboratory practice on coding 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.

**HLIN 461 Health Information-Management Practicum (1-5)**

Supervised experience in health information departments, with emphasis on management projects. Previous management experience considered when assigning the course load, the practicum environment, and the projects. Course may be repeated for additional credit.

**HLIN 462 Health Information-Administration Practicum V (1)**

Supervised experience in health information departments and other areas of health care facilities, with emphasis on the management aspect.

**HLIN 463 Health Information-Administration Practicum VI (1)**

Supervised experience in health information departments and other areas of health care facilities, with emphasis on the management aspect.

**HLIN 483 Long-Term and Alternative Delivery Systems in Health Care (4)**

Focus 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 reviewed. 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.

**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. In addition, one course unit is dedicated to administrative management and related topics, which include: 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 or equivalent.

**HLIN 495 Health Information Affiliation (1-3)**

Directed experience (40 to 120 clock hours) at an approved health care or health-related facility. Application of skills and knowledge in 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)**

Project or paper to be submitted 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.

**MHIS 501 Information Systems in Health Organizations (3)**

Concepts of information management, including decision support, executive/management systems, and computer/workstation technology. Exploration of new options for technology in information systems and current hardware and software in use. Required in the first quarter of instruction.

**MHIS 504 Database 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. Although sufficient technical detail is provided, emphasis remains on management and implementation issues pertinent in an information-systems curriculum.

**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 Theory (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. Analysis and development of information-security systems, system auditing, information-system documentation, and system-maintenance plans. Development of 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 timeline. Use of Microsoft Project for documentation requirements. Reporting, monitoring, analysis, and control also presented.

**MHIS 575 Market-Research Methods in Health Care (3)**

Application of 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 systems. 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. Developing 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. Presentation of 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.

**CONJOINT**

See CONJOINT COURSES, section III General Information, for course descriptions.

## NUTRITION AND DIETETICS

**DIETETIC TECHNOLOGY—Associate in Science; Certificate**

**NUTRITION AND DIETETICS—Bachelor of Science; Certificate**

BERTRUM C. CONNELL, Chair

KENNETH I. BURKE, Associate Chair

GEORGIA W. HODGKIN, Program Director, Dietetic Technology

MAXINE TAYLOR, M.S., Academic Coordinator of Clinical Education; Nutrition and Dietetics Program

CINDY KOSCH, M.S., RD, Assistant Professor, Nutrition and Dietetics; Certificate Coordinator

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Sondra D. Henderson  
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Merrill L. King  
Evonne J. Leiske  
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Susan K. Lewis  
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Merijane Malouin  
Nievalinda B. Morgan  
Deanna Nakmura

Leh C. Ota  
Mark A. Palmer  
Marjorie E. Quigley  
Jennifer Radice  
Inherla H. Rivera  
Lia M. Robinson  
Walter C. Thurnhofer  
Linda J. Whiting  
Pamela Yong

### ADVISORY COMMITTEE

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Richard A. Jacobs  
Stella Jones  
Merijane T. Malouin  
Norman H. Meyer  
Elmar P. Sakala  
Grenith J. Zimmerman

\*ex officio

### TUITION

For tuition information, please see section II, Financial Information, SCHEDULE OF CHARGES.

## DIETETIC TECHNOLOGY—Associate in Science

**T**he 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

**T**he 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.

### THE PROGRAM

**T**he program 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 Dietetic Education of The American Dietetic Association, 216 West Jackson Boulevard, 7th floor, Chicago, IL 60606-6995; telephone: 312/899-5400; Web site <[www.eatright.org/cade](http://www.eatright.org/cade)>; FAX: 312/899-4899.

### PROFESSIONAL REGISTRATION

**U**pon 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

**S**tudents 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 approved schools. The national office of The American Dietetic Association is at 216 West Jackson Boulevard, 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 OBJECTIVES

**U**pon 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—Associate in Science**

Admission to the program is based upon a selective process. To be eligible for consideration, the applicant must meet the following criteria:

- completion of prerequisite requirements listed below, at an accredited college or university;
- a 2.5 G.P.A. or above;
- an interview;
- letter of application; and
- recommendations.

**Prerequisites 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

Computer competency

Human nutrition

Electives to meet the total minimum requirements of 43 quarter units



Nutrition and dietetics students Sharon Chou and Lori VanDell—along with their classmates—apply what they have learned in DTCS 203 (The Art of Food Presentation) to one of the course requirements, a formal dinner. (What’s really great about this course is that the SAHP staff members often get invited to enjoy the fruits of the students’ labors.)

**PROGRAM OF INSTRUCTION**  
**DIETETIC TECHNOLOGY—Associate in Science**

The program of instruction outlined below is for full-time students enrolled during the 2002-2003 academic year.

**SOPHOMORE YEAR**

**POST-SUMMER SESSION (4 weeks): August 19–September 13, 2002**

DTCH	201	Human Nutrition	3
DTCH	202	Food Selection and Preparation	4
DTCH	203	The Art of Food Presentation	3

**AUTUMN QUARTER: September 23–December 13, 2002**

DTCH	205	Professional Issues in Nutrition and Dietetics	1
DTCH	239	Life-Cycle Nutrition	2
DTCH	241	Introduction to Clinical Nutrition	3
DTCH	271	Quantity Food Purchasing, Production, and Service	5
AHCJ	407	Financial Management	2

**WINTER QUARTER: January 6–March 21, 2003**

DTCH	242	Nutritional Care	4
DTCH	272	Food-Systems Management	4
RELF	436	Adventist Heritage and Health	3

**SPRING QUARTER: March 31–June 13, 2003**

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—**  
**Certificate**

**ADMISSION**

To be eligible for admission, the applicant must have earned a minimum of a baccalaureate degree at an accredited college or university.

**Prerequisites for Dietetic Technology, Certificate**

Bachelor's degree from an accredited college/  
 university

Human anatomy and physiology with laboratory,  
 complete sequence

Introductory chemistry with laboratory, complete  
 sequence

Sociology

Speech

**PROGRAM OF INSTRUCTION**  
**DIETETIC TECHNOLOGY—Certificate**

**Subject requirements for 2002-2003**

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.

**NUTRITION AND DIETETICS**

**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 general chemistry, microbiology, general psychology, and humanities—including cultural diversity/cultural anthropology. The prospective student should complete a year of practice as a registered dietetic technician before applying to the bachelor's degree program.

## NUTRITION AND DIETETICS—Bachelor of Science

**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

**D**ietetic 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

**T**he 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

**T**he administrative registered dietitian (RD) manages 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 consultant to health care or educational institutions; or enter the field of research.

### COMMUNITY NUTRITIONIST

**C**ommunity nutritionists 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 enter 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 Autumn Quarter of the junior year. The applicant will present at least two years of preprofessional education from an accredited college or university to meet the specific subject requirements for 2002-2003.

The professional program of eight quarters includes theory, laboratory, research, and clinical experiences. Ten-to-eleven weeks of clinical experience are scheduled at the end of the junior year and eight 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, 216 West Jackson Boulevard, Chicago, IL 60606-6995, 312/899-5400.

### PROFESSIONAL REGISTRATION

**U**pon 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

**S**tudents 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 nutrition status of the American population. The association grants student membership at a nominal rate to students in accredited programs. The national office of The American Dietetic Association is at 216 West Jackson Boulevard, 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 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**

Progression to the junior year of the bachelor's degree program to become a registered dietitian requires completion of all the prerequisites for the bachelor's degree:

**Prerequisites for Nutrition and Dietetics, B.S.**

Completion of a year of practice as a registered dietetic technician before applying to the bachelor's degree program

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 cultural anthropology **or** an approved course dealing with cultural diversity
- 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

General chemistry with laboratory, one semester or two quarters

Microbiology with laboratory

General psychology

Sociology

English composition, complete sequence

Speech

Computer competency

Human nutrition

Two physical activity courses

Electives to meet the total minimum requirements of 83 quarter units

For total unit requirements for graduation, see **Division of General Studies, LLU GENERAL EDUCATION REQUIREMENTS (section V)**.

**PROGRAM OF INSTRUCTION**

**NUTRITION AND DIETETICS—Bachelor of Science**

The program of instruction outlined as follows is for full-time students enrolled during the 2002-2003 academic year.

**JUNIOR YEAR**

**POST-SUMMER SESSION (4 weeks)**

DTCS	301	Human Nutrition*	3	
DTCS	302	Food Selection and Preparation	4	
DTCS	303	The Art of Food Presentation	<u>3</u>	
<b>TOTAL</b>				<b>10</b>

**AUTUMN QUARTER**

DTCS	305	Professional Issues in Nutrition and Dietetics	0.5	
DTCS	339	Life Cycle Nutrition	2	
DTCS	341	Introduction to Clinical Nutrition	3	
DTCS	371	Quantity Food Purchasing, Production, and Service	5	
AHCJ	329	Organic Chemistry	<u>5</u>	
<b>TOTAL</b>				<b>15.5</b>

**WINTER QUARTER**

DTCS	342	Medical Nutrition Therapy I	5	
DTCS	372	Food-Systems Organization and Management	4	
RELF	436	Adventist Heritage and Health	3	
AHCJ	332	Biochemistry	<u>5</u>	
<b>TOTAL</b>				<b>17</b>

\*Required only if not completed as a prerequisite

**SPRING QUARTER**

DTCS	304	Community Nutrition	4	
DTCS	321	Nutrition and Human Metabolism	2	
DTCS	343	Medical Nutrition Therapy II	5	
DTCS	442	Nutrition Counseling	3	
AHCJ	305	HIV/AIDS and the Health Provider	<u>1</u>	
TOTAL				17

**SENIOR YEAR**

**SUMMER Professional Practice Experience (10 weeks)**

DTCS	395	Nutrition and Dietetics Practicum (10 weeks)	<u>6</u>	
TOTAL				6

**AUTUMN**

DTCS	405	Senior Seminar	0.5	
DTCS	445	Nutrition-Care Management	2-4	
DTCS	452	Advanced Nutrition	4	
AHCJ	351	Statistics for the Health Professions	3	
RELE	—	Religion elective	<u>3</u>	
TOTAL				17.5

**WINTER**

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	<u>3</u>	
or			or	
DTCS	474	Advanced Food-Systems Management	<u>3</u>	
or			or	
DTCS	477	Advanced Community Nutrition	<u>3</u>	
TOTAL				16

**SPRING**

DTCS	473	Medical Nutrition-Therapy Affiliation (10 weeks)	<u>6</u>	
or			or	
DTCS	479	Food Systems-Management Affiliation (10 weeks)	<u>6</u>	
or			or	
DTCS	478	Community Nutrition Affiliation (10 weeks)	<u>6</u>	
TOTAL				6



Having concluded their weekly meeting, faculty of the Nutrition and Dietetics Department take time out for an introduction. Top row: department chair, Bert Connell; and faculty Crystal Whitten and Cindy Kosch; bottom row: associate department chair, Ken Burke; and faculty Maxine Taylor and Georgia Hodgkins.

## 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 for 2002-2003

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.

### PROGRAM OF INSTRUCTION

#### NUTRITION AND DIETETICS—Certificate

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 dietitians of the Commission on Dietetic Registration will be based on completion of program requirements as well as on demonstrated competency in the following certificate prerequisites.

#### Prerequisites for Nutrition and Dietetics, Certificate

Bachelor's degree from an accredited college  
 Human anatomy and physiology with laboratory, complete sequence  
 Microbiology with laboratory  
 General chemistry with laboratory, one semester or two quarters  
 General psychology  
 Sociology  
 English  
 Speech  
 Writing  
 Mathematics  
 Computers

**NOTE: A minimum grade of C (2.0) is required for all courses in the program.**

## COURSES

For information about units of credit and course numbers, see the beginning of section III of this BULLETIN.

### **DTCH 201 Human Nutrition (3)**

Fundamentals of normal nutrition. Carbohydrates, proteins, fats, vitamins, and minerals; their roles in human metabolism. Introduction to 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. Focus 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; or consent of the 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 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: DTCH 201, 239, 241.

### **DTCH 205 Professional Issues in Nutrition and Dietetics (1)**

Growth of dietetic technology and of nutrition and dietetics as professions; their role in restoration and maintenance of health. Nontraditional roles of the dietetic technician and registered dietitian illustrated. Emphasis on 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 lifespan. Includes focus on pregnancy, lactation, normal infant growth and development, childhood, and adolescence—with an overview of school feeding programs. Adult men's and women's health issues. Geriatrics. Per week: lecture 1 hour, practicum 3 hours.

Prerequisite: DTCH 201.

Corequisite: DTCH 241.

### **DTCH 241 Introduction to Clinical Nutrition (3)**

Basic knowledge of the responsibilities of the clinical dietetic technician and dietitian: medical terminology, patient charts, documentation in the medical record, patient interviewing, and counseling techniques. Utilization of 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.

Corequisite: DTCH 239.

### **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. Continued practice in interviewing and introduction to nutritional counseling. Use of 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)**

Emphasis on methods to achieve quantitative and qualitative standards in quantity food production. Menu planning for institutions. Purchasing. Practicum in food purchasing, production, and service. Per week: lecture 2 hours, practicum 9 hours.

### **DTCH 272 Food-Systems Management (4)**

Study of 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)**

Application of 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 to be submitted on a topic of current interest in an area of dietetic technology. Regular meetings to provide the student with guidance and evaluation.

**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. Focus 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 or consent of the instructor.

**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 (0.5)**

Growth of nutrition and dietetics as a profession, and the role of the professional in restoration and maintenance of health. Illustrated nontraditional roles of the registered dietitian and dietetic technician, registered. Emphasis on development of professionalism, accountability, and responsibility for life-long learning. Preparation of a professional portfolio.

**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.

**DTCS 321 Nutrition and Human Metabolism (4)**

Nutritional requirements and metabolism of essential nutrients for the human organism at the cellular level. Focus on vitamin and mineral metabolism. Per week: lecture 2 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 lifespan. Includes focus on pregnancy, lactation, normal infant growth and development; childhood and adolescence, with an overview of school feeding programs. Adult men's and women's health issues. Geriatrics. Per week: lecture 1 hour, practicum 3 hours.

Prerequisite: DTCS 301.

Corequisite: DTCS 341.

**DTCS 341 Introduction to Clinical Nutrition (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. Utilization of the computer for diet analysis. Introduction to 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; general 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; and indications for the use of enteral nutrition support.

Continued practice in patient interviewing and counseling, 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; physiology.

**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 and HIV/AIDS. Continuation of nutrition assessment, patient interviewing, and counseling. Application of enteral and parenteral nutrition support when indicated in the clinical management of patients with these conditions. Introduction to preparation of an in-depth case study.

Prerequisite: DTCS 342.

**DTCS 371 Quantity Food Purchasing, Production, and Service (5)**

Emphasis on methods to achieve quantitative and qualitative standards in quantity food production. Menu planning for institutions. Purchasing. Practicum in food production and service. Open to dietetics students only. Per week: lecture 2 hours, practicum 9 hours.

Prerequisite: Microbiology.

**DTCS 372 Food-Systems Organization and Management (4)**

Study of food-service systems. Effective utilization of resources within the food system. Computer application in food-systems management. Per week: lecture 2 hours, practicum 9 hours.

Prerequisite: DTCS 371.

**DTCS 395 Nutrition and Dietetics Practicum (2-6)**

Supervised experience in clinical, community, and administrative dietetics in hospitals, outpatient clinics, public health departments, and convenience-food systems. Performance review and evaluation. Eleven weeks (400 clock hours) during the summer at the end of the junior year.

Prerequisite: DTCS 343, 372.

**DTCS 405 Senior Seminar (0.5)**

Development of 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. Emphasis on professional portfolio and transition to entry-level nutrition educator/dietitian/food-service director.

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. Special emphasis given to drug-nutrient interactions.

**DTCS 442 Nutrition Counseling (3)**

Continued application of 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 342.

Corequisite: DTCS 343.

**DTCS 444 Medical Nutrition Therapy III (3)**

Nutrition intervention in the treatment of high-risk newborns. Inborn errors of metabolism. Fetal alcohol syndrome. Neurological/rheumatological disorders, including Parkinson's disease, Alzheimer's disease, and arthritis. Rehabilitation conditions, including stroke, head and spinal cord injury, and dysphagia management. Endocrine disorders. Infection and wound healing. Burns. Immunology. AIDS. Updates on advanced nutrition topics. Preparation of an in-depth case study. Per week: lecture 2 hours, practicum 3 hours.

Prerequisite: DTCS 343, 395; AH CJ 334.

**DTCS 445 Nutrition-Care Management (2-4)**

Application of 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, care management, and entrepreneurship. Students who have taken a course in principles of management register for 2 units only.

Prerequisite: DTCS 395.

**DTCS 452 Advanced Nutrition (4)**

Advanced topics of normal nutrition presented, with emphasis on case studies to illuminate metabolic pathways and effects of disease.

Prerequisite: DTCS 321, 343, 395; AH CJ 334.

**DTCS 453 Advanced Medical Nutrition Therapy (3)**

Case-study approach to the theory and application of critical-care nutrition to complex medical conditions. Interpretation and synthesis of 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. Focus 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 6 hours.

Prerequisite: DTCS 395, 444.

**DTCS 461 Food Science (3-4)**

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. Variable unit is laboratory. Laboratory requirement determined by instructor. Per week: lecture 3 hours, laboratory 3 hours. Laboratory fee.

Prerequisite: Basic foods, human nutrition, organic chemistry.

**DTCS 473 Medical Nutrition-Therapy Affiliation (6)**

Application of 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.

**DTCS 474 Advanced Food-Systems Management (3)**

Development of problem-solving competencies in the management of food systems. Production schedules, equipment, layout and design, and work analysis. Presentation of 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. Discussion of endurance, strength, flexibility, and aerobic exercises. Laboratory included.

Prerequisite: Anatomy and physiology.

**DTCS 477 Advanced Community Nutrition (3)**

Provides students access to community professionals in the context of informal, round-table discussions. Topics may include school-based nutrition education and interventions; epidemiology (cancer, CHD, or vegetarian diets); addictions; nutrition education and teaching aids; study of an international health organization; nutrition and public policy in the U.S. (FDA, NCI, etc.); nutrition journalism; the RD in private practice; soy protein use around the world; and promotion of nutrition in the community. Provides students a weekly opportunity to participate in professional practice, including opportunity to conduct community-based programs and limited research. Assignments include giving a multimedia presentation, professional-practice case studies, professional-practice diary, writing a nutrition article to be submitted for publication, and a special-interest project (subject to approval of the instructor). 400 clock hours.

Prerequisite: DTCS 304, 444.

**DTCS 478 Community-Nutrition Affiliation (6)**

Professional practice in community-nutrition settings, in both traditional and nontraditional settings. The professional practice includes projects, presentation to the community, research, screening events, association with clinical instructors, assessment and counseling, group instruction, community-nutrition events, etc. Minimum of ten weeks (400 clock hours) during the Spring Quarter of the senior year.

Prerequisite: DTCS 477.

**DTCS 479 Food Systems-Management Affiliation (6)**

Application of 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.

**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.

Concurrent: AHCJ 461.

**DTCS 497 Advanced Clinical Experience (40 to 480 clock hours per term)**

Advanced clinical experience in selected areas of professional dietetic practice.

Prerequisite: Completion of DTCS 473 or 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 to provide the student with guidance and evaluation. Elected on the basis of need or interest.

**CONJOINT**

See CONJOINT COURSES, section III General Information, for course descriptions.

**COGNATE****RELE 457 Christian Ethics and Health Care (2)**

Ethical issues in modern medicine and related fields from the perspective of Christian thought and practice.

**RELF 436 Adventist Heritage and Health (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.



# OCCUPATIONAL THERAPY

## OCCUPATIONAL THERAPY ASSISTANT—Associate in Arts

## OCCUPATIONAL THERAPY—Entry-Level Master of Occupational Therapy; Post-Professional Master of Occupational Therapy

LIANE H. HEWITT, Chair; Program Director for Associate in Arts, Occupational Therapy Assistant; Program Director for Associate in Arts, Occupational Therapy Assistant Distance Learning; and Program Director for Post-Professional Master of Occupational Therapy

ESTHER M. HUECKER, Program Director for Entry-Level Master of Occupational Therapy

RUTH JEFFRIES, Academic Coordinator for Fieldwork Education, Occupational Therapy Assistant Program

JUDITH A. PALLADINO, Academic Coordinator for Fieldwork Education, Occupational Therapy Program

TERESE R. PFEIFFER, Program Coordinator for Distance Learning, Fresno

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 Bonnie J. Forrester  
 Liane H. Hewitt  
 Joyce W. Hopp  
 Esther M. Huecker  
 Ruth Jeffries  
 Bradford D. Martin  
 Judith A. Palladino  
 Karen M. Pendleton  
 Davena D. Peters  
 Terese R. Pfeiffer  
 Ernest R. Schwab  
 Marilyn Wright  
 Grenith Zimmerman

### CLINICAL FACULTY

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 Michael K. Davis  
 Jeanette S. Fischer  
 Luella M. Grangaard  
 Diane S. Hardy  
 Joyce M. Hoopai  
 Dyhalma Irizarry  
 John W. Kerr, Jr.  
 Tonia A. Kimber  
 Kathleen L. Marshall  
 Janette L. Morey  
 Christine S. O'Hagan  
 Diana Su-Erickson  
 Tracy G. Uditsky

Christine M. Wietlisbach  
 Dorre Yamashiro  
 Y. Lynn Yasuda

### ADVISORY COMMITTEE

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 Esther Huecker  
 John Kerr  
 Rebecca Larson  
 LeRoy Nattress  
 Madge Oh  
 Christine O'Hagan  
 Annette Richardson  
 Clarissa Saunders-Newton

\*ex officio

### TUITION

**F**or tuition information, please see section II, Financial Information, SCHEDULE OF CHARGES.

**T**he 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

**O**ccupational 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

**B**oth 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, a registered (OTR), or a certified occupational therapy assistant (COTA).

## PROFESSIONAL REGISTRATION

**U**pon 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). NBCOT offers computerized examinations four times a 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.

## PROFESSIONAL ASSOCIATIONS

**S**tudents 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—Associate in Arts

### 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 community health care programs. Level II fieldwork must be completed within eighteen months following academic preparation.

### DISTANCE EDUCATION

The Occupational Therapy Assistant Program is offered via distance education at Fresno City College, Fresno, California; while the Post-Professional Master of Occupational Therapy Program is offered on site at Antillean Adventist University, Mayaguez, Puerto Rico.

### 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, 24887 Taylor Street, Suite 102.

### IMMUNIZATIONS

Students are required to have a current TB test, the complete hepatitis B series, and chicken pox immunizations for all scheduled clinical experience. Titers for MMR, hepatitis B, and varicella must be completed before entering the program. These are essential for fieldwork placements. Immunizations are available at the Student Health Service, Evans Hall.

### TRANSPORTATION

Students are required to have their own transportation to and from fieldwork sites.

### 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.

### Prerequisites for Occupational Therapy Assistant, A.A.

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)

Computers

Ceramics or other related art, such as pottery, 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 patient 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****OCCUPATIONAL THERAPY ASSISTANT—Associate in Arts**

The program of instruction outlined as follows is for full-time students enrolled during the 2002-2003 academic year.

**AUTUMN QUARTER**

OCTA 201	Introduction to Occupational Therapy	1
OCTA 215	Introduction to Applied Neuroanatomy	2
OCTA 224	Therapeutic Activities I	2
OCTA 228	Intervention Techniques	2
OCTA 233	Occupational Therapy Practice I	5
OCTA 241	Rehabilitation Principles I	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.



Under the talented guidance of Liane Hewitt, staff and faculty of the Occupational Therapy Program and the Occupational Therapy Assistant Program go out of their way to mentor their students. Front row: Madge Oh (staff), Judy Palladino (academic coordinator), Cerise Bender and Michelle Frasco (staff). Top row: Esther Huecker (program director), Karen Pendleton (faculty), Liane Hewitt (department chair), Ruth Jeffries (academic coordinator, OTA); and Christy Billock (faculty).

## OCCUPATIONAL THERAPY—Entry-Level Master of Occupational Therapy

### THE PROGRAM

The 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 as listed under Admission—Option Two.

The curriculum is built on three levels of learning: foundation, professional, and practice. These levels of learning represent curriculum content that supports the student's progressive growth and knowledge. Initially, the student focuses primarily on combining foundation-knowledge courses with prerequisite courses and experiences completed prior to admission into the program. 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 and Spring quarters 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.

### 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, 24887 Taylor Street, Suite 102.

### IMMUNIZATIONS

Students are required to have a current TB test and titers for varicella, MMR, and hepatitis B series for all scheduled fieldwork experience.

### 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. Evaluate, formulate, and implement appropriate occupational therapy treatment plans that are focused on patient 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 lifelong 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.

### ADMISSION—Option One: B.S. and M.O.T. (Bachelor of Science and Master of Occupational Therapy) 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.**

### Prerequisites for Entry-Level Master of Occupational Therapy, M.O.T.

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

Chemistry with laboratory, one quarter or semester (minimum 6 quarter units)

Physics with laboratory, one quarter or semester (minimum 6 quarter units)

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

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: M.O.T. (Master of Occupational Therapy) 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.

**Subject requirements for 2002-2003**

The applicant must complete the following subject requirements at an accredited college or university:

Human anatomy and physiology with laboratory, complete sequence

Chemistry with laboratory

Physics with laboratory

(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**

**OCCUPATIONAL THERAPY—Entry-Level Master of Occupational Therapy**

The program of instruction outlined as follows is for full-time students enrolled during the 2002-2003 academic year.

**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 Professional	1
AHCJ 311	Medical Terminology	2
AHCJ 312	Anatomy	9
AHCJ 351	Statistics for the Health Professions	3
AHCJ 402, 403	Pathology I, II	4, 3
AHCJ 404	Pharmacology	1
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	2
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

\*Religion courses required for M.O.T. track students only.

**YEAR THREE**

OCTH 542	Current Trends in Occupational Therapy Practice II	3
OCTH 544	Advanced Occupational Therapy History	3
OCTH 551, 552	Theoretical Perspectives on Occupation I, II	3, 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	2*

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 twelve units per quarter does not indicate less than full-time work.

\*Religion courses required for M.O.T. track students only.

**OCCUPATIONAL THERAPY—Post-Professional Master of Occupational Therapy**

**THE PROGRAM**

The post-professional 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 post-baccalaureate 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.

**CPR CERTIFICATION**

Students are required to have current cardio-pulmonary resuscitation (CPR) certification (adult and child) for all scheduled clinical experience. Classes are available on campus at Life Support Education, University Arts, 24887 Taylor Street, Suite 102.

**Prerequisites for Post-Professional Master of Occupational Therapy, M.O.T.**

Baccalaureate degree in occupational therapy from an accredited institution.

**PROGRAM OF INSTRUCTION**

**OCCUPATIONAL THERAPY—Post-Professional Master of Occupational Therapy**

The program of instruction outlined as follows is for full-time students enrolled during the 2002-2003 academic year. 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	3
OCTH 544	Advanced Occupational Therapy History	3
OCTH 551, 552	Theoretical Perspectives on Occupation I, II	3, 3
OCTH 699	Directed Study	3
AHCJ 509	Teaching and Learning Styles	3
AHCJ 525	Biostatistics	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 electives	3



## COURSES

For information about units of credit and course numbers, see the beginning of section III of this BULLETIN.

### **OCTA 201 Introduction to Occupational Therapy (1)**

Growth of occupational therapy as a profession and its role in medical rehabilitative care. Human development from birth to death. Self-care, work, and play related to physical function and sociocultural adjustment. Per week: lecture 1 hour.

### **OCTA 214 Applied Anatomy (2)**

Review of upper/lower extremities and trunk anatomy. Analysis-associated pathology as it applies to function. Per week: lecture 1 hour, laboratory 2 hours.

### **OCTA 215 Introduction to Functional Neuroanatomy (2)**

Basic concepts of the anatomy of brain and spinal cord. Introduction to the neuron, synapse, nerve conduction, cell threshold, and feedback system. Per week: lecture 2 hours.

### **OCTA 217, 218 Occupational Therapy Assistant Practicum I, II (2, 2)**

Observation and supervised experience in community programs. Per week: 8 hours.

Prerequisite: Must be completed in sequence.

### **OCTA 224 Therapeutic Activities I (2)**

Basic activities used by the occupational therapy assistant in a clinic setting. Problem-solving approach to woodwork, metalwork, and the primitive crafts. Clinic maintenance and safety emphasized. Per week: lecture 1 hour, laboratory 2 hours.

### **OCTA 225 Therapeutic Activities II (2)**

General introduction to the use of assistive technology and splinting, and their role in occupational therapy. Per week: lecture 1 hour, laboratory 2 hours.

### **OCTA 226 Occupational Therapy Assistant Seminar (2)**

Practical application of analyzing an activity for an individual or group of patients and demonstrating the ability to adapt those activities to each patient's needs. Per week: lecture 2 hours.

### **OCTA 228 Intervention Techniques (2)**

Theory and application of basic skills in the management of disabled persons. Application of skills to body mechanics, self-care, and homemaking. Use of adaptive equipment in laboratory and clinic settings. Per week: lecture 1 hour, laboratory 2 hours.

### **OCTA 233 Occupational Therapy Practice I (5)**

Normal and abnormal growth and development. Diagnosis and treatment of disabilities associated with development. Per week: lecture 4 hours, laboratory 2 hours.

### **OCTA 234 Occupational Therapy Practice II (5)**

Introduction to major categories of physical dysfunction, with emphasis on intervention strategies and appropriate treatment protocols. Per week: lecture 4 hours, laboratory 2 hours.

### **OCTA 235 Occupational Therapy Practice III (5)**

Theoretical foundations based on mental-health practice. Development of therapeutic relationships, data gathering, treatment methods, and use of adaptive activities to fit the needs of individual patients or groups. Per week: lecture 4 hours, laboratory 2 hours.

### **OCTA 241 Rehabilitation Principles (2)**

Introduction to general rehabilitation principles. Course work emphasis on treatment planning, documentation, and introduction to clinical reasoning. Per week: lecture 1 hour.

### **OCTA 251, 252, 253 Human Pathology I, II, III (2, 2, 2)**

Introduction to disorders and diseases. Includes organ-system diseases, central-nervous system dysfunction, orthopaedic problems, and mental illness. Medical-intervention strategies. Per week: lecture 2 hours.

### **OCTA 256 Professional Self-Management (2)**

Social and ethical issues affecting health care and occupational therapy. Per week: seminar 2 hours.

### **OCTA 261 Aging (2)**

Evaluation and treatment of acute and long-term dysfunction of older persons. Addresses age as a developmental stage of the normal lifespan. Treatment intervention in terms of the model of human occupation frame of reference. Per week: lecture 2 hours.

### **OCTA 271 Group Dynamics (2)**

Theories of group interaction and communication. Laboratory emphasizes the influence and dynamics of social roles in the context of structured occupational therapy group exercise. Per week: lecture 1 hour, laboratory 2 hours.

### **OCTA 291 Occupational Therapy Assistant Affiliation I (3)**

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 a 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.

**OCTH 301 Introduction to Occupational Therapy (3)**

Definition of occupational therapy from basic philosophical and historical perspectives. Describes the uniqueness of the profession and various practice areas of occupational therapy. Explores the roles of occupational therapists and describes the 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 306 Group Dynamics and Intervention (2)**

Historical and current knowledge of group dynamics as related to psychosocial aspects of occupational therapy. Principles of group dynamics, leadership skills, and basic treatment planning practiced in group exercises. Per week: 2 hours.

**OCTH 309 Human Occupation across the Lifespan (5)**

Consideration of how occupation, embedded in a diverse social-cultural context, is shaped and changed through the human lifespan. Occupation, defined in occupational therapy and occupational science and examined in historical relationship to human adaptation and health. Delineations among academic studies, theories, models, and frames of reference related to occupation introduced and explored as potential foundations influencing occupational therapy.

**OCTH 314 Task Analysis (2)**

Emphasis on analysis of occupational performance. Identification of occupational profiles and patterns of occupation. Interactive acquisition and analysis of areas of occupation, performance skills, performance patterns, context, activity demands, and client factors. Per week: lecture 2 hours.

**OCTH 315 Therapeutic Media (2)**

Application of occupational therapy through purposeful activity. Analysis and application of crafts, hobbies, and recreation. 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 examination and assessment of 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, 318 Occupational Therapy Practicum I, II (2, 2)**

Observation and supervised experience in clinical and/or community-based programs. Per quarter: 80 hours.

**OCTH 321 Intervention Techniques and Strategies I (2)**

Introduction to the treatment of performance areas within the temporal and environmental contexts. Emphasis on 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)**

Anatomical and mechanical fundamentals of human motion. Application to the analysis of motor skills, including muscle testing and goniometry. Emphasis on the upper extremities. Per week: lecture 2 hours, laboratory 2 hours.

Prerequisite: AHCJ 312.

**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)**

Critical analysis of evidence-based research and qualitative studies. Introduction to 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 (1-2)**

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)**

Introduction to the intervention process using specific occupational therapy theory and frames of reference applied to various populations. Emphasis on sensory integration and neurodevelopmental approaches using case studies. Per week: lecture 2 hours, laboratory 2 hours.

**OCTH 434 Intervention Techniques III (3)**

Hand and upper-extremity rehabilitation, evaluation procedures, and treatment protocol for diseases and trauma. Current concepts in design and fabrication of hand splints.

Prerequisite: OCTH 451-453.

**OCTH 441 Fundamentals of Case Management (4)**

Introduction to application of clinical reasoning process; effective communication, documentation and overall professional skill building. Application of case-management skills, assessment, intervention planning, implementation, reassessment, and termination when appropriate.

**OCTH 442 Case Analysis, Reasoning, and Management I (2)**

Introduction to application of clinical 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)**

Continuation of case-management process as a means of addressing questions of importance to occupational therapy practice through theoretical perspectives. Application of case-management skills, assessment, intervention planning, implementation, reassessment, and termination when appropriate. Emphasis on clinical 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)**

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; emphasis on effect of such conditions on human occupational performance across the lifespan.

Prerequisite: OCTH 309, 341.

**OCTH 452 Disorders of Human Performance II (5)**

Continuation of 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)**

Continuation of 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, 492 Fieldwork Experience I, II (6, 6)**

Supervised fieldwork experience in clinical and/or community-based programs. Emphasis on assessment, planning, treatment, problem solving, administration, and professionalism. Successful completion necessary before the student is eligible to take the certification examination (480 clock hours each).

**OCTH 499 Occupational Therapy Independent Study (1-4)**

Project or paper to be submitted 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)**

Continuation of case-management process as a means of addressing questions of importance to occupational therapy practice through theoretical perspectives. Application of case-management skills, assessment, intervention planning, implementation, reassessment, and termination when appropriate. Emphasis on clinical reasoning through community-based case practice.

Prerequisite: OCTH 442, 443, 451.

**OCTH 525 Program Seminar (2)**

Development of clinical reasoning skills. Evaluation of program effectiveness in providing tools to assess, plan, and implement treatment, make referrals, and discontinue occupational therapy services. Emphasis on professional portfolio and transition to entry-level occupational therapy practitioner.

Prerequisite: Senior standing.

**OCTH 526 Business Topics in Health Care (2-3)**

Introduction to business for occupational therapy practitioners—including financial statements and budgetary processes, marketing, management, and consultation. Emphasis on 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 clock hours per term)**

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)**

Analysis of 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 Theoretical Perspectives on Occupation II (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.  
Prerequisite: OCTH 551.

**OCTH 561 Program Development/Design I (3)**

Focus on selection, research, and design of programs pertinent to occupational therapy practice.

**OCTH 562 Program Development/Design II (3)**

Implementation of 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, 572, 573 Research I, II, III (2, 2, 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 598 Occupational Therapy Advanced Specialty Track (1-3)**

Presentation of in-depth practice application in an area of occupational therapy. Opportunity to pursue various topics related to current trends. Development of advanced clinical skills, where appropriate.

**OCTH 699 Directed Study (2-3)**

Student pursues an area of special interest under the direction of the faculty adviser. Topic must be approved by the OT department.

**CONJOINT**

See CONJOINT COURSES, section III General Information, for course descriptions.

**COGNATE**

**RELE 457 Christian Ethics and Health Care (2)**

Ethical issues in modern medicine and related fields from the perspective of Christian thought and practice.

**RELR 525 Health Care and the Dynamics of Christian Leadership (3-4)**

Christian principles of leadership in the community and in the practice of health care.

Additional project required for fourth unit.



In the foreground, Master of Occupational Therapy degree students Dan Barnett, Aileen Villanova, and Shannon Gibson are happy to be able to share ideas before class starts.

# PHYSICAL THERAPY

## PHYSICAL THERAPIST ASSISTANT—Associate in Science

### PHYSICAL THERAPY—Entry-Level Master of Physical Therapy; Progression Master of Physical Therapy; Post-Professional Master of Physical Therapy

### PHYSICAL THERAPY—Entry-Level Doctor of Physical Therapy; Post-Professional Doctor of Physical Therapy; Post-Professional Doctor of Physical Therapy Science

EDD J. ASHLEY, Chair; Program Director for Post-Professional Master of Physical Therapy and for Post-Professional Doctor of Physical Therapy Science

HOWARD W. SULZLE, Associate Department Chair

LAWRENCE E. CHINNOCK, Program Director for Entry-Level Master of Physical Therapy, for Progression Master of Physical Therapy, and for Entry-Level Doctor of Physical Therapy

EVERETT B. LOHMAN III, Program Director for Progression Master of Physical Therapy, for Post-Professional Master of Physical Therapy, and for Post-Professional Doctor of Physical Therapy

JEANNINE STUART-MENDES, Academic Coordinator of Clinical Education for Entry-Level Master of Physical Therapy Program and for Entry-Level Doctor of Physical Therapy Program

ANTONIO VALENZUELA, Academic Coordinator of Clinical Education for Progression Master of Physical Therapy Program

DESMYRNA R. TAYLOR, Program Director for Physical Therapist Assistant

CAROL J. APPLETON, Academic Coordinator of Clinical Education for Physical Therapist Assistant Program and Assistant Program Director for Physical Therapist Assistant

## FACULTY

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Edd J. Ashley  
Gail A. Polvoorde  
Lawrence E. Chinnock  
Gary A. Coleman  
Nicceta Davis  
Intithar S. Elias  
Bonnie J. Forrester  
Joseph Godges  
Joyce W. Hopp  
Susan M. Huffaker  
Eric G. Johnson  
Everett B. Lohman III  
Helen H. Marshak  
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Ronald M. Rea  
Gail T. Rice  
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Howard W. Sulzle  
James M. Syms  
Desmyrna R. Taylor  
Donna G. Thorpe  
Antonio Valenzuela  
Melanie A. Westberg  
Grenith J. Zimmerman

Henry Garcia  
Ronald A. Hershey  
Patricia A. Hokama  
Norma C. Huckaby  
Christine Eddow  
Robert F. Landel  
Kevin D. Larson  
Trudi L. Maaskant  
Steven D. Newton  
Melvin A. Orser  
Robert W. Swen  
William E. Walthall  
Lily L. Young

## ADVISORY COMMITTEE

Edd J. Ashley  
Dennis Canig  
Lawrence E. Chinnock  
Liane H. Hewitt  
Joyce W. Hopp\*  
Wendy Lantz  
Lee Nattress  
Lyn Nattress  
Theresa O. DeLao

\*ex officio

## CLINICAL FACULTY

Jacqueline Bell  
Mei Lee Chiu

## TUITION

For tuition information, please see section II, Financial Information, SCHEDULE OF CHARGES.

**PHYSICAL THERAPIST ASSISTANT—Associate in Science**

**T**he 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 therapist 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**

**P**hysical therapy offers a career for men and women who are interested in medical science and who enjoy working with people. Graduates have a wide choice of opportunities with medical groups, hospitals, rehabilitation centers, outpatient clinics, national and state agencies, and school systems.

## THE PROGRAM

The Physical Therapist Assistant Program leads to the Associate in Science degree and professional certification. 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 cardiopulmonary resuscitation (CPR) certification (adult and child) for all scheduled clinical experience. Classes are available on campus at Life Support Education, University Arts, 24887 Taylor Street, Suite 102.

## TRANSPORTATION

Students are required to have their own transportation to and from clinical sites.

## IMMUNIZATIONS

Students are required to have a current TB test, the complete hepatitis B series, and chicken pox immunization for all scheduled clinical experiences.

## 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 or registration 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.fsbpt.org/directory.cfm](http://www.fsbpt.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 of physical therapy.
- 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 of 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.
- Demonstrate ability to work effectively in a team setting.

## ADMISSION

**PLEASE NOTE: GRADES OF 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.

### Prerequisites for Physical Therapist Assistant, A.S.

Religion required, 4 units per year of attendance at 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  
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

**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 is required.



While it was impossible to gather all of the faculty and staff of the Physical Therapy Program and Physical Therapist Assistant Program, the above grouping is a majority of our PT/PTA force. Front row: James Syms (faculty), Barbara Cassimy (staff), Bonnie Forrester (faculty), Jan Fisher (staff). Second row: Grenith Zimmerman (associate dean and director for research and statistics), Carol Appleton, Sue Huffaker, and Desmyrana Taylor (all faculty). Third row: Brad Martin, Eric Johnson, Tony Valenzuela, Joe Godges, Howard Sulzle, and Jeannine Stuart-Mendes (all faculty). Top row: Edd Ashley (department chair), and Ron Rea and Larry Chinnock (both faculty).



**PROGRAM OF INSTRUCTION**  
**PHYSICAL THERAPIST ASSISTANT—Associate in Science**

The program of instruction outlined as follows is for students enrolled during the 2002-2003 academic year.

**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 Exercises	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
RELR	475	The Art of Integrative Care	2
RELE	456	Personal and Professional Ethics	2

A minimum grade of C (2.0) is required for all courses in the program.



Nicceta Davis, a favorite faculty—among many favorites—helps physical therapy master’s degree/ post-professional degree and physician assistant students with their research papers.

**PHYSICAL THERAPY—****Entry-Level Master of Physical Therapy****Progression Master of Physical Therapy****Post-Professional Master of Physical Therapy****Entry-Level Doctor of Physical Therapy****Post-Professional Doctor of Physical Therapy****Post-Professional Doctor of Physical Therapy Science**

**P**hysical 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.

**CPR CERTIFICATION**

**S**tudents 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, 24887 Taylor Street, Suite 102.

**PROFESSIONAL ASSOCIATION**

**S**tudents 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 entry-level M.P.T., progression M.P.T., or entry-level D.P.T. degree requirements and clinical affiliation qualifies the student to sit for all state registration 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 registration to practice. California application form and fee are submitted to the Physical Therapy Board of California, 1434 Howe Avenue, Suite 92, Sacramento, CA 95852.

## PHYSICAL THERAPY—Entry-Level Master of Physical Therapy

### THE PROGRAM

The Entry-Level Master of Physical Therapy Program is designed for individuals who have no previous degree in physical therapy and wish to pursue a Master of Physical Therapy degree and professional certification. Admission to the University follows presentation of two academic years of prerequisites earned at a regionally accredited college or university. Graduation is in the Spring Quarter following completion of the clinical affiliations. The emphasis in the program is on professional courses, ethics, and practical experience at Loma Linda University Medical Center and affiliated hospitals and clinics.

#### 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 different times during the program. First-year students complete one two-week practicum assignment during the Spring Quarter. Second-year students complete two three-week assignments during the Autumn and Spring quarters. The major clinical assignments, thirty-three weeks, are during the third year.

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.

### THE PROGRAM OBJECTIVES

Upon completion of the program, the graduate should be qualified to:

1. Demonstrate a basic level of knowledge, skills, and behaviors appropriate for the safe and effective practice of physical therapy.

This will be evidenced by the graduate's ability to—

- evaluate a patient and identify problems amenable to physical therapy;
  - formulate and carry out a therapeutic treatment plan focused on solving the identified problems;
  - develop discharge plans that include education of patients in a home-care program and preventive lifestyle;
  - function as a viable member of an interdisciplinary health care team.
2. Conduct clinically relevant research activities and critically review and interpret professionally published research material.
  3. Demonstrate ethical and legal accountability to themselves, their patients, and their profession.
  4. Commit to proactive, long-term involvement in professional and personal growth.
  5. Actively contribute as an alumnus of Loma Linda University through involvement in clinical education and support of student endowment funds.
  6. Address the spiritual and emotional needs of patients—exhibiting compassion and empathy to all people, as embodied in the biblical teaching of Jesus Christ.
  7. Participate as part of the resource personnel assisting the Seventh-day Adventist church in achieving its global mission, through its church ministries, educational programs, and health care systems.

### ADMISSION

#### Subject requirements for 2002-2003

To be eligible for admission, the applicant must have a minimum G.P.A. of 3.3 and have completed 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 under the two options that follow.

**PLEASE NOTE: GRADES OF C- ARE NOT TRANSFERABLE FOR CREDIT.**

**OPTION ONE—B.S./M.P.T. track**

**T**his option is for individuals who DO NOT have an earned bachelor's degree from a regionally accredited college or university. Graduates will receive a Bachelor of Science degree in health science and a Master of Physical Therapy degree.

**Prerequisites for Entry-Level Master of Physical Therapy, B.S. and M.P.T. track**

Minimum of 20 units in humanities/religion. If applicants have attended a Seventh-day Adventist college or university, they must have a minimum of 4 units religion per year (up to 8). All applicants must have a minimum of 12 units in humanites (choose a minimum of two areas from: history, literature, philosophy, foreign language, art/music appreciation/history). For remaining units to meet the required 20, students may take additional religion or humanities course work.

Human anatomy and physiology with laboratory, complete sequence; **or** general biology with laboratory, complete sequence

Microbiology with laboratory; alternate biology course accepted

Statistics

Select **one** of the following two options:

1: General chemistry with laboratory, complete sequence; **AND** a minimum of 6 quarter units of any physics with laboratory

2: General physics with laboratory, complete sequence; **AND** a minimum of two academic terms of any sequenced chemistry with laboratory

Cultural anthropology **or** an approved course dealing with cultural diversity

General psychology

Human growth and development

English composition, complete sequence

Speech

Computers

Personal health **or** nutrition

Two physical activity courses

Electives to meet the minimum total requirements of 98 quarter units

**Work experience**

A minimum of eighty hours of work/observation experience (volunteer/employee) in a physical therapy department, twenty hours of which are expected to be in an inpatient setting.

**Test requirement**

No test is required.

**OPTION TWO—M.P.T.-only track**

**T**his option is for individuals who have an earned baccalaureate degree from a regionally accredited college or university. A second baccalaureate degree is not awarded, and graduates will receive a Master of Physical Therapy degree ONLY.

**Prerequisites for Entry-Level Master of Physical Therapy, M.P.T.-only track**

Human anatomy and physiology with laboratory, complete sequence; **or** general biology with laboratory, complete sequence

Microbiology with laboratory; alternate biology course accepted.

Statistics

Select **one** of the following two options:

1: General chemistry with laboratory, complete sequence; **and** a minimum of 6 quarter units of any physics with laboratory

2: General physics with laboratory, complete sequence; **and** a minimum of two academic terms of any sequenced chemistry with laboratory

General psychology

Human growth and development

Speech

Computers

**Work experience**

A minimum of eighty hours of work/observation experience (volunteer/employee) in a physical therapy department, twenty hours of which must be in an inpatient setting.

**Test requirement**

No test is required.

**PROGRAM OF INSTRUCTION**

**PHYSICAL THERAPY—Entry-Level Master of Physical Therapy**

The program of instruction outlined as follows is for students enrolled during the 2002-2003 academic year.

**YEAR ONE**

PHTH 321	Kinesiology	3
PHTH 327	Human Life Sequences	3
PHTH 328	Manual Muscle Testing	3
PHTH 371	Therapeutic Exercise	4
PHTH 373	Therapeutic Procedures	3
PHTH 413	Clinical Neurology	2
PHTH 434	PT Communication and Documentation	2
PHTH 435	Hydrotherapy and Massage	3
PHTH 465	Exercise Physiology	3
PHTH 471	Physical Therapy Practicum I	1
PHTH 477	Locomotion Studies	3
AHCJ 305	HIV/AIDS and the Health Provider	1
AHCJ 311	Medical Terminology	2
AHCJ 312	Anatomy	9
AHCJ 318, 419	Physiology I, II	4, 3
AHCJ 328	Portfolio Practicum I	1
AHCJ 343, 444	Neuroanatomy I, II	4, 2
AHCJ 402, 403	Pathology I, II	4, 3
AHCJ 426	Introduction to Computer Applications I	2
AHCJ 538	Histology	2
REL_ 4__	Adventist selective	2
REL_ 4__	Religion selective	3

**YEAR TWO**

PHTH 411	Clinical Orthopaedics	2
PHTH 412	Clinical Psychiatry	2
PHTH 424	Electrotherapy	3
PHTH 495, 496	Research I, II	3, 2
PHTH 401-403	Neurorehabilitation I, II, III	3, 3, 3
PHTH 404, 405	Pediatric Care I, II	3, 2
PHTH 415	Hand Therapy	1
PHTH 421-423	Orthopaedics I, II, III	3, 3, 3
PHTH 425, 426	General Medicine I, II	3, 3
PHTH 431	Soft-Tissue Techniques	2
PHTH 461	Physical Therapy Administration	4
PHTH 472, 473	Physical Therapy Practicum II, III	1.5, 1.5
PHTH 595	Applied Research I	1
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
HPRO 508	Aspects of Health Promotion	2
RELE 457	Christian Ethics and Health Care	3
REL_ 4__	Religion selective	2

**YEAR THREE**

PHTH 583-585	Physical Therapy 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
PHTH 596, 597	Applied Research II, III	2, 1

A minimum grade of C (2.0) is required for all courses in the program.



Gathering in the study area in Nichol Hall, Doctor of Physical Therapy students (left to right)—Joe Muñoz, Tricia Williams, Cheryl Dimaposoc, David Baker, Melissa Abercrombie, Annie Larson, and Rey Mojares—discuss the day's classes and exchange information.

## PHYSICAL THERAPY—Progression Master of Physical Therapy

### THE PROGRAM

The Progression Master of Physical Therapy (PMPT) Program is specifically for men and women who have graduated from an accredited physical therapist assistant program and wish to pursue a Master of Physical Therapy degree and professional certification. Admission to the University follows completion of an associate degree in physical therapy, and completion of the prerequisites and a minimum of 2500 hours as a physical therapist assistant earned in no less than sixteen months following graduation as a physical therapist assistant but within the past five years prior to application. The emphasis throughout the program is on professional courses, ethics, and practical experience at Loma Linda University Medical Center and affiliated hospitals and clinics.

The program is two and one-quarter years in length. Classes begin in June. Graduation is in the Spring Quarter followed by one quarter of didactic and one quarter of clinical affiliation.

Individuals who became physical therapists assistants by passing the challenge examination but who did not graduate from an accredited physical therapist assistant program may be eligible for the PMPT program by:

1. Completing all prerequisite course work.
2. Having a 3.3 overall prerequisite G.P.A.
3. Having 4000 hours as a licensed PTA.
4. Coming on campus six weeks prior to the program for a preprogram block.

### 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 Spring Quarter of the first 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

#### Subject requirements for 2002-2003.

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 of (C-) and below 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.

#### Prerequisites for Progression Master of Physical Therapy, M.P.T.

Minimum of 20 units in humanities/religion. If applicants have attended a Seventh-day Adventist college or university, they must have a minimum of 4 units religion per year (up to 8). All applicants must have a minimum of 12 units in humanities (choose a minimum of two areas from: history, literature, philosophy, foreign language, art/music appreciation/history). For remaining units to meet the 20, students may take additional religion or humanities course work.

\*Human anatomy and physiology with laboratory, complete sequence; **or** general biology with laboratory, complete sequence

\*Microbiology with laboratory; alternate biology course accepted

\*Statistics

\*Select **one** of the following two options:

1: General chemistry with laboratory, complete sequence; **and** a minimum of 6 quarter units of any physics with laboratory

2: General physics with laboratory, complete sequence; **and** a minimum of two academic terms of any sequenced chemistry with laboratory

Cultural anthropology **or** an approved course dealing with cultural diversity

\*General psychology

\*Human growth and development

English composition, complete sequence

\*Speech

\*Computers

Personal health **or** nutrition

Two physical activity courses

Electives to meet the minimum total requirements of 98 quarter units

**PROGRAM OF INSTRUCTION**

**PHYSICAL THERAPY—Progression Master of Physical Therapy**

The program of instruction outlined as follows is for students enrolled during the 2002-2003 academic year.

**YEAR ONE**

PHTH	328	Manual Muscle Testing	3
PHTH	401, 403	Neurorehabilitation I, III	3, 3
PHTH	404, 405	Pediatric Care I, II	3, 2
PHTH	413	Clinical Neurology	2
PHTH	421-423	Orthopaedics I, II, III	3, 3, 3
PHTH	465	Exercise Physiology	3
PHTH	495, 496	Research I, II	3, 2
PMPT	321	Kinesiology	2
PMPT	371	Therapeutic Exercise	3
PMPT	427	Human Life Sequence	2
PMPT	474	Physical Therapy Practicum	1.5
PMPT	477	Locomotion Studies	3
AHCJ	311	Medical Terminology	2
AHCJ	312	Anatomy	9
AHCJ	318, 419	Physiology I, II	4, 3
AHCJ	328	Portfolio Practicum I	1
AHCJ	343	Neuroanatomy I	4
AHCJ	402, 403	Pathology I, II	4, 3
AHCJ	444	Neuroanatomy II	2
AHCJ	538	Histology	2
REL_	4__	Religion selective	3

**YEAR TWO**

PHTH	402	Neurorehabilitation II	2
PHTH	411	Clinical Orthopaedics	2
PHTH	412	Clinical Psychiatry	2
PHTH	425, 426	General Medicine I, II	3, 3
PHTH	431	Soft-Tissue Techniques	2
PHTH	461	Physical Therapy Administration	4
PHTH	595-596	Applied Research I, II	1, 2
PMPT	424	Electrotherapy	2
PMPT	434	Physical Therapy Communication and Documentation	2
PMPT	435	Hydrotherapy and Massage	2
PMPT	483	Physical Therapy Affiliation I	4
PMPT	491	Advanced Orthopaedic Studies	5
PMPT	492	Advanced Neurologic Studies	5
PMPT	493	Advanced General Medicine Studies	3
AHCJ	305	HIV/AIDS and the Health Provider	1
AHCJ	404	Pharmacology	1
AHCJ	405	Dynamics of Learning	1
AHCJ	421	Psychology of Physical Disability	2
AHCJ	426	Computer Applications I	2
AHCJ	498	Portfolio Practicum II	1
HPRO	508	Aspects of Health Promotion	2
RELE	457	Christian Ethics	3
REL_	4__	Religion selectives	2
RELF	4__	Adventist selective	

**YEAR THREE**

PHTH	597	Applied Research III	1
PMPT	584, 585	Physical Therapy Affiliation II, III	4, 4



## PHYSICAL THERAPY—Post-Professional Master of Physical Therapy

### 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 Post-Professional Master of Physical Therapy Program is designed for individuals with a degree in physical therapy who wish to pursue advanced studies in their profession.

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 applicant's entry-level education. Post-professional education cannot be used for this purpose.

### DISTANCE EDUCATION

The Post-Professional Master of Physical Therapy Program is offered on site at Antillean Adventist University, Mayaguez, Puerto Rico.

### PROGRAM OF INSTRUCTION

#### PHYSICAL THERAPY—Post-Professional Master of Physical Therapy

The program of instruction outlined as follows is for students enrolled during the 2002-2003 academic year.

PHTH	529	Pathokinesiology of Gait	3
PHTH	531	Soft-Tissue Techniques	3
PHTH	598	Advanced Specialty Tracks	3
AHCJ	544	Advanced Functional Neuroanatomy	3
AHCJ	505	Educational Psychology for Health Professionals	3
AHCJ	509	Teaching and Learning Styles	3
AHCJ	525	Biostatistics	3
AHCJ	526	Computer Applications II	3
AHCJ	538	Histology	2-3
AHCJ	546	Orthopaedic Interventions: Mobilization of Peripheral Nerves and Joints of the Extremities	3
AHCJ	547	Orthopaedic and Neurological Integrative Manual Therapy	3
AHCJ	591	Research I	3
AHCJ	592	Research II	3
MFAM	558	Advanced Human Growth and Development	3
RELR	575	The Art of Integrative Care	3

## PHYSICAL THERAPY—Entry-Level Doctor of Physical Therapy

### THE PROGRAM

The Entry-Level Doctor of Physical Therapy Program (D.P.T.) is designed for individuals who have no previous degree in physical therapy and wish to pursue a Doctor of Physical Therapy degree and professional certification. Admission to the University follows presentation of three academic years of prerequisites earned at a regionally accredited college or university. The program is 3.25 years in length. The emphasis in the program is on professional courses, ethics, and practical experience. Additional emphasis is placed on research and specialized clinical affiliations.

### 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 two three-week assignments during the Autumn and Spring Quarters. The major clinical assignments are during the third year. The student will be assigned one twelve-week affiliation during Summer quarter and one twenty-two week affiliation during Winter/Spring quarters. 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

#### Subject requirements for 2002-2003.

To be eligible for admission, the applicant must have a minimum G.P.A. of 3.3 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 of C- and below are not transferable for credit.

### Prerequisites for Entry-Level Doctor of Physical Therapy, D.P.T.

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 (\*)

Humanities/Religion, minimum of 28 units. Included in this minimum, 4 units of religion per year of attendance at a Seventh-day Adventist college or university (up to 12 units)

All applicants must have a minimum of 16 units in humanities selected from at least two of the following areas: civilization/history, fine arts, literature, modern language, philosophy, performing/visual arts (not to exceed 2 quarter credits). One humanities course must be at the upper-division level, and the department recommends additional electives in this area.

Natural/Social sciences, minimum of 53 units. Natural sciences must include at least one upper-division course.

\* Human anatomy and physiology with laboratory complete sequence (preferred) **or** general biology with laboratory, complete sequence

\* Statistics

\* One additional biology class (microbiology preferred)

\* Select **one** of the following 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 two academic terms of any sequenced chemistry with laboratory

+Social Sciences, minimum of 16 units

At least one class at the upper-division level

Cultural diversity class that deals specifically with issues of human diversity among peers

\* General psychology

\* Human growth and development

+Communication, minimum of 15 units. One communication course must be at the upper-division level

Freshman English, complete sequence

\* One course in basic communication skills

\* One basic computer course that includes word processing and spreadsheets. (Applicants may document proficiency on Computer Literacy Form in application.)

+Health and wellness, minimum of 3 units. .

Personal health or Nutrition

Two physical education courses

Electives to meet the minimum total requirements of 138 quarter units. Students must have a minimum of 18 quarter units of upper-division course work.

+The department strongly recommends additional electives in this area.

**PROGRAM OF INSTRUCTION**

**PHYSICAL THERAPY—Entry-Level Doctor of Physical Therapy**

The program of instruction outlined as follows is for students enrolled during the 2002-2003 academic year.

**YEAR ONE**

PHTH 321	Kinesiology	3
PHTH 327	Human Life Sequence	3
PHTH 328	Manual Muscle Testing	3
PHTH 371	Therapeutic Exercise	4
PHTH 373	Therapeutic Procedures	3
PHTH 413	Clinical Neurology	2
PHTH 434	Physical Therapy Communication and Documentation	2
PHTH 435	Hydrotherapy and Massage	3
PHTH 465	Exercise Physiology	3
PHTH 471	Physical Therapy Practicum I	1
PHTH 477	Locomotion Studies	3
PHTH 495	Research I	3
AHCJ 305	HIV /AIDS for the Health Provider	1
AHCJ 311	Medical Terminology	2
AHCJ 312	Anatomy	9
AHCJ 318, 419	Physiology I, II	4, 3
AHCJ 328	Portfolio Practicum I	1
AHCJ 343	Neuroanatomy I	4
AHCJ 402, 403	Pathology I, II	4, 3
AHCJ 426	Introduction to Computer Applications I	2
AHCJ 444	Neuroanatomy II	2
AHCJ 525	Biostatistics	3
AHCJ 530, 531	Research and Statistics I, II	3, 3
AHCJ 538	Histology	2-3
REL 4__	Religion selective	3
REL 4__	Adventist selective	2

**YEAR TWO**

PHTH 411	Clinical Orthopaedics	2
PHTH 412	Clinical Psychiatry	2
PHTH 424	Electrotherapy	3
PHTH 401-403	Neurorehabilitation I, II, III	3, 2, 3
PHTH 404, 405	Pediatric Care I, II	3, 2
PHTH 415	Hand Therapy	1
PHTH 421-423	Orthopaedics I, II, III	3, 3, 3
PHTH 425, 426	General Medicine I, II	3, 3
PHTH 431	Soft-Tissue Techniques	2
PHTH 461	Physical Therapy Administration	4
PHTH 472, 473	Physical Therapy Practicum II, III	1.5, 1.5
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	3
AHCJ 532	Research and Statistics III	3
AHCJ 557	Professional Systems in Management	3
AHCJ 601	Research Proposal Writing	3
HPRO 508	Aspects of Health Promotion	2
RELE 457	Christian Ethics and Health Care	3

**YEARS THREE, FOUR**

PHTH 583	Physical Therapy Affiliation I	5
PHTH 586, 587	DPT Affiliation I, II	5, 5
PHTH 591	Advanced Orthopaedic Studies	6
PHTH 592	Advanced Neurologic Studies	6
PHTH 594	Advanced General Medicine Studies	4
AHCJ 533	Research and Statistics IV	3

## PHYSICAL THERAPY—Post-Professional Doctor of Physical Therapy

### ADMISSION

The post-professional Doctor of Physical Therapy degree track 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 is expected to have completed a minimum of 30 quarter units

beyond the bachelor's level prior to beginning the program. There is no GRE requirement for acceptance into this program.

Since some courses are Web based, all students admitted in the program must have access to a personal computer (minimum: 300 MHz multi-media) with Internet access (minimum: 56 kbs [v.90 standard]).

### PROGRAM OF INSTRUCTION

#### PHYSICAL THERAPY—Post-Professional Doctor of Physical Therapy

AHCJ	501	Advanced Clinical Practice I	3
AHCJ	502	Advanced Clinical Practice II	3
AHCJ	503	Advanced Clinical Practice III	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	557	Professional Systems in Management	3
AHCJ	605	Critical Analysis of Scientific Literature	3
AHCJ	629	Lower-Quarter Biomechanical Relationships	3
AHCJ	699	Directed Study	3
RELR	525	Health Care and Dynamics of Christian Leadership	3
—	—	Electives	9

## PHYSICAL THERAPY—Post-Professional Doctor of Physical Therapy Science

### ADMISSION

The post-professional Doctor of Physical Therapy Science degree track is designed for the physical therapist who wishes to pursue advanced studies in the area of education and research. To be eligible for admission, a candidate must have completed 35 quarter hours of course work beyond a master's degree.

### PROGRAM OF INSTRUCTION

#### PHYSICAL THERAPY—Post-Professional Doctor of Physical Therapy Science

AHCJ	506	Educational Evaluation and Clinical Assessment	3
AHCJ	518	Neurobiology	3
AHCJ	527	Medical Screening for Rehabilitation Professionals	3
AHCJ	530	Research and Statistics I	3
AHCJ	531	Research and Statistics II	3
AHCJ	532	Research and Statistics III	3
AHCJ	533	Research and Statistics IV	3
AHCJ	534	Advanced Neurological Rehabilitation	3
AHCJ	535	Exercise and Thermoregulation	3
AHCJ	564	Group Process/Dynamics	3
AHCJ	569	Computers-Electronics for Clinicians	3
RELF	557	Theology of Human Suffering	3
—	—	Electives	9

## COURSES

For information about units of credit and course numbers, see the beginning of division III of this BULLETIN.

### **PHTH 321 Kinesiology (3)**

Functional anatomy of the musculoskeletal system. Analysis and application of the biomechanics of normal and pathological movement of the human body. Lecture and laboratory.

Prerequisite: ANAT 312.

### **PHTH 327 Human Life Sequences (3)**

Sequential human development from neonate through adolescence, as applied to normal and abnormal neurological development. Includes concepts of pre- 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. Special emphasis on the problem of aging.

### **PHTH 328 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 371 Therapeutic Exercise (4)**

Application of physical, mechanical, and soft-tissue biomechanical considerations in the formulation of exercise prescriptions. Consideration of the neurophysiological basis of motor control and motor-learning acquisition. Selection of exercise modes for treatment of musculoskeletal and neurological disorders of the nonpathological individual.

### **PHTH 373 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 401 Neurorehabilitation I (3)**

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. Emphasis on clinical application.

### **PHTH 402 Neurorehabilitation II (2)**

Basic physiological and neurophysiological mechanisms specific to therapeutic concepts. Clinical approach to pathology and trauma of the central and peripheral nervous systems. Emphasis on proprioceptive neuromuscular facilitation.

### **PHTH 403 Neurorehabilitation III (3)**

Continuation of basic physiological and neurophysiological mechanisms specific to therapeutic concepts. Clinical approach to pathology and trauma of the central and peripheral nervous systems. Emphasis on comparing and contrasting facilitation techniques.

### **PHTH 404 Pediatric Care I (3)**

Discussion of 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. Introduction to the physical therapist's role in the NICU.

### **PHTH 405 Pediatric Care II (2)**

Discussion of the etiology, associated problems, and physical therapy care of clients with arthrogryposis, osteogenesis imperfecta, muscular dystrophies, cystic fibrosis, and hemophilia. Expands further on various therapy techniques available to the client with cerebral palsy.

### **PHTH 411 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 412 Clinical Psychiatry (2)**

Introduction to mental and personality disorders. Review of abnormal behaviors commonly found in a clinical setting.

### **PHTH 413 Clinical Neurology (2)**

Systematic review of clinical disorders of the central and peripheral nervous systems, with emphasis on sensorimotor sequelae of injury and disease.

### **PHTH 415 Hand Rehabilitation for the Physical Therapist (2)**

Functional anatomy and pathophysiology in the diagnosis and treatment of the forearm, wrist, and hand. Student will be able to recognize common problems, integrate scientific knowledge base into treatment choice, and learn rational and general treatment concepts for, but not limited to, fractures, joint derangement, stiffness, flexor and extensor multiple-system trauma, arthritis and vascular disorders. Course covers common surgical procedures of the forearm, wrist, and hand; as well as basic concepts and practical application of static and dynamic splinting.

### **PHTH 421 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 422, 423 Orthopaedics II, III (3, 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 424 Electrotherapy (3)**

Principles and techniques of electrotherapy procedures, including electrodiagnosis. Basic physical and physiological indications and contraindications. Lecture, demonstration, and laboratory.

**PHTH 425, 426 General Medicine I, II (3, 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 431 Soft-Tissue Techniques (2)**

Trends in soft-tissue manipulation. Lecture, demonstration, and laboratory.

**PHTH 434 PT Communication and Documentation (2)**

Introduction to the principles and dynamics of professional communication. Emphasis on the 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 461 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 supportive personnel. Departmental design and budgetary considerations.

**PHTH 465 Exercise Physiology (3)**

Principles and application of human response to exercise, including body composition. Tests and measurements. Techniques of physical fitness. Cardio-respiratory considerations. Exercise prescriptions.

**PHTH 466 Fundamentals of Physical Therapy and Research (5)**

Introduction to the theory and management of orthopaedic and neurological disorders—including joint and nerve mobilization, constrain-induced movement therapy, and balance and vestibular rehabilitation. Application of 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 471 Physical Therapy Practicum I (1)**

Two-week assignment, to be completed during the Spring Quarter of third year, in an affiliated clinical setting. Forty clock hours per week of supervised clinical experience.

**PHTH 472, 473 Physical Therapy Practicum II, III (1.5, 1.5)**

Two three-week assignments, to be completed during the Summer and Spring quarters of the fourth year, in affiliated clinical settings. Forty clock hours per week of supervised clinical experience.

**PHTH 495 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.

**PHTH 496 Research II (2)**

Application of the research process to problems in related specific allied health fields. Development of 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 to provide the student with guidance and evaluation. Elected on the basis of need or interest.

**PHTH 507 Lower-Quarter Biomechanical Relationships (3)**

Advanced examination procedures for performing a biomechanical assessment of the lower extremities. Emphasis on identifying causes of, compensations for, and complications of movement dysfunctions associated with lower-extremity musculoskeletal pain syndromes. Physical therapy management of gait abnormalities.

**PHTH 529 Pathokinesiology of Gait (3)**

Advanced observational analysis of normal and abnormal human locomotion, with comparison of pathological differences.

**PHTH 531 Soft-Tissue Techniques (3)**

Trends in soft-tissue manipulation. Lecture, demonstration, and laboratory.

**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 EOB's coding and compliance issues (Medicare and state); and locating capital to finance the venture.

**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, pre-game sideline/courtside set up, techniques of athletic-tape application to various body locations, and onfield 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. Emphasis on 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-chair 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 583, 584, 585 Physical Therapy Affiliation I, II, III (5, 5, 5)**

Three twelve-week assignments—to be completed in the Summer, Winter, and Spring quarters during the fifth year—in affiliated clinical settings. Emphasis on 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, 587 Doctor of Physical Therapy Affiliation I, II (5, 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) will be granted after satisfactory completion of PHTH 587.

**PHTH 588 Doctor of Physical Therapy Affiliation III (5)**

A nine- or ten-week, full-time (40 hours/week) clinical education assignment done in an affiliated clinic. Emphasis in any of a variety of settings: acute care, outpatient care, neuro rehabilitation, orthopaedics, geriatrics, pediatrics, sports medicine, and preventive care/wellness. This is the third of three affiliations required in the final year. Activities may include direct patient care, learn conferences, in-service, demonstrations, special assignments, and research activities.

**PHTH 591 Advanced Orthopaedic Studies (6)**

Specialty track designed to provide opportunity to pursue, in greater depth, various topics related to current trends in orthopaedic physical therapy and development of advanced clinical skills, where appropriate.

**PHTH 592 Advanced Neurologic Studies (6)**

Specialty track designed to provide opportunity to pursue, in greater depth, various topics related to current trends in neurologic physical therapy and development of advanced clinical skills, where appropriate.

**PHTH 594 Advanced General Medicine Studies (4)**

Specialty track designed to provide opportunity to pursue, in greater depth, various topics related to current trends in general medicine physical therapy and development of advanced clinical skills, where appropriate.

**PHTH 595 Applied Research I (1)**

Pilot testing of a research proposal in a practice setting. Testing of procedures and data forms.

**PHTH 596 Applied Research II (2)**

Implementation of a research proposal in a practice setting. Computer data analysis and preparation of a preliminary research report.

**PHTH 597 Applied Research III (1)**

Preparation and presentation of a research report both in written and oral formats. Graphics, tables, Power Point presentations, poster, and abstract.

**PHTH 598 Advanced Specialty Tracks (3)**

Presentation of the newest clinical treatment applications over the spectrum of the patient population in the field of physical therapy. Includes ortho, neuro, and general medicine.

**PMPT 321 Kinesiology (2)**

Functional anatomy of the musculoskeletal system. Analysis and application of biomechanics of normal and pathological movement of the human body. Lecture and laboratory.

Prerequisite: PMPT 312.

**PMPT 371 Therapeutic Exercise (3)**

Application of physical, mechanical, and soft-tissue biomechanical considerations in the formulation of exercise prescriptions. Considerations of 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 424 Electrotherapy (2)**

Principles and techniques of electrotherapy procedures, including electrodiagnosis. Basic physical and physiological indications and contraindications. Lecture, demonstration, and laboratory. Modified for the PMPT program.

**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. Evaluation of developmental reflexes and gross motor function of the pediatric population and balance of the geriatric population. Demonstration of treatment techniques as adapted to pediatric and geriatric patients. Discussion of cultural awareness. Ethical and legislative issues as they relate to the human life sequence.

**PMPT 434 Physical Therapy Communication and Documentation (2)**

Dynamic principles of professional communication. Basic skills include, but are not limited to, the following: initial evaluations, progress notes, discharge summary, patient interviews, letters of justification, legal consideration, and computer documentation programs. Class modified for the Progression M.P.T. Program.

**PMPT 435 Hydrotherapy and Massage (2)**

Fundamental principles, physiological effects, and techniques of hydrotherapy and massage used in preventative medicine and diagnostic techniques. Lecture, demonstration, and laboratory. Class modified for the Progression M.P.T. Program.

**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 477 Locomotion Studies (3)**

Development of 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 M.P.T. Program.

**PMPT 483 Physical Therapy Affiliation I (4)**

Eight-week assignment in the Winter Quarter of the second year. Emphasis on 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 491 Advanced Orthopaedic Studies (5)**

Specialty tracks designed to provide opportunity to pursue in greater depth various topics related to current trends in orthopaedic physical therapy. Development of advanced clinical skills, where appropriate.

**PMPT 492 Advanced Neurologic Studies (5)**

Specialty tracks designed to provide opportunity to pursue in greater depth various topics related to current trends in neurologic physical therapy. Development of advanced clinical skills, where appropriate.

**PMPT 493 Advanced General Medicine Studies (3)**

Specialty tracks designed to provide opportunity to pursue in greater depth various topics related to current trends in general medicine physical therapy. Development of advanced clinical skills, where appropriate.

**PMPT 584, 585 Physical Therapy Affiliation II, III (4, 4)**

Two eight-week assignments in the final quarter of the program. Emphasis on 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.

**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)**

Introduction to functional anatomy of the musculoskeletal system. Application of biomechanics of normal and abnormal movement in the human body. Introduction to 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. Introduction to the multidisciplinary/team approach. Familiarization with health care facilities and government agencies.

**PTAS 206 Documentation Skills (1)**

Introduction to 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)**

Introduction to 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 required before end of term.

**PTAS 225 Neurology (3)**

Introduction to 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)**

Introduction to common orthopaedic conditions, pathologies, and surgical procedures of the peripheral joints. Introduction to 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)**

Introduction to 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, sterilization techniques, 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. Emphasis on developmental sequence, testing, and treatment of neurological and orthopaedic disorders. Practical laboratory.

**PTAS 243 Applied Geriatrics (3)**

Introduction to 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. Development and implementation of a sports-medicine program, participation in physical examination, medical emergencies in the sports medicine setting, criteria for return to play, types and frequency of sport-specific injuries, pre-game sidelines/courtside set-up, techniques of athletic-tape application to various body locations, and on-field examinations.

**PTAS 251 Orthopaedics II (3)**

Introduction to 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)**

Introduction to facilitation techniques of neurodevelopmental treatment, proprioceptive neuromuscular facilitation, Brunnstrom, and principles of therapeutic exercise of the cardiac patient. Practical laboratory.

**PTAS 261 Physical Therapy Practice (1)**

Observations of evaluations, treatments, and various diagnoses. Billing procedures and third-party payors. Completion of a resume and a state licensing application. Preparation and presentation of case study and in-service.

**PTAS 262 Professional Seminar (1)**

Contemporary theories and practices of physical therapy. Topics covered by faculty and guest lecturers may include: sports taping, ortho taping, soft tissue, geriatric experience through affective learning, Meyers-Briggs personality categories, Kolb learning styles, vestibular rehabilitation, music therapy, and hand therapy. Lecture and laboratory.

**PTAS 264 Applied Prosthetics and Orthotics (2)**

Introduction to basic principles in the use of selected prosthetic and orthotic devices. Exposure to various types of devices and adjustment to devices; examination of 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 may include: sports taping, ortho taping, soft tissue, affective learning geriatric experience through affective learning, Meyers-Briggs personality categories, Kolb learning styles, vestibular rehabilitation, music therapy, and hand therapy. 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. Emphasis on 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, 294, 295 Physical Therapist Assistant Affiliation I, II, III (3, 3, 3)**

I: One six-week assignment to be completed during the Spring Quarter.

II, III: Two six-week assignments to be completed in affiliated clinical settings during the second Summer Quarter. Exposure to a variety of clinical facilities. Forty clock hours per week of supervised clinical experience. The combined total of twenty weeks of clinical experience prepares the student for entry-level performance.

**CONJOINT**

See CONJOINT COURSES, section III General Information, for course descriptions.

**COGNATE**

**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.

**RELE 456 Personal and Professional Ethics (2)**

Introductory exploration of the foundations, norms, and patterns of personal integrity in professional contexts.

**RELE 457 Christian Ethics and Health Care (2-3)**

Ethical issues in modern medicine and related fields from the perspective of Christian thought and practice.

**RELR 475 The Art of Integrative Care (2)**

Principles, concepts, and practices that affect the ministry of health care and the Christian witness in the clinical setting.

**RELR 575 Art of Integrative Care (3)**

Examination of the attitudes and actions of the health care professional relative to personal spirituality and patient witnessing.

**RELF 423 Loma Linda Perspectives (2)**

History and philosophy of Loma Linda University as a Christian health-sciences institution that fosters human wholeness.

**MFAM 553 Family Systems Theory (3)**

Review of Bowen theory and theory of family systems. Introduction to family psychotherapy as an outgrowth of the theory. Students examine their own families of origin.

**MFAM 558 Advanced Human Growth and Development (3)**

Human biological, psychological, and social development from conception to death, including but not limited to, childbirth, child rearing, childhood, adolescence, adulthood, marriage, divorce, blended families, step-parenting, and geropsychology. Overview of concepts, theories, and research relevant to human development. Emphasis on development over the lifespan in the context of family interaction and its impact on family therapy.

**PSYC 405 Psychology of Human Relations (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.

# RADIATION TECHNOLOGY

**MEDICAL RADIOGRAPHY—Associate in Science**

**RADIATION SCIENCES—Bachelor of Science**

**RADIATION THERAPY TECHNOLOGY—Bachelor of Science; Certificate**

**DIAGNOSTIC MEDICAL SONOGRAPHY—Certificate**

**NUCLEAR MEDICINE TECHNOLOGY—Certificate**

**SPECIAL IMAGING TECHNOLOGY: CT/MRI—Certificate**

ARTHUR W. KROETZ, Chair

MARK J. CLEMENTS, Associate Department Chair; Program Director for Associate in Science, Medical Radiography; Program Director for Bachelor of Science, Radiation Therapy Technology; Coordinator for Certificate, Diagnostic Medical Sonography Program

LAURA L. ALIPOON, Program Director for Bachelor of Science, Radiation Sciences

ERMA P. EZPELATA, Program Director for Certificate, Nuclear Medicine Technology

STEVEN L. LEBER, Clinical Coordinator for Associate in Science, Medical Radiography Program; Program Director for Certificate, Special Imaging Technology

CAROL A. DAVIS, Clinical Program Director for Certificate, Radiation Therapy Technology

MARIE M. DELANGE, Clinical Program Director for Certificate, Diagnostic Medical Sonography

GREGORY E. WATKINS, Medical Adviser for Medical Radiography Program

GLENN A. ROUSE, Medical Director for Certificate, Diagnostic Medical Sonography Program

JAMES M. SLATER, Medical Director for Radiation Therapy Technology Program

\_\_\_\_\_, Medical Director for Certificate, Nuclear Medicine Technology Program

## FACULTY

Laura L. Alipoon  
 Mark J. Clements  
 Noha S. Daher  
 Carol A. Davis  
 Marie M. DeLange  
 Intithar S. Elias  
 Erma P. Ezpeleta  
 Barbara S. Holshouser  
 Noriece R. Kisinger  
 Arthur W. Kroetz  
 Steven L. Leber

## CLINICAL FACULTY

Brenda S. Holden  
 Helen J. King  
 Glenn A. Rouse



Representing the Department of Radiation Technology are Art Kroetz (department chair), Steve Leber, Laura Alipoon, and Mark Clements.

## TUITION

For tuition information, please see section II, Financial Information, SCHEDULE OF CHARGES.

## MEDICAL RADIOGRAPHY—Associate in Science

**T**he 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

**T**he 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 involves some evening and weekend duties.

#### Affiliations

For the clinical portion of the program, students are assigned to one of the affiliated medical centers: Loma Linda University Medical Center and 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

**S**tudents 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, 24887 Taylor Street, Suite 102.

### PROFESSIONAL REGISTRATION AND CERTIFICATION

**U**pon 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) and become certified by the state of California.

### PROFESSIONAL ASSOCIATION

**S**tudents and graduates are eligible for membership in The American Society of Radiologic Technologists (ASRT) and The California Society of Radiologic Technologists (CSRT). The objectives of the association are to advance the science of radiologic technology, to improve education, and to elevate the quality of patient care. Clinical-year students are encouraged to become members of The California Society of Radiologic Technologists (CSRT).

### THE PROGRAM OBJECTIVES

**U**pon 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.

**Prerequisites for Medical Radiography, A.S.**

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-level physics **or** introductory physics (one quarter/semester in college)

General psychology **or** sociology

English composition, complete sequence

Speech

Computers

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**

**MEDICAL RADIOGRAPHY—Associate in Science**

The program of instruction outlined below is for students enrolled during the 2002-2003 academic year. 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, 4
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	1
RTMR 287	Principles of Radiography III	2
RTMR 314	Research/Writing for Radiologic Technology	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.

## RADIATION SCIENCES—Bachelor of Science

**F**or 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 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; wascsr@wascsr.org

### 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, 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

#### Educational background

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.

### RADIATION SCIENCES B.S. DEGREE

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.

**Prerequisites/Corequisites for Radiation Sciences, B.S.**

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, 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: economic, 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  
 RADIATION SCIENCES—Bachelor of Science**

**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	1-3
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	2-3
AHCJ 465	Seminars in Leadership	2
AHCJ 498	Portfolio Practicum II	1
EMMC 314	Introduction to 12-Lead ECG Interpretation	1
EMMC 316	12-Lead EKG Interpretation	2
EMMC 405	Trauma and Surgery	2
EMMC 431	Emergency Case Studies	2
EMMC 484	Legal Issues in Health Care	2
RELE 457	Christian Ethics and Health Care	3
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
RSTH 471	Instructional Techniques	2
RTMR 454	Quality Management in Radiation Sciences	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**

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	CLINICAL SPECIALTY	UNITS EARNED TOWARD B.S.
Medical sonography	38 units	Special imaging technology	18 units
Echocardiography	18 units	Radiation therapy technology	26-41 units
Nuclear medicine technology	18 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 quarter units selected from the natural sciences in the areas of: biology, anatomy, physiology, medical terminology, and physics. AHCJ 402 and 403 (Pathology I and II) are highly recommended.

## RADIATION THERAPY TECHNOLOGY—Bachelor of Science

**R**adiation 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, be able to interact empathically with patients. Individuals who show initiative and are capable of critical thinking and problem solving make good radiation therapists. The job demand in this well-paying field is currently high.

### PROGRAM DESCRIPTION

**T**his 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.

### CPR CERTIFICATION

**S**tudents 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, 24887 Taylor Street, Suite 102.

### PROFESSIONAL REGISTRATION AND CERTIFICATION

**U**pon 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

#### Prerequisites for Radiation Therapy Technology, B.S.

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

2 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 are selected from existing courses after consultation with the program adviser.

**PROGRAM OF INSTRUCTION****RADIATION THERAPY TECHNOLOGY—Bachelor of Science****Required Core Courses and Religion Studies****(30 units)**

RTCH 385	Current Issues in Radiation Sciences I	2
RTCH 417	Applied Research Methods	1
RTCH 494	Senior Project	2
RTMR 451	Management of a Radiologic Service	3
RTMR 454	Quality Management in Radiologic Service	2
AHCJ 305	HIV/AIDS and the Health Professional	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 371-378	Radiation Therapy Affiliation I	8
AHCJ 402	Pathology I	4
AHCJ 403	Pathology II	3-4
AHCJ 404	Pharmacology	1
DTCS 301	Human Nutrition	3

**Track B****(26 units)**

RSTH 471	Instructional Techniques	2
RTCH 411	Student Teaching Practicum	2
RTCH 413	Management Practicum	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	2
AHCJ 465	Seminars in Leadership	2*
DTCS 301	Human Nutrition	3

\*Either RTCH 464 or AHCJ 465 may be taken.

## RADIATION THERAPY TECHNOLOGY—Certificate

**D**uring 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

**T**he Radiation Therapy Technology Program is offered via distance education at Fresno City College, Fresno, California.

### CPR CERTIFICATION

**S**tudents 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, 24887 Taylor Street, Suite 102.

### ADMISSION

#### Prerequisites for Radiation Therapy Technology, Certificate

To be admitted into the radiation therapy technology program and to become certified and registered, the applicant **must fulfill one of the following 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, complete 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

A minimum of forty hours of work observation in a radiation therapy department is required.

**PROGRAM OF INSTRUCTION****RADIATION THERAPY TECHNOLOGY—Certificate**

The program of instruction outlined below is for students enrolled during the 2002-2003 academic year.

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
RELF	416	God and Human Suffering	2-3

**DIAGNOSTIC MEDICAL SONOGRAPHY—Certificate**

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.

**THE PROGRAM**

**Track 1** (General RDMS and RVT) is a twenty-four-month program leading to credentials in two areas. General RDMS technologists 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 technologists perform a variety of noninvasive examinations of the arteries and veins—assessing blood flow, valve competence, and presence of clots.

**Track 2** (Cardiac RDMS) is a twelve-month program leading to proficiency in diagnostic imaging of cardiac function and disease processes.

**Track 3** (RVT) 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.

### CPR CERTIFICATION

Students are required to have current cardio-pulmonary resuscitation (CPR) certification (adult and child) for all scheduled clinical experience. Classes are available on campus at Life Support Education, University Arts, 24887 Taylor Street, Suite 102.

### ADMISSION

#### Requirements for 2002-2003

The applicant must fulfill one of the following requirements. Specific course requirements must be completed at an accredited college or university.

Applicant must 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 two-year A.S. degree

**or**

Have a baccalaureate degree in one of the natural sciences

#### and have credits in the following:

Human anatomy and physiology with laboratory, complete sequence

Intermediate algebra

Medical terminology

Patient-care methods

Introduction to computers



Program director, Marie DeLange (third from left), assembles two-year students from the Diagnostic Medical Sonography Program for a photograph: (left to right) Sonia Su, Maria Lopez, Maria Buenrostro, Vera Howie, and Lorraine Fernando, with instructors Phil-Ann Sinn and Curt Serikaku.

**PROGRAM OF INSTRUCTION****DIAGNOSTIC MEDICAL SONOGRAPHY—Certificate**

The program of instruction outlined below is for students enrolled during the 2002-2003 academic year.

**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 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	1
HPRO	443	Writing for Publication	2
RELE	457	Christian Ethics and Health Care	2-3

Option: Third credential (RDCS) requires additional six months

**TRACK 2:****One-year certificate****One credential—Cardiac (RDCS)**

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	1
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	1

Option: RDCS credential requires one additional year

A minimum grade of C (2.0) is required for all courses in the program.

## NUCLEAR MEDICINE TECHNOLOGY—Certificate

**N**uclear 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

**D**uring the twelve-month certificate program of clinical studies in nuclear medicine, 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 Western Association of Schools and Colleges, Accrediting Commission for Senior Colleges and Universities, 985 Atlantic Avenue, Suite 100, Alameda, CA 94501 and Department of Health Services, Radiologic Health Branch, P.O. Box 942732, Sacramento, CA 94234-7320.

### DISTANCE EDUCATION

**T**he Nuclear Medicine Technology Program is offered via distance education at Fresno City College, Fresno, California.

### CPR CERTIFICATION

**S**tudents 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, 24887 Taylor Street, Suite 102.

### PROFESSIONAL REGISTRATION AND CERTIFICATION

**U**pon 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

#### Prerequisites for Nuclear Medicine Technology, Certificate

**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 **or** 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**

- CPR certification (adult, child)#
- Venipuncture\*
- ECG/EKG interpretation\*

If the student is unable to complete these three certifications prior to entering the program, equivalent courses—offered by  
 # LLU Life Support Education or  
 \* LLU Medical Center Staff Development  
 —can be taken concurrently with the program.

**PROGRAM OF INSTRUCTION  
 NUCLEAR MEDICINE TECHNOLOGY—Certificate**

The program of instruction outlined below is for students enrolled during the 2002-2003 academic year.

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.

## SPECIAL IMAGING TECHNOLOGY—CT/MRI Certificate

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.

### THE PROGRAM

#### 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, in actual CT and MRI procedures.

### 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, 24887 Taylor Street, Suite 102.

### ADMISSION

#### Prerequisites for Special Imaging Technology, CT/MRI Certificate

The applicant must:

- 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

### PROGRAM OF INSTRUCTION

#### SPECIAL IMAGING TECHNOLOGY—CT/MRI Certificate

The program of instruction outlined below is for students enrolled during the 2002-2003 academic year.

RTSI	364	Patient Care in Special Imaging (2)	2
RTSI	367	Cross-sectional Radiographic Anatomy	3
RTSI	368, 369	Special Imaging I, II	3, 3
RTSI	371-373	Special Imaging Affiliation I, II, III	1, 1, 1
RTMR	451	Management of a Radiologic Service**	2-3
RELE	457	Christian Ethics in Health Care	2

\*\*B.S. degree students take course for 3 units.

A minimum grade of C (2.0) is required for all courses in the program.

this experience is provided in the application packet or may be obtained by calling the Department of Radiologic 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 certificate requirements, and if the student has completed the new competency requirements of The American Registry of Radiologic Technologists (ARRT), the student is eligible to write the qualifying examination for computer 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.



## COURSES

For information about units of credit and course numbers, see the beginning of section III of this BULLETIN.

### **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, 412 Student-Teaching Practicum I, II (2, 2)**

Classroom teaching experience. Includes preparation of lecture outlines, objectives, and tests. Presentation of lectures and laboratory sessions. Practical application of teaching techniques.

### **RTCH 413, 414 Radiologic Management Practicum I, II (2, 2)**

Observation of and discussion with selected administrative personnel in a radiology service. Emphasis on 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)**

Application of research methods to radiation sciences. Directed experience with a research project. Laboratory.  
Prerequisite: AHCJ 351.  
Concurrent: AHCJ 454 or 461.

### **RTCH 475 Curriculum Development in Health Science (2)**

Curriculum development theories and approaches applied to the health-science arena. Development of a seminar, course, or curriculum. 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 (2-3)**

Project associated with the development of radiologic procedures and techniques. Units chosen in consultation with adviser.

### **RTCH 497 Advanced Clinical Experience (40 to 480 clock hours per term)**

Advanced clinical experience in selected areas of professional practice.

### **RTCH 499 Radiation Technology Independent Study (.5-2)**

Project or paper to be submitted on a topic of current interest in an area related to radiation technology. Regular meetings to provide the student with guidance and evaluation. Elected on the basis of need or interest. The .5 unit of credit is designed to offer directed experience in the prevention of AIDS and other communicable diseases in the clinical setting.

### **RTMR 202 Orientation Laboratory (1)**

Clinical orientation to the functions of radiologic technologists. Laboratory sessions conducted at affiliated clinical sites.

### **RTMR 221 Radiologic Patient Care (2)**

Aspects of patient care in the radiology service. Emphasis on 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, 254, 255 Medical Radiography Procedures I, II, III (3, 4, 1)**

Application of anatomy and physiology to the radiographic situation. Proper patient positioning, equipment usage, and technical film-quality factors.

### **RTMR 253L, 254L Medical Radiography Procedures Laboratory I, II (1, 1)**

Principles of patient positioning and radiographic exposure applied to the laboratory setting. Clinical patient simulations and radiographic phantoms used to determine optimum techniques.

### **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. Application of radiation-safety laws.

### **RTMR 285 Principles of Radiography I (3)**

Principles of producing the optimum radiograph. Physical factors involved in photographic processing techniques. Instruction in the use of accessory equipment in obtaining the optimum radiograph under any situation. Laboratory.

### **RTMR 286 Principles of Radiography II (4)**

Advanced instruction in the principles of radiographic theory and technique. Application of television, cineradiography, and other photographic equipment and principles to medical radiography.

### **RTMR 287 Principles of Radiography III (2)**

Applications of fluoroscopy to radiographic imaging. Introduction to new DIGITAL imaging modalities and their impact on diagnostic radiography. Review of quality-assurance/quality-control practices in radiography.

**RTMR 301, 302 Introduction to Radiographic Procedures I, II (1-3, 1-3)**

Nature and description of radiologic procedures for the nonradiologic technologist. Principles and medical techniques applied to the radiographic setting. Survey of anatomy and instrumentation. Includes observation laboratory.

**RTMR 314 Research/Writing for Radiologic Technologists (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)**

Application of 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)**

Review of the 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, 372, 373, 374, 375 Medical Radiography Affiliation I, II, III, IV, V (1, 2, 3, 2, 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 to provide guidance to the student.

**RTMR 381, 382, 383, 384, 385 Topics in Medical Radiography I, II, III, IV, V (3, 3, 3, 1-3, 1-3)**

Survey of 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, 402, 403, 404 Advanced Clinical Procedures I, II, III, IV (1-3, 1-3, 1-3, 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 (1-3)**

Techniques of organization, planning, and management, with specific applications to a hospital radiology service.

**RTMR 454 Quality Management in Radiologic Sciences (2)**

An in-depth look at continuous quality management of all aspects in a radiology department, from equipment to personnel.

**RTMS 339 Introduction to Echocardiography (4)**

Focus 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; 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)**

Vascular technology, doppler, abdomen, small-parts, and cross-sectional anatomy covered. Continued case studies and case presentations.

**RTMS 347 Echocardiography, Adult, and Pediatric Specialties (4)**

Echocardiography, adult and pediatric. Further focus 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 presentations and case studies.

**RTMS 361-364 Vascular Ultrasound Clinical Affiliation (1, 1, 1, 1)**

Clinical experience in vascular ultrasound (416 clock hours per quarter) covering a wide variety of technical procedures.

**RTMS 365-368 Cardiac Ultrasound Clinical Affiliation (1, 1, 1, 1)**

Clinical experience in cardiac ultrasound (416 clock hours per quarter), covering a wide variety of technical procedures.

**RTMS 371-378 Medical Sonography Clinical Affiliation (1, 1, 1, 1, 1, 1, 1, 1)**

Clinical experience in medical sonography (416 clock hours per term) covering a wide variety of technical procedures.

Prerequisite: Completion of each course in sequence, beginning with RTMS 371.

**RTMS 379 Ultrasound Physics and Instrumentation I (2)**

Study of the basic physical principles and instrumentation of ultrasound production and imaging. Selected case-study presentations, as assigned.

**RTMS 381, 382, 383, 384 Topics in Medical Sonography I-IV (1, 1, 2, 2)**

Survey of selected topics in medical sonography. Procedure summaries, projects, literature reviews.

**RTMS 385, 386 Topics in Medical Sonography V, VI (1-3, 1-3)**

Selected projects that may be taken concurrently with RTMS 371-378 Medical Sonography I-VII for credit toward the B.S. degree.

**RTMS 387 Ultrasound Physics and Instrumentation II (1)**

Study and review of the basic physical principles and instrumentation of ultrasound, with additional emphasis on doppler and artifacts.

Prerequisite: RTMS 378

**RTMS 401, 402, 403, 404 Advanced Clinical Procedures I, II, III, IV (1-3, 1-3, 1-3, 1-3)**

Credit for full-time, postcertification clinical practice in a medical sonography service. Periodic evaluations by the clinical supervisor.

**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, 354 Nuclear Medicine Procedures I, II (2, 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 371, 372, 373, 374 Nuclear Medicine Affiliation I, II, III, IV (1, 1, 1, 1)**

Clinical experience of twelve months (416 clock hours per term) covering a wide variety of technical procedures.

**RTNM 381, 382, 383, 384 Topics in Nuclear Medicine I, II, III, IV (1-3, 1-3, 1-3, 1-3)**

Survey of 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, 402, 403, 404 Advanced Clinical Procedures I, II, III, IV (3, 3, 3, 3)**

Credit for full-time, postcertification clinical practice in a nuclear medicine service. Periodic evaluations by the clinical supervisor.

**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. Identification of 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 368 MRI Physics (3)**

Basic principles, physics, imaging parameters, biological effects, management, and patient protocol of magnetic resonance imaging (MRI).

**RTSI 369 CT Physics (3)**

Basic principles, physics, imaging parameters, radiological effects, management, and patient protocol of computed tomography (CT).

**RTSI 371 Special Imaging Affiliation I (1)**

Nine months of clinical experience (three quarter terms of 520 clock hours per term) that provides a wide variety of experiences in computerized tomography (CT) and magnetic resonance imaging (MRI).

**RTSI 372 Special Imaging Affiliation II (1)**

Nine month of clinical experience (three quarter terms of 520 clock hours per term) that provides a wide variety of experiences in computerized tomography (CT) and magnetic resonance imaging (MRI).

**RTSI 373 Special Imaging Affiliation III (1)**

Nine months of clinical experience (three quarter terms of 520 clock hours per term) that provides a wide variety of experiences in computerized tomography (CT) and magnetic resonance imaging (MRI).

**RTSI 381, 382, 383 Topics in Special Imaging I, II, III (1-3, 1-3, 1-3)**

Survey of 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)**

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 to provide guidance to the student.

**RTSI 391, 392, 393 CVI Internships I, II, III (3, 3, 3)**

Advanced clinical training for qualified CRT, ARRT-certified individuals with current CPR and fluoroscopy permit. Training involves 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, 402, 403, 404 Advanced Clinical Procedures I, II, III, IV (3, 3, 3, 3)**

Credit for full-time, postcertification clinical practice in a radiology service. Periodic evaluations by the clinical supervisor.

**RTTH 332 Radiation Biology (1)**

Radiation's effects on living systems.

**RTTH 342 Patient-Care Practices in Radiation Therapy (2)**

Aspects of radiation-therapy patient care. Emphasis on 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. Examination of 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)**

Comprehensive review of radiation physics, protection, and dosimetry. Application of radioactive materials. Radiobiology. Technical aspects of radiation oncology.

**RTTH 353 Psycho-Oncology (2)**

Examination of potential psychological effects of malignant disease on the patient and family. The patient's emotional responses to the initial diagnosis. 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, 365 Radiation Oncology I, II (3, 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 371, 372, 373, 374 Radiation Therapy Affiliation I, II, III, IV (attendance credit) (1, 1, 1, 1)**

Twelve months of clinical experience (520 clock hours per term) covering a wide variety of technical procedures.

**RTTH 381, 382, 383, 384 Topics in Radiation Therapy I, II, III, IV (1-3, 1-3, 1-3, 1-3)**

Survey of 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, 402, 403, 404 Advanced Clinical Procedures I, II, III, IV (3, 3, 3, 3)**

Credit for full-time, postcertification clinical practice in a radiation therapy service. Periodic evaluations by the clinical supervisor.

**CONJOINT**

See CONJOINT COURSES, section III General Information, for course descriptions.

**COGNATE****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.

**EMMC 314 Introduction to ECG Interpretation (1)**

Development of basic ECG interpretation skills. Focus on anatomy and physiology, underlying pathophysiology, basic rhythm recognition, and overview of related treatments. Special emphasis on skills needed by bedside practitioner to differentiate between benign and life-threatening dysrhythmias.

**EMMC 484 Legal Issues in Health Care (2)**

Introduction to 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. Discussion of employment issues, including discrimination and sexual harassment. Development of health and safety programs per OSHA regulations, risk management, legal issues in vehicle operations and equipment, and EMS and law-enforcement interactions.

**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. One publishable paper.

Prerequisite: Consent of instructor for nondoctoral students.

**RELE 457 Christian Ethics and Health Care (2)**

Ethical issues in modern medicine and related fields from the perspective of Christian thought and practice.

# SPEECH-LANGUAGE PATHOLOGY AND AUDIOLOGY

**SPEECH-LANGUAGE PATHOLOGY—Certificate**

**SPEECH-LANGUAGE PATHOLOGY ASSISTANT—Associate in Science**

**SPEECH-LANGUAGE PATHOLOGY AND AUDIOLOGY—Bachelor of Science**

KEIKO KHOO, Chair

JEAN B. LOWRY, Program Director for Master of Science, for Bachelor of Science, and for Certificate,  
Speech Language Pathology and Audiology

YOOMI KIM, Academic Coordinator for Clinical Education, Speech-Language Pathology and Audiology Program

KAREN MAINESS, Program Director for Associate in Science, Speech-Language Pathology Assistant

## FACULTY

Noha S. Daher  
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Jean B. Lowry  
Karen J. Mainess  
Jan McFarland  
Paige Shaughnessy  
Susan Steffani

## CLINICAL FACULTY

Melissa K. Backstrom-Gonzales  
Juli Ann Spiller  
David G. McGann  
Anne-Marie Stauble

## TUITION

**F**or tuition information, please see section II,  
Financial Information, SCHEDULE OF CHARGES.

**S**peech-language pathologists evaluate and treat children and adults with communication disorders. Difficulties in the areas of speech, language, fluency, 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 nonskilled therapeutic activities and assisting in therapy, as directed by the supervising speech-language pathologist.

## OPPORTUNITIES

**E**mployment opportunities for speech-sanguage 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 the BULLETIN of the Graduate School. An abridged list of Graduate School courses for the M.S. degree is provided at the end of this department.

**SPEECH-LANGUAGE PATHOLOGY—Certificate**

**A**ny individual with a bachelor’s degree from an accredited institution is eligible for the certificate program. This program permits completion of undergraduate pre-requisites 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  
SPEECH-LANGUAGE PATHOLOGY—Certificate**

SPPA	201	Observation of Clinical Management in Speech Pathology	1
SPPA	276	Communication across the Lifespan	4
SPPA	314	Language Analysis for Speech-Language Pathologists	3
SPPA	317	Acoustic, Physiological, and Transcription 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	3
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.



Taking a break after their weekly staff meeting are Department of Speech-Language Pathology and Audiology faculty. (Front row) Karen Mainess; department chair, Keiko Khoo; Yoomi Kim and Susan Steffani. (Back row) Paige Shaughnessy; department secretary, Jeanne Stoddard; Jean Lowry and Jan McFarland.

## SPEECH-LANGUAGE PATHOLOGY ASSISTANT—Associate in Science

### THE PROGRAM

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.

#### Clinical experience

Supervised clinical fieldwork is an integral part of the student's education. Completion of directed observation and supervised fieldwork experience are required as part of the technical course work. Completion of specific theoretical courses precedes placement for fieldwork.

#### Accreditation

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 applied for approval from the California State Department of Consumer Affairs, the Speech-Language Pathology and Audiology Board, and the American Speech-Language-Hearing Association.

### DISTANCE EDUCATION

The Speech-Language Pathology Assistant Program is offered via distance education at Crafton Hills Community College, Yucaipa.

### THE PROGRAM OBJECTIVES

Upon completion of the program, the graduate will:

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 a basic knowledge of the treatment methods and procedures.

And should be able to:

1. Effectively prepare for screening and therapy sessions.
2. Conduct systematic screening sessions.
3. Conduct effective therapy sessions.
4. Function within the scope of practice for the SLPA.
5. Seek to facilitate on-going learning process.
6. Demonstrate effective communication skills.
7. Work effectively as a team member.
8. Carry out scheduling and clerical tasks.
9. Demonstrate ethical behavior.
10. Demonstrate acceptable workplace behavior.

### 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, 24887 Taylor Street, Suite 102.

### PROFESSIONAL REGISTRATION

Registration with the American Speech-Language-Hearing Association is voluntary at this time. However, the state of California requires that individuals seeking employment as a speech-language pathology assistant be registered with the Department of Consumer Affairs, Speech-Language Pathology and Audiology Licensing Board.

### ADMISSION

To be eligible for admission, the applicant must have completed a minimum of 34 semester units or 51 quarter units of general education at an accredited college or university.

#### Prerequisites for Speech-Language Pathology Assistant, A.S.

##### General education units must include:

English, 12 quarter units

Intermediate algebra, 4 quarter units (or high school equivalent, with no college credit)

Humanities/Social studies, 17 quarter units

Human anatomy and physiology, 4 quarter units

Students applying from international colleges/universities must have their course work evaluated by a foreign evaluation center (contact Loma Linda University for approved centers).

**PROGRAM OF INSTRUCTION**

**SPEECH-LANGUAGE PATHOLOGY ASSISTANT—Associate in Science**

A total of 96 quarter units is required for the Associate in Science degree at Loma Linda University. The unit distribution must consist of 51 quarter units of general education and electives, and 45 quarter units of core course work.

**CORE COURSES**

SLPA	218	Transcription Phonetics	3
SLPA	224	Language Disorders in Children	4
SLPA	234	Speech Disorders in Children	4
SLPA	235	Speech Disorders in Adults	4
SLPA	244	Language Disorders in Adults	3
SLPA	267	Fieldwork	2, 2
SLPA	275	Assistive Technology	2
SLPA	277	Bicultural and Bilingual Issues in Communication Disorders	2
SPPA	284	Introduction to Speech-Language Pathology and Audiology	3
SLPA	285	Speech-Language Pathology Assistant Methods and Procedures	3
SLPA	286	Workplace Issues and Ethics	2
SPPA	217	Beginning Sign Language	3
SPPA	276	Communication across the Lifespan	4

Electives:

RELE	___	Religious studies	2, 2
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Department of Speech-Language Pathology and Audiology professor Jean Lowry is a typical School of Allied Health Professions faculty member. As busy as they are, faculty always have an open door for the students.



## SPEECH-LANGUAGE PATHOLOGY AND AUDIOLOGY—Bachelor of Science

### THE PROGRAM

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 institution, 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.

#### Accreditation

The program is approved by the Educational Standards Board 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.

### 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, 24887 Taylor Street, Suite 102.

### PROFESSIONAL REGISTRATION

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 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—

1. the General Education requirements and
2. 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.

**Prerequisites for Speech-Language Pathology and Audiology, B.S.**

20 units minimum in humanities (choose a minimum of two areas from: history, literature, philosophy, foreign language, art/music appreciation/history)

Of the 20 units, religion is required, (4 units per year) if attended at a Seventh-day Adventist college or university

Human anatomy and physiology, complete sequence

Introductory physics, one quarter/semester (recommended)

Select a total of 12 quarter units natural sciences, including one biological science (anatomy and physiology), 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 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

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**

**SPEECH-LANGUAGE PATHOLOGY AND AUDIOLOGY—Bachelor of Science**

**CORE COURSES**

SPPA 201	Observation of Clinical Management in Speech Pathology	1
SPPA 217	Beginning Sign Language	3
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 Science	3
SPPA 317	Acoustic, Physiological, and Transcription 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 415	Intermediate Sign Language	2
SPPA 477	Bilingualism and Biculturalism II	2
AHCJ 305	HIV/AIDS and the Health Provider	1
AHCJ 328	Portfolio Practicum	1
AHCJ 351	Statistics for the Health Professions	3
AHCJ 461	Research Methods	2
AHCS 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
ENGL 478	Theory and Application of Linguistics	4
PSYC 479	Human Neuropsychology	4

**Select 23 units from:**

SPPA 375	Assistive Technology	2
SPPA 377	Bilingualism and Biculturalism I	2
SPPA 424	Adult Language Pathology	2
SPPA 434	Disorders of Fluency	2
SPPA 435	Voice Disorders	2
SPPA 444	Organic Speech Disorders	4
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-Language Pathology	3
SPPA 486	Diagnostic Methods in Speech-Language Pathology	4

A minimum grade of C (2.0) is required for all courses in the program.

**COURSES**

For information about units of credit and course numbers, see the beginning of section III of this BULLETIN.

**SLPA 218 Transcription Phonetics (3)**

Development of transcription skills using the International Phonetic Alphabet.

**SLPA 224 Language Disorders in Children (4)**

Study of language disorders in children. Description of disorders in infancy through adolescence. Treatment strategies discussed.

**SLPA 234 Speech Disorders in Children (4)**

Study of articulation, phonological, and fluency disorders in children. Treatment strategies discussed.

**SLPA 235 Speech Disorders in Adults (4)**

Basic anatomy and physiology of the head and neck. Study of motor speech disorders, and voice and swallowing disorders in adults. Treatment strategies discussed.

**SLPA 244 Language Disorders in Adults (3)**

Foundational neuroanatomy. Study of acquired language disorders—including aphasia, right-hemisphere disorders, and traumatic brain injury. Treatment strategies discussed.

**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 setting and in a hospital setting.

Prerequisite: SLPA 224, 234.

**SLPA 275 Assistive Technology (2)**

Introduction to the development and use of assistive technology. Use of assistive technology for individuals in need of augmentative or alternative means of communication.

**SLPA 277 Bicultural and Bilingual Issues in Communication Disorders (2)**

Clinical competencies and cultural sensitivity needed in interactions with bicultural and bilingual clients. The impact of such knowledge on assessment and intervention.

**SLPA 285 Speech-Language Pathology Assistant Methods and Procedures (3)**

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.

**SLPA 286 Workplace Issues and Ethics (2)**

Interpersonal skills, workplace conduct, ethical conduct, scope of practice, national and state regulations. Special emphasis on 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 life-long learning.

**SPPA 201 Observation of Clinical Management in Speech Pathology (1-2)**

Attendance at scheduled sessions to observe clinical management of the communicatively handicapped. May be repeated once for additional credit.

**SPPA 216 Deaf Bicultural Bilingual Development (2)**

Issues important to speech, language, and literacy development. Clinicianship that is sensitive to deaf culture.

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

Focus on learning American Sign language (ASL) for conversational purposes. Fingerspelling, a sign vocabulary of approximately 500 words, and acquisition of the basic grammatical rules of ASL. Opportunity to use ASL with native signers. 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 in infancy to adolescence, and the effects of aging on communication. Includes 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)**

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

**SPPA 314 Language Analysis for Speech-Language Pathology (4)**

Introduction to techniques of linguistic analyses used in the study of phonology, morphology, syntax, and semantics.

**SPPA 317 Acoustic, Physiological, and Transcription Phonetics (2)**

Acoustic and physiological correlates of speech-sound production.

**SPPA 318 Transcription Phonetics (3)**

Development of 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)**

Introduction to 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 the psycholinguistic views of bilingualism in childhood. Advantages of the dual linguistic systems for problem solving, and disadvantages due to the less-than-well-developed primary language. Introduces the applied linguistic views of adolescent and adult speakers of second languages, and discusses major methods currently used in facilitating balanced bilingualism.

**SPPA 415 Intermediate Sign Language (2)**

Further development of sign language skills, with emphasis on ASL grammar. Introduction to deaf culture and various perspectives on deafness or approaches to aural rehabilitation.

**SPPA 424 Adult Language Pathology (4)**

Impairment of language and speech related to organic neuropathology.

Prerequisite: SPPA 376.

**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)**

Introduction to the classification, cause, manifestations, assessment, and treatment of craniofacial disorders/cleft palate, tongue thrust, dysarthria, apraxia of speech, and dysphagia.

Prerequisite: SPPA 376.

**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. Minimum of thirty clock hours required for each unit of credit.

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-Language Pathology (3)**

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)**

Purpose 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)**

Project or paper to be submitted 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.

**CONJOINT**

See CONJOINT COURSES, section III General Information, for course descriptions.

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

Studies psychological development as it relates to the learning process and to evaluation techniques for learners in 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 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 to upper-division undergraduate and postgraduate students only.

**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.

**GRADUATE SCHOOL****M.S. degree courses**

The program leading to the Master of Science degree in speech-language pathology and its descriptions for the following courses are provided in the BULLETIN of the Graduate School.

**SPPA 523 Early Childhood Language Disorders (3)**

**SPPA 525 Preschool and School-age Children's Language Disorders (3)**

**SPPA 535 Voice Disorders (3)**

**SPPA 554 Swallowing Disorders (3)**

**SPPA 564 Aural Rehabilitation and Hearing Aids (3)**

**SPPA 567 Clinical Practice in Speech-Language Pathology and Audiology, Advanced (1-6)**

**SPPA 568 Clinical Practice in Speech-Language Diagnostics (1-3)**

**SPPA 575 Instrumentation in Speech and Hearing (1)**

**SPPA 576 Instrumentation in Communication Disorders (1)**

**SPPA 585 Professional Aspects of Speech-Language Pathology and Audiology (2)**

**SPPA 587 Counseling in Communication Disorders (3)**

**SPPA 588 Directed Teaching in Speech-Language Pathology (3-6)**

**SPPA 596 Workshop in Speech-Language Pathology/Audiology (1-4)**

**SPPA 597 Externship in Speech-Language Pathology (2-4)**

**SPPA 598 Research Methods and Professional Literature (2)**

**SPPA 679 Seminar: Motor-Speech Disorders/and Augmentation (3)**

**SPPA 682 Seminar: Traumatic Brain Injury (3)**

**SPPA 684 Seminar: Adult Language Disorders (3)**

**SPPA 685 Seminar: Stuttering (3)**

**SPPA 687 Seminar: Open Seminar (2-3)**

**SPPA 688 Seminar: Articulation (3)**

**SPPA 697 Research (2-4)**

**SPPA 698 Thesis (1-6)**

**SPPA 699 Directed Study (1-3)**

# IV

## FACULTY OF RELIGION

Statement of Mission  
Courses

# Faculty of Religion

## STATEMENT OF MISSION

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:
  - Foundational Studies (biblical, theological, mission, and historical).
  - Ethical Studies (personal, professional, and social).
  - Relational Studies (applied theology, clinical ministry, and psychology of religion).
3. To foster and support research in the foundational, 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.

## COURSES

### FOUNDATIONAL STUDIES

#### BIBLICAL STUDIES

#### **REL 404 New Testament Writings (2-3)**

Interpretation of 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.

#### **REL 419 Gospel of John (2-3)**

Key passages and themes in John, with an exploration of its message for today.

Additional project required for third unit.

#### **REL 424 Biblical Prophets (2-3)**

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.

#### **REL 426 Jesus (2-3)**

Study of Jesus as healer and teacher, prophet and reformer, Son of God and Savior.

Additional project required for third unit.

#### **REL 428 Gospel of Mark (2-3)**

Key passages and themes in Mark, with an exploration of its message for today.

Additional project required for third unit.

#### **REL 429 Gospel of Luke (2-3)**

Key passages and themes in Luke, with an exploration of its message for today.

Additional project required for third unit.

#### **REL 439 Gospel of Matthew (2-3)**

Key passages and themes in Matthew, with an exploration of its message for today.

Additional project required for third unit.

#### **REL 464 Paul's Message in Romans (2-3)**

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.

#### **REL 468 Daniel (2-3)**

Nature, purpose, and message of the apocalyptic book of Daniel.

Additional project required for third unit.

#### **REL 469 Revelation (2-3)**

Nature, purpose, and message of the apocalyptic book of Revelation.

Additional project required for third unit.

#### **REL 474 Love and Sex in the Bible (2-3)**

Study of 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.

**REL 475 Spirituality and the Contemporary Christian (2-3)**

Exploration of the meaning of spirituality in the light of Scripture and Christian thought, and study of practices and disciplines that form and mature an individual's spiritual life.

Additional project required for third unit.

**REL 476 The Bible and Ethics (2-3)**

Ways in which the Bible and ethics are related. Major ethical themes in biblical teaching.

Additional project required for third unit.

**REL 499 Directed Study (1-3)**

Prerequisite: Consent of the instructor.

**REL 558 Old Testament Thought (3-4)**

Introduction to the literature and key theological themes of the Old Testament.

Additional project required for fourth unit.

**REL 559 New Testament Thought (3-4)**

Introduction to the literature and key theological themes of the New Testament.

Additional project required for fourth unit.

**REL 699 Directed Study (1-6)**

Prerequisite: Consent of the instructor.

**REL 539 Christian Understanding of God and Humanity (3-4)**

Study of 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.

**REL 557 Theology of Human Suffering (3-4)**

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.

**REL 615 Seminar in Philosophy of Religion (3-4)**

Examination of 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.

**REL 617 Seminar in Religion and the Sciences (3-4)**

Exploration of 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.

**THEOLOGICAL STUDIES**

**REL 406 Adventist Beliefs and Life (2-3)**

Fundamental tenets of Seventh-day Adventist faith and the lifestyle that such faith engenders.

Additional project required for third unit.

**REL 415 Philosophy of Religion (2-3)**

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.

**REL 416 God and Human Suffering (2-3)**

Suffering and evil in relation to the creative and redemptive purposes of God for this world.

Additional project required for third unit.

**REL 437 Current Issues in Adventism (2-3)**

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.

**REL 526 Creation and Cosmology (3-4)**

Exploration of 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.

**HISTORICAL STUDIES**

**REL 423 Loma Linda Perspectives (2-3)**

History and philosophy of Loma Linda University as a Christian health-sciences institution that fosters human wholeness.

Additional project required for third unit.

**REL 425 Contemporary Religious Issues (2-3)**

Analysis of prominent topics in religion discussed in contemporary journals.

Additional project required for third unit.

**REL 436 Adventist Heritage and Health (2-3)**

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.

**REL 440 World Religions (2-3)**

Survey of the origins, beliefs, and contemporary practices of the world's major religious systems. 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.

**REL 555 The Adventist Experience (3-4)**

Introduction to the beliefs and values that shape the Seventh-day Adventist community.

Additional project required for fourth unit.



## MISSION STUDIES.

**RELF 444 Christian Mission (2-3)**

Biblical theology applied 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.

**RELF 447 Cross-Cultural Ministry (2-3)**

Study of the challenges of serving 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.

**RELF 534 Anthropology of Mission (3-4)**

Study of 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.

## ETHICAL STUDIES

**RELE 455 Christian Understanding of Sexuality (2-3)**

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 (2-3)**

The foundations, norms, and patterns of personal integrity and professional responsibility.

Additional project required for third unit.

**RELE 457 Christian Ethics and Health Care (2-3)**

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 the instructor.

**RELE 505 Clinical Ethics (3-4)**

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 (3-4)**

Theoretical and practical dilemmas in bioethics. Contributions of social workers to these issues.

Additional project required for fourth unit.

**RELE 524 Christian Bioethics (3-4)**

Christian perspectives on ethical issues in health care.

Additional project required for fourth unit.

**RELE 525 Ethics for Scientists (3-4)**

Ethical aspects of scientific research, with emphasis on Christian contributions.

Additional project required for fourth unit.

**RELE 534 Ethical Issues in Public Health (3-4)**

Ethical issues encountered by public health administrators, educators, and investigators.

Additional project required for fourth unit.

**RELE 547 Christian Business Ethics (3-4)**

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 (3-4)**

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 (3-4)**

Ethical implications of the primary theological legacies of Western culture.

Additional project required for fourth unit.

**RELE 588 Philosophical Ethics (3-4)**

Ethical themes and significant theorists in Western philosophy.

Additional project required for fourth unit.

**RELE 589 Biblical Ethics (3-4)**

Exploration of the nature of biblical ethics and the contribution which the Bible makes to ethical reflection and action.

Additional project required for fourth unit.

**RELE 624 Seminar in Christian Ethics (3-4)**

Advanced study of selected topics in Christian ethics.

Prerequisite: Consent of the instructor.

**RELE 699 Directed Study (1-6)**

Prerequisite: Consent of the instructor.

## RELATIONAL STUDIES

## APPLIED THEOLOGY

**RELR 404 Christian Service (1-2)**

Participation in approved service learning with written reflection on the Christian reasons for service.

Additional project required for second unit.

**RELR 448 Church and Community Leadership (2-3)**

Theology and practice of lay church involvement and leadership by health care professionals.

Additional project required for third unit.

**RELR 528 Christian Citizenship and Leadership (3-4)**

Christian principles for fostering healthy communities, transforming the institutions of society, and providing public leadership.

Additional project required for fourth unit.

**RELR 536 Spirituality and Occupation (3-4)**

Exploration of the relationship between spirituality and occupation through assimilation of information drawn from religious theorists, theology, spiritual and religious practices, and occupation.

Additional project required for fourth unit.

**RELR 565 Introduction to Pastoral Theology and Methodology (3-4)**

Study of the biblical, theological, and historical foundations for the practice of ministry.

Additional project required for fourth unit.

**RELR 567 Introduction to Pastoral Counseling (3-4)**

Overview of theology, history, theory, and practice of pastoral counseling.

Additional project required for fourth unit.

**RELR 574 Introduction to Preaching (3-4)**

Exploration of 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.

**CLINICAL MINISTRY**

**RELR 409 Christian Perspectives on Death and Dying (2-3)**

From a Christian perspective, consideration of 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 427 Crisis Counseling (2-3)**

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 475 Art of Integrative Care (2-3)**

The integration of psychosocial and spiritual care in the clinical setting.

Additional project required for third unit.

**RELR 524 Clinical Pastoral Education (6-12)**

Twelve-week course including 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 (3-4)**

Christian principles of leadership in the community and in the practice of health care.

Additional project required for fourth unit.

**RELR 527 Crisis Counseling (3-4)**

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 568 Care of the Dying and Bereaved (3-4)**

Study of the biblical, theological, cultural, religious, relational, and psychological aspects of dying and death.

Additional project required for fourth unit.

**RELR 575 Art of Integrative Care (3-4)**

The integration of psychosocial and spiritual care in the clinical setting.

Additional project required for fourth unit.

**RELR 694 Seminar in Clinical Ministry (3-4)**

Principles and practice of effective interaction with patients, parishioners, inmates, and other populations.

Additional project required for fourth unit.

**PSYCHOLOGY OF RELIGION**

**RELR 408 Christian Perspectives on Marriage and the Family (2-3)**

From a Christian perspective, an overview of the family lifecycle.

Additional project required for third unit.

**RELR 415 Christian Theology and Popular Culture (2-3)**

Concepts and practices in popular culture, examined from a Christian perspective.

Additional project required for third unit.

**RELR 429 Cultural Issues in Religion (2-3)**

Study of 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 499 Directed Study (1-3)**

Prerequisite: Consent of the instructor.

**RELR 535 Spirituality and Mental Health (3-4)**

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 564 Religion, Marriage, and the Family (3-4)**

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 584 Culture, Psychology, and Religion (3-4)**

Introduction to 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 (3-4)**

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 (3-4)**

Study of 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 699 Directed Study (1-6)**

Prerequisite: Consent of the instructor.

**GENERAL RELIGIOUS STUDIES****RELG 504 Research Methods (2-4)**

Study of 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 (3-4)**

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 the instructor.

**RELG 695 Clinical Internship (0) (400 clock 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 the instructor and of student's adviser.

**RELG 697 Independent Research (1-8)**

Prerequisite: Consent of the instructor and of student's adviser.

**RELG 698 Thesis (1-4)**

Prerequisite: Consent of the instructor and of student's adviser.

# V

## **DIVISION OF GENERAL STUDIES**

LLU Philosophy of General Education

LLU Criteria for General Education Courses

LLU General Education Requirements

LLU General Education Courses

LLU General Education Courses Booklet

# Division of General Studies

The Division of General Studies, directed by the dean of the Graduate School, offers general education courses that contribute to the fulfillment of requirements that apply to the Bachelor of Science degree programs in the Graduate School and 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.

## LLU 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 B. S. degrees.
2. The primary focus of the course deals with the knowledge and understanding of a subject area within one of the following domains described in the Loma Linda University general education requirements for B.S. 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 appropriately prepared B.S. 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 Loma Linda University's general education requirements for the B.S. degree.

**LLU 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 pages.

**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 the Seventh-day Adventist institution.

The study of cultural heritage must include a minimum of 12 credits. The credits in cultural heritage must be selected from two of the following content areas: civilization/history, fine arts, literature, modern language, performing/visual arts (not to exceed 2 quarter credits), or philosophy.

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

Scientific inquiry and analysis encompasses both the natural and social sciences. Content areas from which students must choose 12-16 credits within the natural sciences include biology, chemistry, geology, mathematics, physics, and statistics. No more than 6 credits in any one area may count toward the natural sciences requirements.

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

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

Course work in communication must include a complete sequence in freshman English which meets the baccalaureate degree requirements of a four-year college or university. 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.

**LLU GENERAL EDUCATION COURSES  
OFFERED BY THE SCHOOL**

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

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

Courses that fulfill the general education requirements for Spiritual Heritage are listed in the Faculty of Religion section of this BULLETIN (see section IV).

**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 240 Microbiology (4)**

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.

**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 318 Physiology I (4)**

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

**AHCJ 319 Physiology II (3)**

Detailed study of neuromuscular physiology.

**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 461 Research Methods (2)**

Introduction to 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.

**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.

**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 a 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.

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

Explores the psycholinguistic views of bilingualism in childhood. Advantages of the dual linguistic systems for problem solving, and disadvantages due to the less-than-well-developed primary language. Introduces the applied linguistic views of adolescent and adult speakers of second languages, and discusses major methods currently used in facilitating balanced bilingualism.

**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 a

**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 (1-3)**

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.

**AHCJ 431 Database Management I (3)**

Introduction to database management concepts, with emphasis on medical information. Microsoft Excel used as a flat database. Data management and presentation using the sorting, reporting, and charting functions of Excel.

Prerequisite: Introduction to computers.

**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. Required project creating a basic medical-information database from scratch.

Prerequisite: AHCJ 431 or consent of instructor.

**AHCJ 433 Special Projects in Computer Applications (2)**

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.

**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 provided 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.

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

**AHCJ 458 Stress in Health Professional Education (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. Explores coping strategies, i.e., nutrition, exercise, humor, time management and organization, cognitive therapies, relaxation, and imagery.



**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.

**LLU GENERAL EDUCATION COURSES—  
ONLINE AND BOOKLET**

A complete listing of courses offered 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; the general education courses which are offered each quarter are listed.

A complete listing, including course descriptions, is available as a booklet—*Loma Linda University General Education Philosophy, Requirements, and Courses* booklet. For access to the booklet, the student should consult his/her academic adviser.

# VI

## THE DIRECTORY

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Diana Medal, M.A., Program Coordinator for Certificate, Coding Specialist  
Terri Rouse, B.S., Recruitment Coordinator

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 Maxine Taylor, M.S., Academic Coordinator of Clinical Education; Nutrition and Dietetics Program  
 Cindy Kosch, M.S., RD, Assistant Professor, Nutrition and Dietetics; Certificate Coordinator

**OCCUPATIONAL THERAPY**

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 \_\_\_\_\_ Program Director; Post-Professional Master of Occupational Therapy  
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 Ruth N. Jeffries, B.S., OTR, Academic Coordinator for Fieldwork Education, Occupational Therapy Assistant Program  
 Judith A. Palladino, M.A., OTR, Academic Coordinator for Fieldwork Education, Occupational Therapy Program  
 Terese R. Pfeiffer B.S., COTA, Program Coordinator for Distance Learning, Fresno

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 Jeannine Stuart-Mendes, M.P.T., Academic Coordinator of Clinical Education for Entry-Level Master of Physical Therapy Program and for Entry-Level Doctor of Physical Therapy Program  
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 Laura L. Alipoon, Ed.S., Program Director for Bachelor of Science, Radiation Sciences  
 Steven L. Leber, B.S., Clinical Coordinator for Associate in Science, Medical Radiography Program; Program Director for Certificate, Special Imaging Technology  
 Marie M. DeLange, B.S., Clinical Program Director for Certificate, Diagnostic Medical Sonography  
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 Gregory E. Watkins, M.D., Medical Adviser for Medical Radiography Program  
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Charles Dart	Dean, Student Affairs*	Special assistant to the chancellor
Helen Greenwood	Department chairs	(diversity)*

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B.S. Pacific Union College 1978
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B.S. University of North Dakota 1978
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M.D. Angeles University 1995
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M.S. Texas Woman's University 1996
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B.S. Centro Escolar University, Philippines 1968
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B.S. Loma Linda University AH 1981
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M.D. University of Illinois, College of Medicine 1970
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B.S. Loma Linda University AH 1986

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M.Div. Biola University 1983

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M.D. Loma Linda University SM 1948

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M.P.H. University of Redlands 1992

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B.S. University of California 1997

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REGINALD YEO, Clinical Instructor, Department of Clinical Laboratory Science  
B.A. Andrews University 1958

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M.P.H. Yonsei University, Seoul, Korea, 1991

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M.P.H. Loma Linda University PH 1989

LILY L. YOUNG, Clinical Instructor, Department of Physical Therapy  
M.A. Hong Kong Union College 1976

JANE N. ZAPPPIA, Clinical Instructor, Department of Clinical Laboratory Science  
B.S. University of Central Florida 1977

**CLINICAL FACILITIES**

- 21st Century Therapy, Raytown, MO  
 Abbink Physical Therapy, Westraten, The Netherlands  
 Able Health Care Network, Tualatin, OR  
 ACIC/AORC 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  
 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 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  
 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., 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 Saints Saint Mary's Medical Center, Racine, WI  
 All Sports Therapy Athletic Rehabilitation, Hanford  
 Allcare Therapy Services, Ridgecrest  
 Allentown Sports Medicine & Human Performance Center, Allentown, PA  
 Alliant Health Systems, dba Alliant Medical Pavilion, Louisville, KY  
 Allied Services Skilled Nursing Center, Scranton, PA  
 Almaden Health & Rehab Center, San Jose  
 Alpine Special Treatment Center, Alpine  
 Alta Loma School District, Alta Loma  
 Alvarado HMC & 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  
 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, 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  
 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  
 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 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  
 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 Med 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 (University of) Los Angeles Neuropsychiatric,  
Los Angeles  
California (University of) San Diego, La Jolla  
Cantor & Company, Beverly Hills  
Canyon Lake Physical Therapy, Canyon Lake  
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  
Carnahan Therapy/The Work Center, Lompoc  
Carter Physical Therapy, Covina  
Casa Colina Hospital for Rehabilitative Medicine,  
Pomona  
Cascada PT & Sports, Sedro Wooley, WA  
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 General  
Hospital, Sacramento  
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–San Bernardino, St.  
Bernardine Medical Center, 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 Dessarrollo y Servicios Especializacion,  
Mayaguez, Puerto Rico  
Century City Hospital, Los Angeles  
Chancellor Health Care, Santa Rosa  
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 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 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, 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 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  
 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 Chula Vista, Chula Vista  
 Community Hospital of Onaga, Onaga, KS  
 Community Hospital of San Bernardino,  
 San Bernardino  
 Community Hospitals of Central California, Fresno  
 Community Medical Center, Clovis  
 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 Sports Medicine,  
 Coon Rapids, MN  
 Comprehensive Rehabilitation, Hendersonville, TN  
 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 Wellness Program, Dallas, TX  
 Cornerstone Medical Group, San Bernardino  
 Cornerstone Therapy, Huntington Beach  
 Corona Physical Therapy, Corona  
 Corona-Temecula Orthopedic Association, Corona, CA  
 Corona Regional Medical Center (Vista Hospital  
 Systems), Corona  
 Corona/Norco Unified School District (Child Nutrition  
 Services), Norco  
 Cottonwood Hospital Back Institute, Murray, UT  
 County of Orange Health Care Agency, Orange  
 County of Riverside Department of Public Health,  
 Riverside  
 County of San Bernardino Department of Public Health,  
 San Bernardino  
 County of San Luis Obispo CCS, San Luis Obispo  
 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 Navy, Naval Medical Center, San  
 Diego  
 DePaul Medical Center, Norfolk, VA  
 Desert Knolls Convalescent, Premier Healthcare, Inc.,  
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 Desert Life Rehabilitation and Care Center,  
 Tucson, AZ  
 Desert Regional Medical Center (Tenet Health System),  
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 Desert Sands Unified School District, La Quinta  
 Desert Valley Hospital, Victorville  
 DeSoto Memorial Hospital, Arcadia  
 Detroit Medical Center, Detroit, MI  
 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  
 Dr. McDougall's Right Foods/*Veggie Life Magazine*,  
 Concorde  
 Drs. Hayashi, Sakai, and Dahms, Thousand Oaks  
 Durango Sports Club PT, Durango, CO  
 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  
 Eggleston'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  
 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
- Fairview Training Center, Physical Medicine  
 Department, Salem, OR  
 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  
 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,  
 California Cancer Care, Fresno  
 Fresno Fire Department, Fresno  
 Friends of Jefferson House, Riverside  
 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 Therapy Center, Poway  
 Gateways Hospital, Los Angeles  
 General Hospital, Eureka  
 Genesys Regional Medical Center Health Park, Grand  
 Blanc, MI  
 Gentilly 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  
 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  
 Guardian Healthcare Group, Modesto  
 Guardian Rehabilitation Hospital, Modesto
- H & W Therapy, Pueblo, CO  
 H & W Therapy, Soldotna, AK  
 Hairston and Daley Physical Therapy, Orange  
 Halifax Medical Center, Daytona Beach, FL  
 Hamilton Physical Therapy, Hamilton, MT  
 Hanford Community Hospital, Hanford  
 Harbor View Medical Center, Seattle, WA  
 Hardee PT/Rehab Service, Inc., Wauchula, FL  
 Havasu Regional Medical Center, Lake Havasu  
 Hawaii State Hospital, Kaneohe, Oahu, HI  
 Hawaiian Electric Company, Honolulu, HI  
 Hawaiian Rehabilitation Services, Kailua-Kona, HI  
 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  
 HealthEast, St. Paul, MN  
 HealthEast–Bethesda Lutheran Hospital and  
 Rehabilitation Center  
 HealthEast–D.R. Hospital  
 HealthEast–Midway Hospital  
 HealthEast–Saint John’s Hospital  
 HealthEast–Saint Joseph’s Hospital, St. Paul, Minnesota  
 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
- Hemet Healthcare, Hemet
- Hemet Unified School District, Hemet
- Hendrick Medical Center, Abilene, TX
- Hesperia Physical Therapy, Hesperia
- Hi Desert Medical Center, Joshua Tree
- 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
- Independent PT–Torrance, Torrance
- Inglish & Petersen PT, Mesa, AZ
- Inland Hand Therapy, Rancho Cucamonga
- Inland Surgery Center, Redlands
- Inland Valley Regional Medical Center, Wildomar
- Innovative Health Systems, Inc., Sacramento
- Integris Baptist Medical Center, Oklahoma City, OK
- Intergro 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
- 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, 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 Rehabilitation Hospital, Visalia
- Kennebec Valley Medical Center, Augusta, ME
- Kennewick General Hospital, Kennewick, WA
- Kensington Physical Therapy, Inc., Gaithersburg, MD
- Kentfield Rehabilitation Hospital, Kentfield
- 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
- Kingman Community Hospital, Kingman, KS
- Kingston Hospital, Kingston, NY
- Kitsap PT and Sports Clinic, Poulsbo, WA
- 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, AZ
- L & J Telesmanic & Associate (Horizon Subacute),  
Fresno
- La Palma Intercommunity Hospital, La Palma
- La Pine Physical Therapy, La Pine, OR
- Lake Arrowhead Physical Therapy/Mountains  
Community Hospital, Lake Arrowhead
- 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
- 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  
 Legacy Rehabilitation Services, Portland, OR  
 Lehigh Valley Physical Therapy and Rehabilitation,  
 Walnutport, PA  
 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 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) 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  
 Madonna Rehabilitation Hospital, Lincoln, NE  
 Magan Clinic, Covina  
 Magic Valley Regional Medical Center, Twin Falls, ID  
 Magnolia Physical Therapy, Huntington Beach  
 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  
 Mater Misericordiae Hospital-Mercy Hospital, Merced  
 Matrix, Lodi  
 Matrix-Long Beach Sports Rehab, Long Beach  
 Maywood Health Care, Oxnard  
 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 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 Olivos  
 Mission Hospital Regional Medical Center, Mission Viejo  
 Mission Orthopedic Physical Therapy, Mission Viejo  
 Missouri Rehabilitation Center, Mt. Vernon, MO  
 Modesto Back School, Modesto  
 Mohave Physical Therapy & Sports Medicine, Victorville  
 Monett Physical Therapy, Monett, MO  
 Montrose Memorial Hospital, Montrose, CO  
 Moreno Valley Physical Therapy, Moreno Valley  
 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  
 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 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 East Georgia Health System, Inc., Gainesville, 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 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, WA  
 Northwest 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  
 NOTAMI Hospitals of California, Inc., San Jose  
 NOVA CARE Contract Division, Genesco, IL  
 NOVA CARE, Inc., Phoenix, AZ  
 NOVA CARE Inland Industrial, Ontario  
 NOVA CARE Outpatient Rehab, Las Vegas, NV  
 NOVA CARE Outpatient Rehabilitation, Phoenix, AZ  
 NOVA CARE Outpatient Rehabilitation Division,  
 Atlanta, GA  
 NOVA CARE Phoenix General Community Hospital,  
 Phoenix, AZ  
 Nutrition and Lifestyle Medical Clinic, Calimesa  
 Nutrition Consultation (Margaret K. Heath), Loma Linda  
 O'Conner Hospital-Physical Medicine, San Jose  
 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 Country Therapy Services, Laguna Hills  
 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 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 for Charity-Baker Victory  
 Services, Buffalo, NV  
 Outreach Therapy Consultants, Spokane, WA  
 P.O.S.T. Rehabilitation Clinic, Moreno Valley  
 PACE Therapy-Christian Heritage, Upland  
 PACE Therapy-C Claremont 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 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  
 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  
 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 General Hospital, 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 of Ancino, Ancino  
 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  
 Placentia-Yorba Linda Unified School District, Placentia

- Point West Physical Therapy, Santa Rosa  
 Pollock Physical Therapy, Upland  
 Pomona Valley Hospital, Pomona  
 Portals, Los Angeles  
 Portercare 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  
 Professional Orthopedic & Sports Care, Fontana  
 Professional Physical Therapy Associates, Whittier  
 Professional Physical Therapy Services, Anchorage, AK  
 Professional Therapy Associates, Inc., Strongsville, OH  
 Professional Therapy Systems, Chattanooga, TN  
 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, Burbank  
 Providence Health Systems, Los Angeles  
 Providence Health Systems, 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  
 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 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  
 Regency 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 Specialists, Inc., Portland, OR  
 Rehab Visions, Omaha, NE  
 Rehabaccess, Decatur, AL  
 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 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 Regional Medical Center, Moreno Valley  
 Riverside Physical Therapy Center, Riverside  
 Riverside Unified School District, Riverside  
 Robert F. Kennedy Medical Center, Hawthorne  
 Robert H. Ballard Hospital for Rehabilitation/CMS, 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  
 Salt Lake City County Health Department, Salt Lake City, UT  
 Samaritan Health System, Mesa, AZ  
 San Antonio Community Hospital, 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 Preschool Services Department, San Bernardino  
 San Bernardino (County of) Public Health Department, San Bernardino

- San Bernardino (County of) Superintendent of Schools, Colton
- San Diego Hospital Association, San Diego
- San Gabriel Valley Medical Center, San Gabriel
- San Geronio Memorial Hospital, Banning
- San Joaquin Community 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 Medical Center, 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
- 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, San Diego, Hospital Association, San Diego
- Sharp Homecare, San Diego
- Shawnee Mission Medical Center, Shawnee Mission, KS
- Shea Health Center, San Bernardino
- Shoroye, Adeyinka, MD, Pediatrics, Riverside
- 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
- 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 Healthcare Services at Desert Regional, Palm Springs
- Sonoma Valley Hospital, Sonoma
- Sonora Community Hospital, Sonora
- 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
- Southill 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
- Special Kids, Murfreesboro, TN
- Specialized PT Center, Orange City, FL
- Specialty Hospital of Southern California, La Mirada
- Spectrum Health East Campus, Grand Rapids, MI
- Spine & Sports Medicine Institute, Concord
- Spoooner 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 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 Regional Medical Center 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, 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 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. 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 Rehab Corporation, Walla Walla, WA  
 Sundance Rehabilitation, Seattle, WA  
 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  
 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, 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, A.Q., Inc., Queen of Angels-Holly, Los Angeles  
 Tenet Western Division, Centinela Hospital Medical Center, Inglewood  
 Tennessee Christian Medical Center, 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  
 Tokos Medical Corporation, Santa Ana  
 Torrance Memorial Hospital Medical Center, Torrance  
 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  
 Tustin Rehab Hospital, Tustin



- UCSF Stanford Health Services, Stanford  
 UMass Memorial Hospital, Leominster  
 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, San Diego Medical Center,  
 San Diego  
 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
- 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  
 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 Hospital, 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  
 Vista Hospital Systems, Inc., Corona Regional Medical  
 Center, Corona  
 Vitas Healthcare Corp., San Bernardino  
 VNA-Ramona, Sun City  
 Volunteer Center, Santa Cruz
- Wahiawa General Hospital, Honolulu, HI  
 Walker Physical Therapy–Sun City, 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  
 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 Gate Convalescent Center, San Jose  
 West Tennessee Rehabilitation Center, Jackson, TN  
 West-Star Physical Therapy, City of Industry  
 Western Medical Center–Santa Ana, Santa Ana  
 Western Medical Center Hospital–Anaheim, Anaheim  
 Western Rehabilitation NOVA Care and Phoenix Baptist  
 Hospital Medical Center, Phoenix, AZ  
 Westside Physical Therapy Clinic, Yakima, WA  
 White Memorial Medical Center, Los Angeles  
 Whittier Hospital Medical Center, Whittier  
 Wilcox Memorial Hospital, Lihue, HI  
 Wilcox Physical Therapy Center, Anaheim  
 William Beaumont Hospital, Troy, MI  
 Wimbledon Park Physical Therapy, Victorville  
 Winways, Orange  
 Wood River Medical Center, Sun Valley, ID  
 Worthington Foods, Inc., Worthington, OH
- Xtreme Physical Therapy, Downey
- Yavapai Regional Medical Center, Prescott, AZ  
 Yonemoto PT Services, Alhambra  
 Yonkers General Hospital, Yonkers, NY
- Zelda Billingsy, M.D., Montebello  
 Ziprick, Schlitz, Heinrich, & Cramer, Redlands

**SUMMARY OF GRADUATES**

**CARDIOPULMONARY SCIENCES**

CLASS	A.S.	B.S.	TOTAL
1972	7	-	7
1973	18	-	18
1974	15	2	17
1975	18	5	23
1976	16	3	19
1977	16	2	18
1978	15	6	21
1979	19	12	31
1980	22	15	37
1981	22	13	35
1982	20	13	33
1983	19	12	31
1984	12	5	17
1985	18	5	23
1986	11	9	20

CLASS	A.S.	B.S.	M.S.	TOTAL
1987	8	8	-	16
1988	23	12	-	35
1989	8	6	-	14
1990	9	8	-	17
1991	14	4	-	18
1992	14	5	-	19
1993	20	10	-	30
1994	17	7	-	24
1995	40	13	-	53
1996	42	19	-	61
1997	18	5	-	23
1998	26	15	-	41
1999	22	8	-	30
2000	14	11	-	25
2001	10	13	-	23
2002	6	6	13	25

**CLINICAL LABORATORY SCIENCE**

CLASS	CERT.	B.S.	TOTAL
1938	5	-	5
1939	6	-	6
1940	6	-	6
1941	6	-	6
1942	8	-	8
1943	7	-	7
1944	-	5	5
1945	-	2	2
1946	5	2	7
1947	1	2	3
1948	5	6	11
1949	2	12	14
1950	2	11	13
1951	2	16	18
1952	2	15	17
1953	-	15	15
1954	-	9	9
1955	2	10	12
1956	1	13	14
1957	2	13	15
1958	-	7	7
1959	-	8	8
1960	-	9	9
1961	-	11	11
1962	-	13	13
1963	-	12	12
1964	-	11	11
1965	-	18	18
1966	-	6	6
1967	-	21	21
1968	-	16	16
1969	-	13	13

CLASS	CERT.	B.S.	TOTAL
1970	-	12	12
1971	-	15	15
1972	-	21	21
1973	-	23	23
1974	-	26	26
1975	-	8	8
1976	-	16	16
1977	-	15	15
1978	-	18	18
1979	-	23	23
1980	-	21	21
1981	-	21	21
1982	4	22	26
1983	4	11	15
1984	-	25	25
1985	-	13	13
1986	2	17	19
1987	3	15	18
1988	5	15	20
1989	-	16	16
1990	5	7	12
1991	2	11	13
1992	4	14	18
1993	3	12	15
1994	2	9	11
1995	1	12	13
1996	4	20	24
1997	4	16	20
1998	5	11	16
1999	6	8	14
2000	-	7	7
2001	6	10	16
2002	2	6	8

**HEALTH INFORMATION MANAGEMENT**

CLASS	CODING	CERT.	B.S.	TOTAL	CLASS	CODING	CERT.	B.S.	M.H.I.S.	TOTAL
1966	-	-	7	7	1985	-	-	5	-	5
1967	-	-	3	3	1986	-	-	8	-	8
1968	-	-	16	16	1987	-	-	7	-	7
1969	-	-	12	12	1988	22	-	18	-	40
1970	-	-	7	7	1989	40	-	15	-	55
1971	-	-	4	4	1990	34	-	13	-	47
1972	-	-	10	10	1991	42	-	2	-	44
1973	-	-	12	12	1992	-	-	8	-	8
1974	-	-	13	13	1993	26	-	10	-	36
1975	-	-	11	11	1994	24	-	6	-	30
1976	-	-	17	17	1995	10	1	10	-	21
1977	-	-	16	16	1996	9	-	7	-	16
1978	-	-	17	17	1997	15	3	10	-	28
1979	-	-	15	15	1998	28	1	8	-	37
1980	-	-	21	21	1999	26	-	13	6	45
1981	-	-	13	13	2000	27	-	11	12	50
1982	-	-	11	11	2001	27	-	8	6	41
1983	-	-	9	9	2002	39	1	10	5	55
1984	-	-	11	11						

**NUTRITION AND DIETETICS**

CLASS	A.S.	B.S.	CERT.	TOTAL	CLASS	A.S.	B.S.	CERT.	TOTAL
1975	-	6	-	6	1990	2	14	-	16
1976	-	21	-	21	1991	1	8	-	9
1977	-	20	-	20	1992	1	14	-	15
1978	-	26	-	26	1993	4	20	-	24
1979	-	10	-	10	1994	2	7	4	13
1980	-	24	-	24	1995	-	22	3	25
1981	-	24	-	24	1996	3	20	2	25
1982	-	21	-	21	1997	1	17	-	18
1983	-	12	-	12	1998	1	15	-	16
1984	-	22	-	22	1999	-	12	4	16
1985	-	18	-	18	2000	1	12	6	19
1986	-	18	-	18	2001	-	6	14	20
1987	-	17	-	17	2002	1	7	19	27
1988	-	9	-	9					
1989	1	7	-	8					

**OCCUPATIONAL THERAPY**

CLASS	CERT.	B.S.	A.A.	M.O.T	P.P.M.O.T.	TOTAL
1961	-	3	-	-	-	3
1962	-	3	-	-	-	3
1963	-	9	-	-	-	9
1964	-	8	-	-	-	8
1965	-	10	-	-	-	10
1966	-	3	-	-	-	3
1967	-	9	-	-	-	9
1968	-	5	-	-	-	5
1969	-	9	-	-	-	9
1970	-	8	-	-	-	8
1971	-	6	-	-	-	6
1972	-	11	-	-	-	11
1973	-	20	-	-	-	20
1974	-	22	-	-	-	22
1975	-	16	-	-	-	16
1976	-	24	-	-	-	24
1977	-	22	-	-	-	22
1978	-	21	-	-	-	21
1979	-	24	-	-	-	24
1980	-	25	-	-	-	25
1981	-	23	-	-	-	23
1982	-	24	-	-	-	24
1983	-	25	-	-	-	25
1984	-	29	-	-	-	29
1985	-	22	-	-	-	22
1986	-	26	-	-	-	26
1987	-	22	-	-	-	22
1988	-	22	-	-	-	22
1989	3	36	8	-	-	47
1990	-	35	9	-	-	44
1991	3	33	19	-	-	55
1992	5	38	28	-	-	71
1993	9	34	35	-	-	78
1994	16	25	28	-	-	69
1995	15	37	49	-	-	101
1996	14	40	47	-	-	101
1997	15	39	52	-	-	106
1998	16	43	62	-	-	121
1999	4	48	41	-	-	93
2000	4	53	19	-	-	76
2001	6	34	4	-	6	50
2002	-	3	4	7	5	19

**PHYSICAL THERAPY**

CLASS	CERT.	A.S.	B.S.	Entry-Level M.P.T./D.P.T.	Post-Professional M.P.T./Dr.P.T./D.P.T.Sc.	TOTAL
1944	2	-	-	-	-	2
1945	8	-	1	-	-	9
1946	22	-	5	-	-	27
1947	11	-	3	-	-	14
1948	11	-	5	-	-	16
1949	2	-	5	-	-	7
1950	3	-	12	-	-	15
1951	9	-	9	-	-	18
1952	2	-	10	-	-	12
1953	9	-	2	-	-	11
1954	4	-	11	-	-	15
1955	5	-	8	-	-	13
1956	8	-	5	-	-	13
1957	5	-	12	-	-	17
1958	-	-	1	-	-	1
1959	1	-	22	-	-	23
1960	-	-	24	-	-	24
1961	-	-	31	-	-	31
1962	-	-	33	-	-	33
1963	-	-	30	-	-	30
1964	-	-	33	-	-	33
1965	-	-	38	-	-	38
1966	-	-	38	-	-	38
1967	-	-	28	-	-	28
1968	-	-	41	-	-	41
1969	-	-	44	-	-	44
1970	-	-	30	-	-	30
1971	-	-	49	-	-	49
1972	-	-	48	-	-	48
1973	-	-	48	-	-	48
1974	-	-	50	-	-	50
1975	-	-	56	-	-	56
1976	-	-	48	-	-	48
1977	-	-	50	-	-	50
1978	-	-	55	-	-	55
1979	-	-	54	-	-	54
1980	-	-	56	-	-	56
1981	-	-	49	-	-	49
1982	-	-	56	-	-	56
1983	-	-	62	-	-	62
1984	-	-	57	-	-	57
1985	-	-	59	-	-	59
1986	-	-	58	-	-	58
1987	-	-	59	-	-	59
1988	-	-	63	-	-	63
1989	-	-	65	-	-	65
1990	-	22	69	-	-	91
1991	-	17	-	-	-	17
1992	-	32	48	-	-	80
1993	-	48	-	79	-	127
1994	-	58	-	58	-	116
1995	-	62	-	111	-	173
1996	-	62	91	86	-	239
1997	-	64	95	101	6	266
1998	-	64	72	86	1	223
1999	-	76	98	106	5	285
2000	-	54	-	144	2	200
2001	-	-	-	65	18	83
2002	-	-	-	53	29	82

**RADIATION TECHNOLOGY**

CLASS	CERT.	A.S.	B.S.	TOTAL	CLASS	CERT.	A.S.	B.S.	TOTAL
1944	5	-	-	5	1974	6	21	7	34
1945	5	-	-	5	1975	8	19	3	30
1946	4	-	-	4	1976	-	26	1	27
1947	2	-	-	2	1977	19	23	1	43
1948	6	-	-	6	1978	18	28	2	48
1949	6	-	-	6	1979	14	22	4	40
1950	6	-	-	6	1980	11	22	5	38
1951	7	-	-	7	1981	13	25	3	41
1952	7	-	-	7	1982	8	22	2	32
1953	6	-	-	6	1983	19	15	2	36
1954	5	-	-	5	1984	13	16	-	29
1955	9	-	-	9	1985	13	15	5	33
1956	8	-	-	8	1986	15	16	3	34
1957	8	-	-	8	1987	15	15	1	31
1958	5	-	-	5	1988	17	16	5	38
1959	6	-	-	6	1989	14	17	2	33
1960	10	-	-	10	1990	17	16	2	35
1961	4	-	-	4	1991	27	15	6	48
1962	4	-	-	4	1992	19	17	2	38
1963	4	-	-	4	1993	23	24	5	52
1964	3	-	-	3	1994	24	31	3	58
1965	5	-	-	5	1995	24	36	4	64
1966	8	-	-	8	1996	15	-	7	22
1967	6	-	-	6	1997	12	-	2	14
1968	6	2	-	8	1998	30	31	8	69
1969	1	11	-	12	1999	27	21	8	56
1970	1	3	2	6	2000	35	23	3	61
1971	2	10	1	13	2001	-	18	5	23
1972	2	15	2	19	2002	43	19	6	68
1973	6	12	1	19					

**SPEECH-LANGUAGE PATHOLOGY AND AUDIOLOGY**

CLASS	B.S.	CLASS	B.S.
1967	7	1985	12
1968	4	1986	5
1969	4	1987	3
1970	11	1988	13
1971	7	1989	9
1972	9	1990	12
1973	14	1991	7
1974	8	1992	12
1975	11	1993	12
1976	7	1994	9
1977	11	1995	4
1978	8	1996	22
1979	6	1997	14
1980	7	1998	13
1981	8	1999	18
1982	11	2000	14
1983	7	2001	6
1984	11	2002	10

## 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 GRADUATE SCHOOL:** Started in 1954. Accredited through University accreditation.

### THE 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.

**DENTAL HYGIENE:** Started in 1959. Approved by the Commission on Dental Accreditation of the American Dental Association since September 7, 1961.

**DENTISTRY:** Started in 1953. Approved by the Commission on Dental Accreditation of the American Dental Association since May 23, 1957.

**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 Dietetics Technology Program is currently granted accreditation by the Commission on Accreditation for Dietetics Education of the American Dietetics 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.

**ENDODONTICS:** Started in 1967. Approved by the Commission on Dental Accreditation of the American Dental Association since December 1969.

**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.

**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..

**NUCLEAR MEDICINE:** 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.

**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.

**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 Dietetics 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.

**ORAL AND MAXILLOFACIAL SURGERY:** Started in 1978. Approved by the Commission on Dental Accreditation of the American Dental Association since 1981.

**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 1972.

**PERIODONTICS:** Started in 1979. Approved by the Commission on Dental Accreditation of the American Dental Association since December 1972.

**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:** Started in 2000. Provisional accreditation granted October 20, 2000, by the Commission on Accreditation of Allied Health Education Programs (CAAHEP). Accredited March 2002 by the Accreditation Review Commission on Education for the Physician Assistant, Inc. (ARC-PA). (Effective January 1, 2001, CAAHEP was succeeded by ARC-PA).

**PROSTHODONTICS:** Started in 1993. Approved by the Commission on Dental Accreditation of the American Dental Association since February 1995.

**PUBLIC HEALTH:** Started in 1948; reorganized in 1964. Approved by the American Public Health Association June 23, 1967. Currently approved by the Council on Education for Public Health.

**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 in collaboration with the Joint Committee on Accreditation for Respiratory Care Education.

**SPEECH-LANGUAGE PATHOLOGY AND AUDIOLOGY:** Approved by the American Speech-Language-Hearing Association June 1, 1991.

## ACCREDITING AGENCIES

### THE UNIVERSITY

**L**oma Linda University is accredited by WASC.

Accrediting Commission for Senior Colleges and Universities of the Western Association of Schools and Colleges  
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 agencies accredit specific University schools or programs\*:

### GRADUATE SCHOOL

#### 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)  
Email: [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)  
Email: [coamfte@aamft.org](mailto:coamfte@aamft.org)

#### Psychology

American Psychological Association  
750 First Street N. E.  
Washington, DC 20002-4242  
Phone: 202 / 336-5500  
FAX: 202 / 336-5978  
Web site: [www.apa.org](http://www.apa.org)  
Email: [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)  
Email: [info@cswe.org](mailto:info@cswe.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 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)  
Email: [richwalker@coarc.com](mailto:richwalker@coarc.com)

#### Physician Assistant

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)  
Email: [mccartyj@mflclin.edu](mailto:mccartyj@mflclin.edu)

### 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)  
Email: [naaclsinfo@naacls.org](mailto:naaclsinfo@naacls.org)

#### 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)  
Email: [naaclsinfo@naacls.org](mailto:naaclsinfo@naacls.org)

#### 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)  
Email: [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)  
Email: [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)  
The American Dietetic Association  
216 West Jackson Boulevard, 7th floor  
Chicago, IL 60606-6995  
Phone: 800 / 877-1600  
FAX: 312 / 899-4899 or 899-4817  
Web site: [www.eatright.org/CADE](http://www.eatright.org/CADE)  
Email: [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)  
Email: [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)  
Email: see Web site

### Radiation Technology

#### Medical Radiography—A.S.

#### Radiation Therapy Technology—certificate

Joint Review Committee on Education in  
Radiologic Technology  
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  
Web site: [www.caahep.org](http://www.caahep.org)  
Email: [sharonworthing@coarc.com](mailto:sharonworthing@coarc.com)  
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.jrcdms.org](http://www.jrcdms.org)  
Email: [sharonworthing@coarc.com](mailto:sharonworthing@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)  
Email: [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)  
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)  
Email: [licarif@ada.org](mailto:licarif@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)  
Email: [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 PUBLIC HEALTH**

Council on Education for Public Health  
800 Eye St. NW, Suite 202  
Washington, DC 20001-1397  
Phone: 202 / 789-1050  
FAX: 202 / 789-1895  
Web site: [www.ceph.org](http://www.ceph.org)  
Email: [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 / 813-0727  
Web site: [www.nchec.org](http://www.nchec.org)  
Email: [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)  
Email: [rhook1@dhs.ca.gov](mailto:rhook1@dhs.ca.gov)

**Nutrition**

Commission on Accreditation for  
Dietetics Education (CADE)  
The American Dietetic Association  
216 West Jackson Boulevard, 7th floor  
Chicago, IL 60606-6995  
Phone: 800 / 877-1600  
FAX: 312 / 899-4899  
Web site: [www.eatright.org/cade](http://www.eatright.org/cade)  
Email: [education@eatright.org](mailto:education@eatright.org)

**\*All entry-level degrees are accredited by their  
respective professional accrediting associations.**

## THE 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 Jorgensen Learning Resources Center,
- the Jesse Medical Library and Information Center, and
- the Veterans Administration Library Services.

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

### Central library

The Del E. Webb Memorial Library is the central library of Loma Linda University. Its historical roots 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. Then in 1981, a new library building was built from a grant by the Del E. Webb Foundation, 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 2001, the library has a total collection of 410,807 books, bound and current journals/periodicals, and media items (197,303 books; 125,577 bound journals, 1,420 current periodical subscriptions, 349 nonsubscription periodicals; and 84,158 media items).

### 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, access to the internet, and hundreds of online databases, e.g., full-text, automatic, selective dissemination of information (SDI) services; database end-user training programs; library orientations; interlibrary loans; photocopy and pull services; a microcomputer laboratory; a learning service resource center; class-integrated library instruction programs; and services that support distance education and University outreach programs.

### Worldwide access

The Library provides access to other collections worldwide using internet technologies. It also participates in a number of national and regional networks. One of these is 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 IEALC (Inland Empire Academic Library Cooperative) and SIR-CULS (San Bernardino, Inyo, Riverside Counties United Library Services). Membership in these cooperatives gives our 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. In addition to print materials which include rare books, theses, and dissertations, there are microforms, sound recordings, and several thousand photographs. Searchable digitized indexes for various document files are also available via the Library's web site. The collection also includes 14,000 linear feet of archival materials, which include papers of various denominational and University officials, as well as the congressional papers of the Honorable Jerry and Shirley Pettis.

### 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 different variant editions of her works is available on the Library's home page.

# LLU&MC CAMPUS MAP



74  
Geoscience  
Research  
Institute

Security  
25 Dept.

UNIVERSITY AVE.

**LOT G\***  
LLUMC Employee  
Parking Garage

PROSPECT ST.

LOT F  
North\*  
Nelson  
House  
63

LOT F  
West\*  
64  
West Hall  
(SN, SP, TLC,  
GS admin.)

LOT F South\*

← to (215)

# = Medical Center  
amphitheaters

H = Heliports

LOMA LINDA UNIVERSITY  
(not to scale)

LOT X\*\*

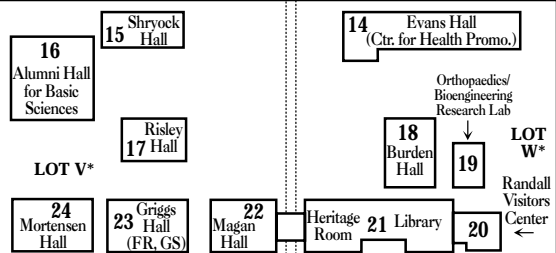


LOT X (unpaved)+

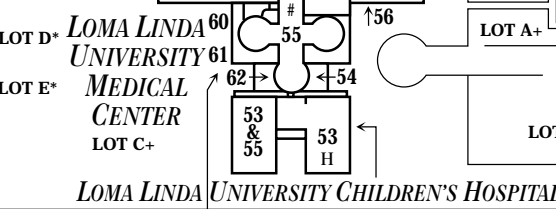
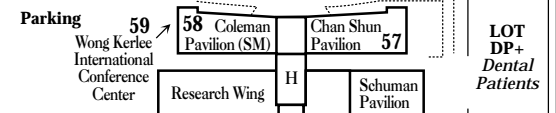
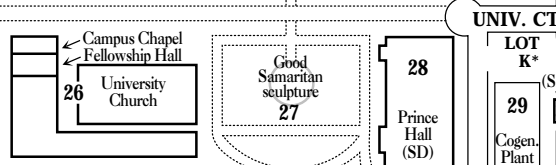
LOT X (paved)\*



STEWART STREET



CAMPUS STREET

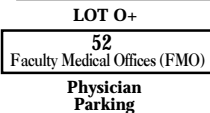


LOMA LINDA UNIVERSITY CHILDREN'S HOSPITAL

BARTON ROAD

60-61 Emergency Dept.  
62 Mail Service

Physician  
Parking



Physician  
Parking

to (10)

ANDERSON STREET

UNIV. CT.

LOT K\*

(SD)

LOT DP+

Dental  
Patients

LOT A+

LOT A+

LOT A+

LOT A+

LOT A+

LOT A+

LOT A+

LOT A+

LOT A+

LOT A+

LOT A+

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LOT A+

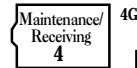
LOT A+

LOT A+

LOT U\*\*

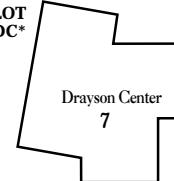


PARKLAND ST.



LOT DC\*

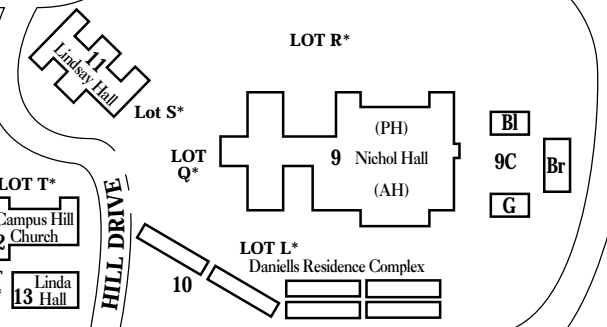
LOT DC\*



LOT DC\*\*

Speech & Hearing Clinic (AH)

STEWART STREET



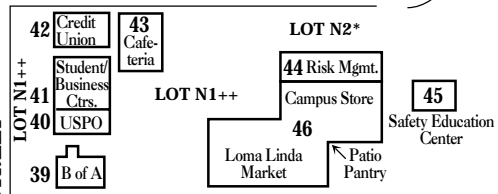
SHEPARDSON ST.

to Child →  
Care Center

LOT N6+  
Employee overflow

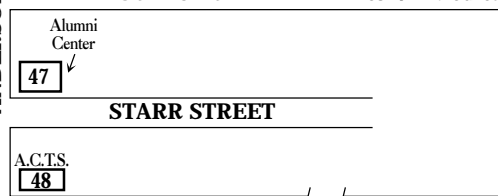
AH=Allied Health Professions  
GS=Graduate School  
PH=Public Health  
SD=Dentistry  
SM=Medicine  
SN=Nursing  
SP=School of Pharmacy  
FR=Faculty of Religion

MOUND STREET



PROSPECT STREET

to VA Medical Center →



STARR STREET

**Index for Lots**

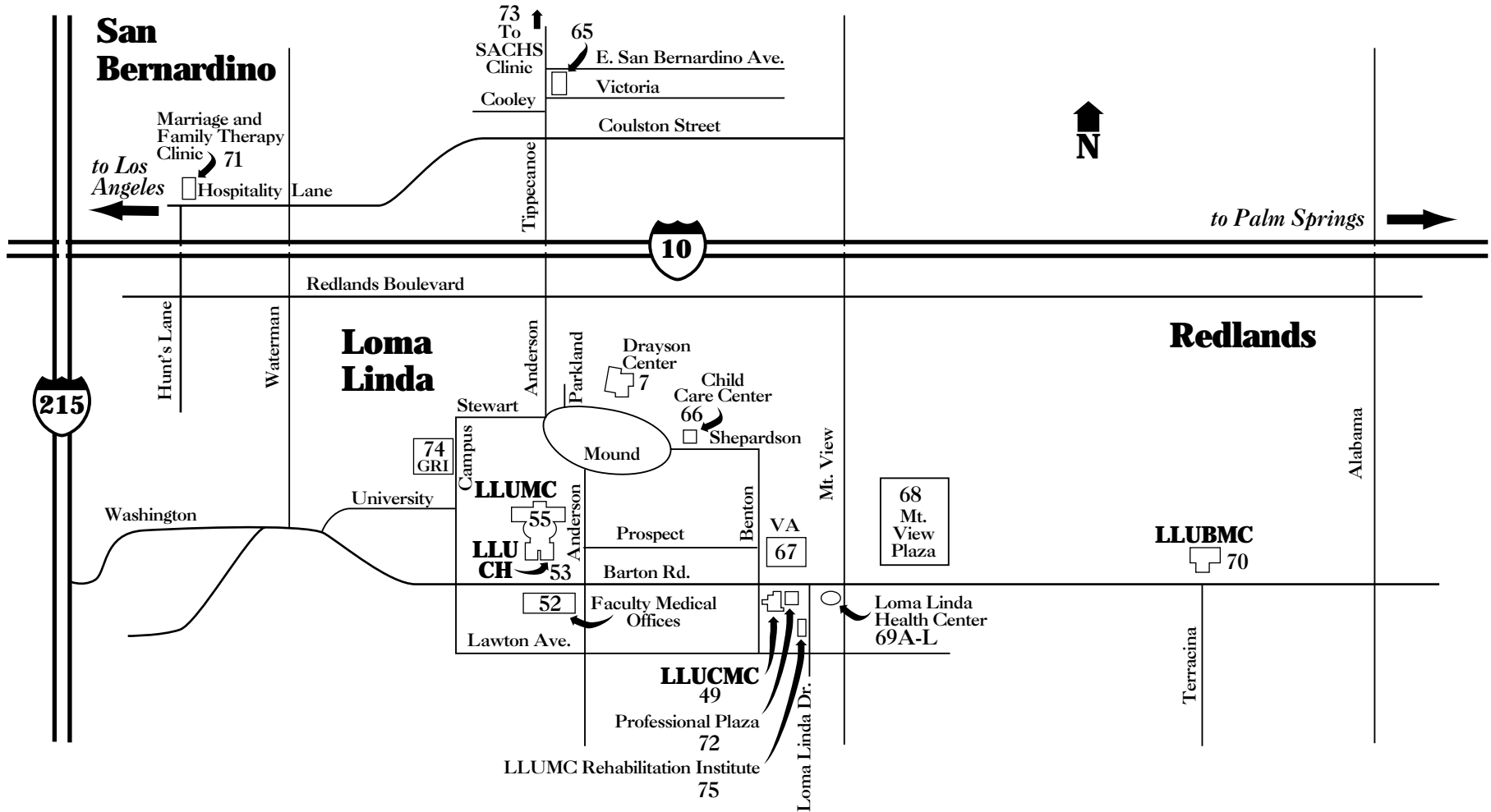
- \*Parking requires permit
- \*\*Parking requires permit except where signs are posted
- +Patient/visitor parking
- ++Patient/visitor parking (time-limited)

← LOMA LINDA UNIVERSITY  
COMMUNITY MEDICAL CENTER

**Area Map  
and numerical legend**

- 1-64 (see Campus Map)
- 65 - Material Supply and Distribution Support Services Center
- 66 - Loma Linda Children's Center
- 67 - Jerry L. Pettis Memorial Veterans Medical Center (VA Hospital)

- 68 - Mountain View Plaza
- 69 - Loma Linda Health Center
- 70 - LLU Behavioral Medicine Center
- 71 - Marriage and Family Therapy Clinic
- 72 - Professional Plaza
- 73 - SACHS Norton Clinic
- 74 - Geoscience Research Institute
- 75 - LLUMC Rehabilitation Institute



**Key to abbreviations and symbols**  
(See also key to Schools on Campus Map)

- X = Nearest cross street  
> = See Area Map  
LLUAHSC = Loma Linda University  
Adventist Health Sciences Center  
LLU= Loma Linda University  
LLUBMC = Behavioral Medicine Center  
LLUCH = Children's Hospital  
LLUCMC = Community Medical Center  
LLUMC = Medical Center

**Campus Map (numerical)**

1. Gentry Gymnasium
2. Media Services (University, MC)
3. Housekeeping (University); Radiation / Hazardous Materials Safety
4. Campus Engineering (maintenance shops); Lock and Key; Campus Receiving (University); 4G=Garage buildings
5. Purchasing (University); Campus Engineering (machine shop)
6. University Printing Services and Design Department; Construction; Architectural Services; Warehouse
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, Centers for Health Research and for Health and Development; School of Allied Health Professions; 9C = Cottages; #60 ("Blue")—Marketing and Retention (AH); #70 ("Brown")—OT Field Work Office (AH); #80 ("Green")—SIMS, Center for Health and Development (PH)
10. Daniels Residence Complex (men; graduate women)
11. Lindsay Hall (women's residence)
12. Campus Hill SDA Church
13. Linda Hall (Campus Hill SDA Church)
14. Evans Hall: Center for Health Promotion; Cutler Amphitheater; Student Health Service
15. Shryock 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. Orthopaedic and bioengineering research labs; Department of Natural Sciences—Ecological Physiology/Marine Biology research labs

20. Randall Visitors Center: Amphitheater; Jorgensen Learning Center
21. University Library; Del E. Webb Memorial: Main library; Ellen G. White Estate Loma Linda Branch Office; Heritage Room; Micro-Systems Support
22. Magan Hall: Administration, LOMA LINDA UNIVERSITY; Faculty Records; Gift Records; Vice chancellors for academic affairs, advancement, public affairs; Special assistants to the chancellor—diversity, global outreach
23. Griggs Hall: Faculty of Religion; Graduate School Departments of Biology, Geology, Marital and Family Therapy, and Social Work
24. Mortensen Hall: Biochemistry; Center for Molecular Biology and Gene Therapy
25. Campus Security; Rideshare
26. University Church; Fellowship Hall; Campus Chapel
27. Good Samaritan sculpture
28. Prince Hall: School of Dentistry
29. Cogeneration Plant (power plant)
30. Advanced Periodontics Education; Dentistry faculty endodontics\*
31. Educational Support Services (SD)
32. Central Building; Psychology (GS)
33. Center for Dental Research; Administrative Information Systems (University), room 208
34. Carlson Wagonlit Travel—University Travel
35. University Arts: Human Resource Management (personnel, payroll, benefits, employee training and orientation); Purchasing (MC); Advanced Life Support Education; Dentistry\*
36. Faculty Dental Offices\*
37. Occupational therapy lab (AH)
- 38A. Grants Management (postaward, University); LLU Foundation Rental Office
- 38B. Research affairs, vice chancellor for
- 38C. Office of Sponsored Research (preaward)
39. Bank of America
40. U. S. Post Office
41. **Upper level:** Business Center; Accounting; Foundation; **Lower level:** Student Services Center—Student Affairs (student life, international student services, off-campus housing, dean of students); Financial Aid; Student Finance / Accounting; Loan Collections; University Records; Administrative Information Systems (University) (room 115)
42. La Loma Credit Union
43. Campus Cafeteria
44. Risk Management
45. Safety Education Center
46. Campus Store (bookstore, camera shop, Apple computer sales and service); Loma Linda Market (Campus Pharmacy, bakery, natural foods); Patio Pantry
47. Alumni Center: Alumni offices; Staff Development; Planned Giving; General Conference liaison
48. A.C.T.S. (emergency relief)
49. LLU COMMUNITY MEDICAL CENTER; Urgent Care

50. Ronald McDonald House
51. University Kidney Center (dialysis)
52. Faculty Medical Offices (FMO\* and SM)
53. LLU CHILDREN'S HOSPITAL: Heliport, H South; Cafeteria; Central Computing (MC)—room B737, room B724
54. Proton Treatment Center
55. LLU MEDICAL CENTER: School of Medicine; Heliport, H North; Lost and Found, B404; Cafeteria; Amphitheaters: Lobby-1506, A512; Transplantation Institute
56. Schuman Pavilion: International Heart Institute
57. Chan Shun Pavilion: Cancer Research Institute
58. Coleman Pavilion: School of Medicine; Medical Affairs (LLUAHSC); Center for Christian Bioethics; Center for Spiritual Life and Wholeness, special assistant to the chancellor—spiritual life and wholeness; Employee health and immunizations, 2nd floor (room 21019)
59. Wong Kerlee International Conference Center
- 60-61. Emergency Department, LLUMC
62. Mail Service (University, MC)
63. Nelson House: Decision Support Services (MC)
64. West Hall: Schools of Nursing and Pharmacy; Graduate School administration; Teaching Learning Center

**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 Shepardson Dr.
67. Veterans Medical Center, Jerry L. Pettis Memorial (VA Hospital), 11201 Benton St. (X Barton Rd.)
68. Mountain View Plaza (X Barton Rd.): Diabetes Treatment Center (MC); Osteoporosis Research Center, LLU administrative office; Radiology Medical Group, administrative office; Hospice (MC); LL Medical Supply (MC); Home Care Services (respiratory, family) (MC); Judkins Library (MC); LLUMC Managed Care Finance; Health Care Patient Business Office (FMO billing); Adventist Health Managed Care
69. Loma Linda Health Center ("*Cape Cod*" buildings), Mountain View Ave. (X Barton Rd.):  
A -11306 **Providence:** LL Community Medical Group\*  
B -11314 **Cambridge:** LLU medical staff administration (BMC, CH, CMC, MC); Compliance Department  
C -11320 **Gloucester: Women's Exercise Fitness Center**  
D -11326 **Worcester:** Special Projects (MC); Physician Referral and Circle of Care  
E -11332 **Westerly:** Medical\*  
F -11354 **Walden:** Medical\*  
G -11360 **Hartford:** LLU Cancer Institute: Cancer Data Center; Administration; Clinical oncology research  
H -11346 **Concord:** Marketing (MC); Medical\*  
I -11368 **Springfield:** LLU Cancer Institute: Region 5 Cancer Surveillance Program; Pharmaceutical research

- J -11374 **Dover:** Psychiatry and Behavioral Medicine (SM)  
K -11382 **Danbury:** Loma Linda Health Pharmacy; Dental\*  
L -11340 **Bridgeport:** LLU Cancer Institute: Cancer Information

**69-72: Counseling and chemical dependency treatment centers (students, employees):**

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.): Crisis hotline; Partial hospitalization (days only); Inpatient
71. Marriage and Family Therapy Clinic, 164 W. Hospitality Lane., Suite 15, (X Hunt's Lane in SB)
72. 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 Street off Tippecanoe)
74. Geoscience Research Institute [of the General Conference of Seventh-day Adventists] (Ortner Building)
75. (East Campus) LLUMC Rehabilitation Institute; Out-patient physical therapy; Orthopaedic research, Tribology laboratory

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**TO COMMUNICATE WITH LLU . . .**

**MAIL:** Loma Linda University  
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dialing from Canada 1/800-548-7114

**Area Code:** 909/

**Switchboard:** 558-1000, 558-4300

<b>Off-campus PHONE:</b>	<b>On-campus PHONE:</b>		<b>Off-campus FAX:</b>	<b>On-campus FAX:</b>
558-4540	44540	<b>Chancellor</b>	558-0242	80242
558-4787	44787	<b>Diversity</b>	558-0140	80140
558-4510	44510	<b>Student Affairs</b>	558-4879	44879
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558-4955	44955	<b>International Student Services</b>	558-4879	44879
558-4520	44520	<b>Student Finance</b>	558-4879	44879
558-4509	44509	<b>Student Financial Aid</b>	558-4879	44879
558-4508	44508	<b>University Records</b>	558-4879	44879
558-8770	88770	<b>Student Health Service</b>	558-0433	80433
558-6028	66028	<b>Student Counseling</b>	558-6090	66090
558-8625	88625	<b>Teaching Learning Center</b>	558-0179	80179
558-6050	66050	<b>Student Assistance Program</b>	558-6051	66051
		<b>Spiritual Counseling</b>		
558-8348	88348	Campus Chaplain/Campus Ministries	---	---
558-4570	44570	University Church	558-4186	44186
809-1049	44270	Campus Hill Church	796-1992	---
335-4275	34275	<b>Crisis Hotline</b>	1-800-752-5999	
793-9333	34008	Behavioral Medicine Center	558-9262	34262
		<b>Faculty of Religion</b>		
558-4536	44536	Dean	558-4856	44856
558-8434	88434	Biomedical and Clinical Ethics	558-4856	44856
558-4956	44956	Center for Christian Bioethics	558-0336	80336
558-4956	44956	Center for Christian Bioethics	558-0336	80336
558-8433	88433	Clinical Ministry	558-4856	44856
558-1000	ext. 43983	Center for Spiritual Life and Wholeness	558-0336	80336
558-4536	44536	Religion and the Sciences	558-4856	44856

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**Allied Health Professions**

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	84239-attn. OCTH
558-4948	44948	Occupational Therapy Assistant	558-0239	84239-attn. OCTA
558-4632	44632	Physical Therapy	558-4291	44291-attn. PPTH
558-4634	44634	Physical Therapist Assistant	558-4291	44291-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

<b>Off-campus PHONE:</b>	<b>On-campus PHONE:</b>		<b>Off-campus FAX:</b>	<b>On-campus FAX:</b>
558-4222	1616	<b>Dentistry</b>		
558-4621	44621	Admissions	558-4211	44211
558-4683	44683	Dean	558-0483	80483
558-8624	88624	Advanced Programs	558-0122	80122
558-4601	44601	Dentistry Program	558-4211	44211
558-4631	44631	Dental Hygiene Program	558-0313	80313
558-4669	44669	International Dentist Program	558-0133	80133
558-4790	44790	SD Student Affairs	558-4211	44211
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558-4529	44529	Admissions	558-4859	44859
558-4528	44528	Dean	558-0441	80441
		<b>Medicine</b>		
558-4462	44462	Admissions	558-4146	44146
558-4467	44467	Dean	558-0359	80359
558-4481	44481		558-4146	44146
		<b>Nursing</b>		
558-1000	ext. 44360	Admissions	558-4134	44134
558-4923	44923	Dean	558-0175	80175
558-4517	44517	Graduate	558-0225	80225
558-8061	88061	Undergraduate	558-0719	80719
558-8060	88060	International Nursing	558-0643	80643
558-7122	87122		558-0224	80224
		<b>Pharmacy</b>		
558-4529	44529	Admissions	558-4859	44859
558-4528	44528	Dean	558-0441	80441
		<b>Public Health</b>		
558-4546	44546	Admissions/Academic Records	558-4087	44087
558-4694	44694	Dean	558-4087	44087 attn. Admissions
558-4578	44578	Environmental and Occupational Health	558-4087	44087 attn. Dean
558-8750	88750	Epidemiology and Biostatistics	558-0493	84493 attn. ENVH
558-8750	44590	Health Administration	558-0126	80126 attn. EPDM/STAT
558-4573	44573	Health Promotion and Education	558-0469	80469 attn. HADM
558-4575	44575	International Health	558-0471	80471 attn. HPRO
558-4902	44902	Maternal and Child Health	558-0389	80389 attn. INTH
558-4575	44575	Nutrition	558-0471	80471 attn. MCH
558-4598	44598	Preventive Medicine Residency Program	558-4095	44095 attn. NUTR
558-4918	44918		558-0630	80630 attn. PMR

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 <b><i>The Schools:</i></b>	
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