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2003 - 2004 Bulletin

Loma Linda University

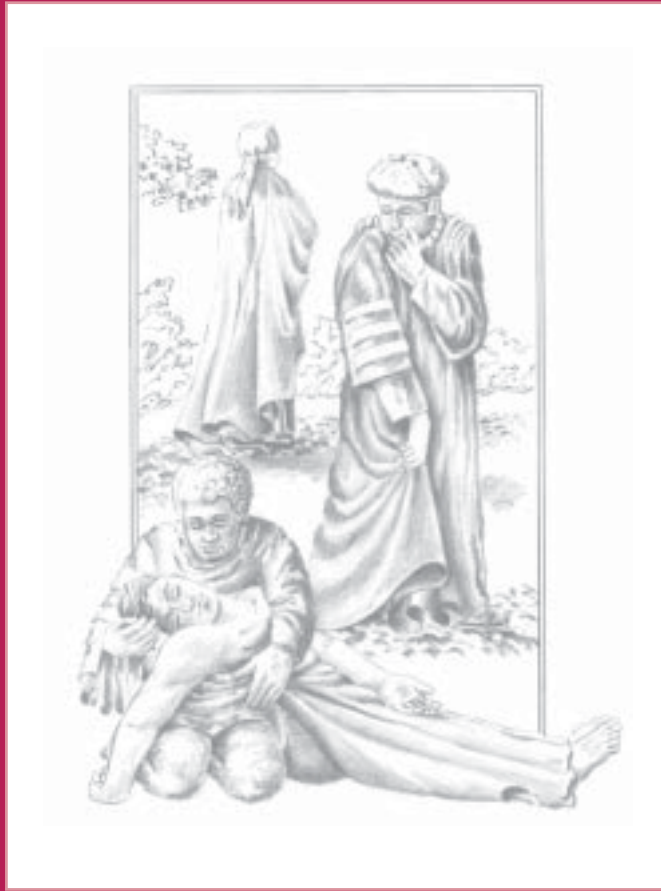
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LOMA LINDA UNIVERSITY



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

2003-2004

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effective beginning Summer Quarter 2003.

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

Loma 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, School of Pharmacy, 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, Pharmacy, 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, 2003) indicate that the core of the combined faculties consists of 1,071 full-time teachers. Part-time and voluntary teachers, largely clinicians in the professional curricula, bring the total to 2,565. As of Autumn Quarter 2002, students from 93 countries are represented in the enrollment of 3,520.

PHILOSOPHY

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

God is the creator and sustainer of the universe.

Mankind’s fullest development entails a growing understanding of the individual in relation 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

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

Educating ethical and proficient Christian health professionals and scholars through instruction, example, and the pursuit of truth;

Expanding knowledge through research in the biological, behavioral, physical, and environmental sciences and applying this knowledge to health and disease;

Providing comprehensive, competent, and compassionate health care for the whole person through faculty, students, and alumni.

In harmony with our heritage and global mission:

We encourage personal and professional growth through integrated development of the intellectual, physical, social, and spiritual dimensions of each member of the University community and those we serve.

We promote an environment that reflects and builds respect for the diversity of humanity as ordained by God.

We seek to serve a worldwide community by promoting healthful living, caring for the sick, and sharing the good news of a loving God.

To achieve our mission we are committed to:

OUR STUDENTS

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

OUR FACULTY, STAFF, AND ADMINISTRATION

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

OUR PATIENTS AND OTHERS WE SERVE

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

OUR GOD AND OUR CHURCH

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

Nondiscrimination Policy

The 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

The 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 Rieley (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

2003

JUNE

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

MAY 26
MAY 26

SUMMER SESSIONS 2003

Registration for Cytotechnology certificate classes
Instruction begins for Cytotechnology certificate classes
(MAY 27–AUG 15)

2–JUN 20
2–AUG 22
9–SEP 19
16

General registration
PA Program 2nd year summer clerkships
Nutrition and Dietetics summer practicum
Student/Family Welcome for MPT/DPT, PMPT, PTA, MOT
(Randall Visitors Center, 6:30 p.m.)

18

Instruction begins for DPT, PMPT, PTA **Juniors**, and MOT **Juniors**

23

Last day to obtain financial clearance for standard term

23

Instruction begins

23–JUL 29

First five-week session: 26 days

23–SEP 5

Eleven-week session: 53 days (including examinations)

23–SEP 19

PA Program 1st year summer sessions

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

28

Instruction begins for MPT/DPT and MOT **Seniors**

30–SEP 5

Second five-week session: 27 days

One week after
course begins

Last day to enter a course or change from audit to credit/
credit to audit

One week after
course begins

Last day to withdraw with no record of course registration on
transcript

One week before
end of course

Last day to withdraw with a W grade

One week before
end of course

Last day to submit S/U petition

AUGUST

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

4–11

Registration for Clinical Laboratory Science **Seniors**

11

Orientation for Clinical Laboratory Science **Seniors**

12

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

17–18

Orientation for incoming Physician Assistant students

18–SEP 12

Nutrition and Dietetics prerequisite block classes

18

Registration for Cytotechnology certificate

18

Instruction begins for Cytotechnology certificate

18

Orientation for Clinical Laboratory Science **Juniors**

19

Registration for Clinical Laboratory Science **Juniors**

19

Instruction begins for Clinical Laboratory Science **Juniors**

The Calendar

2003

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				

1	Labor Day recess
5	Summer Quarter ends
	POSTSUMMER SESSIONS 2003
8	Instruction begins (unless otherwise noted in class schedule)
2-19	Registration for Autumn Quarter
3-20	Fourteen-day session: Nutrition and Dietetics
8-19	Ten-day session
10	Grades due from faculty
11	PTA Summer Quarter ends
14-OCT 14	Hispanic Heritage Month
22	Student/Family Welcome (Campus Hill Church, 5:45 p.m.)
22	Last day to obtain financial clearance for standard term
22	Instruction begins for AH, FR, GS, SD, SN
23	University Fall Faculty Colloquium
23	SAHP student orientation (Randall Visitors Center, 8 a.m.-noon)
	AUTUMN QUARTER 2003
22-DEC 12	PA program, 2 nd year Autumn Quarter clerkships
22-DEC 12	Autumn Quarter total days (including examinations): 57
30	Last day to enter a course change from audit to credit/credit to audit

OCTOBER

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

3	SAHP stampede event
5	Welcome-back party
5	HALL banquet
6	Diversity new-student orientation
7	Last day to withdraw with no record of course registration on transcript
9	Physician Assistant jacketing ceremony
9	Campus/Chamber of Commerce Connection
13-17	Fall Week of Devotion
15	ALAS chapel
22	University convocation
25-26	ALAS student retreat
26	Healthy neighborhoods 5K and 10K race and Norton community celebration

NOVEMBER

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

3	Registration for Cytotechnology (Winter Quarter)
3	Instruction begins for Cytotechnology
5	SAHP counselor open house (Drayson Center, 4:15 p.m.)
7-8	Annual BALL/BHPSA student retreat
10	Term II practicum begins for Clinical Laboratory Science Seniors
24	Last day to withdraw with a W grade or to submit S/U petition
26-30	Thanksgiving recess

The Calendar

2003

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			

1	Instruction resumes
5	Christmas tree lighting
1-24	Registration for Winter Quarter
8-12	Final examinations
12	Autumn Quarter ends
13-JAN 4	Christmas recess: 23 days
17	Grades due from faculty
22	Instruction begins for Radiation Technology: Medical Radiography (A.S. degree, 2 nd year); Radiation Therapy Technology; Diagnostic Medical Sonography; Nuclear Medicine Technology; Special Imaging Technology

2004

JANUARY

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

5-MAR 19	WINTER QUARTER 2003
5	Winter Quarter total days (including examinations): 53
5	Instruction begins (all schools, unless otherwise noted)
5	Instruction begins for Radiation Technology B.S. degree; and for Medical Radiography A.S. degree, 1 st year
5	Last day to obtain financial clearance
5-26	PA Program, 2 nd year Winter Quarter clerkships
12-17	Mission Emphasis Week
13	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
19	Martin Luther King, Jr., Day recess
20	Last day to withdraw with no record of course registration on transcript
20-23	Student Week of Spiritual Emphasis

FEBRUARY

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

1-29	Black History Month
4	BHPSA chapel
16	Presidents' Day recess
17	Registration for Cytotechnology
17	Instruction begins for Cytotechnology

MARCH

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

1	Last day to withdraw with a W grade or to submit S/U petition
1-26	Registration for Spring Quarter
4	Term III practicum begins for Clinical Laboratory Science
	Seniors
15-19	Final examinations
19	Winter Quarter ends
20-28	Spring recess: 9 days
24	Grades due from faculty
25	PTA Winter Quarter ends
27	SAHP faculty and staff retreat
27-APR 4	PA program, 2 nd year Spring Quarter recess
	SPRING QUARTER 2004
29-JUN 11	Spring Quarter total days (including examinations): 54
29	Last day to obtain financial clearance
29	Instruction begins (unless otherwise noted in class schedule)

The Calendar

2004

APRIL

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

5-9	Spring Week of Devotion
5-MAY 28	PA Program 2 nd year Spring Quarter clerkships
6	Last day to enter a course or change from audit to credit/credit to audit
13	Last day to withdraw with no record of course registration on transcript record
24-27	SAHP alumni weekend

MAY

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					

15	Diversity Consecration Scxservice
24	Registration for Cytotechnology certificate
24	Instruction begins for Cytotechnology certificate
24	Last day to withdraw with a W grade or to submit S/U petition
31	Memorial Day recess

JUNE

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

2-18	Registration for summer session
7-11	Final examinations
7-AUG 27	PA program, 2 nd year clinical rotations
11	<i>Focus on Graduates</i> Vespers: AH, GS, PH, SN
11	Spring Quarter ends
12	Baccalaureate: AH, GS, PH, SN
12	Dietetics Pinning Service
13	Occupational Therapy and Occupational Therapy Assistant Pinning Service
13	Conferring of Degrees: AH, GS, PH, SN
16	Grades due from faculty
	SUMMER SESSIONS 2004
21-SEP 24	PA program, 1 st year summer session
21-JUL 27	First five-week summer session
21-SEP 3	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

5	Independence Day recess
28-SEP 3	Second five-week summer session

AUGUST

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

16	Registration for Cytotechnology
16	Instruction begins for Cytotechnology

SEPTEMBER

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

6
7-24

27-DEC 10

POSTSUMMER SESSIONS 2004

Labor Day recess
Total days of instruction: 15

AUTUMN QUARTER 2004

Total days of instruction (including examinations): 52

OCTOBER

S	M	T	W	T	F	S
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17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

3 SAHP stampede event



Welcome!

Emmalein Dharmaraj speaks for everyone here at the School of Allied Health Professions. 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



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

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

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

A handwritten signature in black ink that reads "Craig R. Jackson". The signature is written in a cursive, flowing style.

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

School Foundations

The School of Allied Health Professions was established in 1966 (under the name School of Health Related Professions, 1966-1971) to consolidate the administration of individual curricula initiated 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; polysomnography, 2002; radiologist assistant, 2003. The curriculum in speech-language pathology and audiology, initiated in 1965 under the auspices of the College of Arts and Sciences of La Sierra University (formerly Loma Linda University, La Sierra campus), was transferred to the School of Allied Health Professions in 1987. Particulars governing each program are detailed in the departments in division III of this BULLETIN.



Being honored at the annual Awards Chapel with the American Medical Response Scholarship award for excellence in clinical practice of emergency medical services and outstanding academic achievement, winner Anthony Yvanovich—Emergency Medical Care, Bachelor of Science degree student—receives his plaque and gift from Ehren Ngo, program director.

Mission and Goals

OUR MISSION

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

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

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

OUR GOALS

The goals of the School of Allied Health Professions are 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.

Helen Greenwood, director of admission; and her staff—
(standing) Shirley Sing,
(seated) Emmalein Dharmaraj,
and Leah Natividad-Beck.



General Information

ACCREDITATION

The 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

The 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

The 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

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

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

Loma Linda University is committed to equal opportunity and does not discriminate against qualified persons on the basis of handicap, 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 \$60 application fee.
2. Request that transcripts of all college course work be sent to the School. High school transcripts are required of all applicants in order to verify graduation and completion of high school mathematics.
3. Upon receipt of the notice of acceptance, return the required deposit and the card provided to confirm acceptance.
4. Provide health records or certificates, as required.

Applicant's records

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

ENTRANCE REQUIREMENTS**Subject/diploma requirements**

High school and college subject requirements for each program are outlined in the respective 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

It is Loma Linda University's policy to comply fully with the provisions of the American Disabilities Act. The School of Allied health Professions is committed to providing education, including support services and reasonable accommodations for disabilities, to qualified applicants. A student may apply for accommodation for any disability by obtaining a form provided for this purpose from the office of the Dean. The completed form and required supporting documentation need to be delivered to the Office of the Dean for evaluation with appropriate University entities. Appropriate and reasonable accommodation will be provided as necessary.

Pre-entrance health requirements/Immunizations

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

New students are required to have certain immunizations and tests before registration. Forms to document the required immunizations are provided for the physician in the acceptance packet sent to the student by the School. In order to avoid having a hold placed on the registration packet, the student is encouraged to return the documentation forms in the provided envelope to Student Health Service *no later than six weeks prior to the beginning of classes*.

Accepted students will be asked to file evidence of having had the following immunizations and tests:

- MMRs—measles (rubeola), mumps, German measles (rubella) (or provide proof of two previous MMRs)
- PPD (TB) skin test
- Tetanus/Diphtheria booster
- Chicken pox blood test and/or immunization:
If no known history of chicken pox, then student may choose blood test (which may reveal pre-existing immunity) and/or immunization (if no prior immunity).

Hepatitis-B vaccination series

Students who know themselves to have had hepatitis-B in the past should employ extra protection when involved in direct patient care and may request a modified curriculum, if necessary. This series of three vaccinations may be completed at this University, even if it was begun elsewhere.

For further information, consult the *Student Handbook*, Section V—University Policies: Communicable disease transmission prevention policy—and the Student Health Service office, extension 88770.

If a returning student is assigned to a clinical facility that requires a tuberculosis skin test, then the student is required to have the test within the six months before the assignment begins.

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 (non-U.S. citizens and non-U.S. permanent residents) must meet all admissions requirements for the chosen program, provide suitable recommendations, meet minimum pre-entrance examination requirements, furnish English evaluations of all official foreign transcripts and credentials, and give evidence of their ability to meet estimated living expenses and all financial obligations to the University during their program.

English competency requirements

Prior to admission and regardless of nationality or citizenship, an applicant whose native language is not English is required to pass either the Michigan Test of English Language Proficiency (MTELP) or the three ETS exams: Test of English as a Foreign Language (TOEFL), Test of Spoken English (TSE), and Test of Written English (TWE). If satisfactory results are not achieved on the tests, remedial course work should be taken and the appropriate test repeated until a satisfactory score is achieved. A personal interview is also encouraged to verify acceptable verbal and written skills.

The minimum MTELP requirements are as follows: undergraduate, a score at the 90th percentile; graduate humanities and social sciences, 90th percentile; graduate science, 85th percentile; professional graduate, 90th percentile.

The minimum TOEFL requirements are as follows: for clinical programs, a minimum score of 550 on the paper-based examination or 213 on the computer-based examination. For non-clinical programs, a minimum score of 173 on the computer-based examination is required, with the goal of a 213 score by graduation. It is recommended that applicants with scores below these minimums complete an English-as-a-second-language (ESL) program and repeat the examination until a satisfactory score is achieved.

The Admissions Office of the School of Allied Health Professions reserves the right to waive or to require any or all of the above English competency examinations.

Pre-entrance examination results

Official pre-entrance examination results, as required by each program (e.g., TOEFL results),

should be sent directly to the Admissions Office of the School of Allied Health Professions.

Foreign transcripts and credentials

Official foreign degrees, professional credentials, and educational transcripts (or grade sheets or grade reports) must be sent to a National Association of Credential Evaluation Services, Inc.-approved evaluation center. The center reports the evaluation results directly to the Admissions Office of the School of Allied Health Professions.

Finances and employment

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

United States immigration regulations require a prospective student to document his/her financial resources for tuition, fees, and living expenses. For international students, on-campus employment is allowed but limited by visa regulations. For example, for F-1 and J-1 students, employment is limited to a maximum of twenty hours per week while school is in session. Scholarships, assistantships, and living stipends are rarely available at Loma Linda University because it is a small, private university (i.e., not supported by the U.S. or California state government but rather is church sponsored). Employment plans require approval by a designated school official in International Student Services.

VISAS

F-1 student visas

Loma Linda University is authorized by the U.S. Department of Homeland Security to issue F-1 visa applications (i.e., I-20 forms). The F-1 student visa is the choice for most international students attending Loma Linda University. This visa allows some nondegree study (e.g., certificates, preceptorships, and English-as-a-second-language studies). Degree-earning students are subject to study-load requirements and are allowed limited on-campus employment. The I-20 is issued after a student has been accepted into a program, has paid the advance deposit, and has documented his/her financial plan for the chosen program. Contact International Student Services at (909) 558-4995 for further information.

J exchange-visitors visas

Loma Linda University has an Exchange Visitor Program that is approved by the U.S. Department of State. This J-visa exchange program is authorized to sponsor degree-earning students, nondegree (continuing education) short-term scholars, visiting professors, and research scholars. The J-visa form, DS-2019, is issued after

an exchange visitor has been accepted into a program, scholar position, or professor position; and has documented his/her financial plan (including health insurance for J-1 and for J-2 dependents) for the chosen program.

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

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

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

Other visas

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

Transfer Students

International students currently attending other schools in the U.S. who have either an I-20 or a DS-2019 must do a school-to-school transfer. The timing of a transfer is critical for maintaining status; so it is important to consult with an international adviser as soon as the acceptance letter is received.

Study load

Both the F and J student-visa regulations require the successful completion of a full study load during each quarter of each academic year (as defined by each program). A minimum of 12 units per quarter is usually considered full time for an undergraduate program and 8 units per quarter for a graduate program. A reduced study load, in any quarter, requires the prior approval Exchange Visitor Program of a designated school official in International Student Services.

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. A B.S. degree in radiation technology and a certificate in nuclear medicine are offered in Fresno, California.

The School also operates an on-line program, Health Information Technology Progression, which leads to a B.S. degree in health information administration.

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 student 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 in accordance with the grievance procedures set forth in the *Student Handbook*. Subsequent to a student's filing 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 gender, 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.

Loma Linda University offers opportunities for students to complement their formal learning through participation in a wide variety of recreational, cultural, and other activities which can enrich their group interaction and leadership experiences, increase their interests in fields outside their profession, develop their 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 social, intellectual, physical, emotional, and spiritual 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).

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. Student Assistance Program 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. Clinicians in the program will not release information without the written consent of the student, with the exception of matters that fall under mandatory reporting laws.

Loma Linda Student Assistance Program, the only nationally accredited student assistance program in California, has provided state-of-the-art services to students since it was established in 1990.

Appointments may be scheduled during office hours (on-campus extension—66050; off-campus telephone—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. The program is located at:

11360 Mountain View Avenue
Hartford Building, Suite A
Loma Linda, CA 92354.

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 regarding sexual harassment and the sexual standards policy can be found in the *2002 Loma Linda University Student Handbook*, Section V, University Policies.

OFF-CAMPUS CRISIS INTERVENTION

Rape Crisis Center and child-abuse intervention helpline: San Bernardino and Riverside counties

For students and employees who prefer anonymity, San Bernardino and Riverside counties offer intervention for victims of sexual assault and in child-abuse situations:

909-885-8884 . . . for San Bernardino county
909-686-7273 . . . for Riverside county.

Suicide and crisis help-lines for San Bernardino and Riverside counties

For suicide-intervention and other crisis hot-lines, San Bernardino and Riverside counties offer Helpline Access through these phone numbers:
800-832-9119 . . . for San Bernardino county
909-686-4357 . . . for Riverside county.

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.

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, Loma Linda University's recreation and wellness center, provides state-of-the-art fitness facilities. The center includes a 21,000-square-foot multipurpose gymnasium, which may accommodate three full-sized basketball courts or five volleyball courts or nine badminton courts. Circling the gymnasium's inside perimeter is an elevated, rubberized, three-lane running track. The facility also includes five racquetball courts with viewing areas, and fully equipped men's and women's locker rooms. Aerobics studios and cardiovascular and fitness areas are equipped for strength training, sports conditioning, body building, and power lifting. A 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.

The Student Health Plan covers prescriptions when the Advance PCS prescription benefit services card is used. At Loma Linda University (LLU) network pharmacies the student co-pay for a 30-day supply per prescription is \$15.00 for generic or \$30.00 for brand-name. At non-LLU

Advance PCS pharmacies, the student co-pay for a 30-day supply per prescription is \$25.00 for generic and \$40.00 for brand-name. The Student Health Plan prescription co-pay is limited to \$2,500.00 per plan year.

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

MALPRACTICE COVERAGE

Students have 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,
- 21 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; in the *Student Handbook*; 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. Vehicles used by students 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, or other recreational or illegal drugs; any use of a nonprescription

mood-altering substance that impairs the appropriate functioning of the student; or any misuse of a prescription or nonprescription drug. Also, possession of an illegal drug may be cause for dismissal. The 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, relapse prevention, confidentiality, and discipline—see the Loma Linda University *Student Handbook 2002*, Section V, University Policies: Alcohol, controlled substances, and tobacco policy.

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.

Employment for international students

International students must obtain written authorization from International Student Services **before** accepting **any on-campus** employment. Before employment begins, **all off-campus** employment requires a work permit issued by the Bureau of Citizenship and Immigration Services. International students must limit their employment to twenty hours or less per week while registered for courses and while classes are in session during three of four quarters in an academic year. Regulations allow full-time work (forty hours or less per week) during school breaks and summer vacations (if students' programs allow summer quarters off). If international students have any questions, please telephone International Students Services at (909) 558-4955.

Policies and General Regulations

Students 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

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

ACADEMIC INTEGRITY

Acts 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.

Non-LLU 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 on the student's total load as eligible for financial-aid and loan-deferment purposes.

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

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

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:

- 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.
- A joking or casual attitude toward illness and medical treatment should not be displayed since it may seem uncaring and be disturbing to those who are ill and suffering, as well as to the family members.
- Student and staff behavior in the professional situation may be the deciding influence for or against Christian beliefs, values, and a health-enhancing lifestyle.

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 transitional 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 another baccalaureate degree would be classified as a sophomore while taking sophomore-level courses, etc.).

Students enrolled in block programs are classified according to the level of the block in which they are enrolled (e.g., master's—1st, 2nd, or 3rd year; 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 examination 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 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 session 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 then reports the I notation on the grade-report form, as well as the grade the student will receive if the deficiency is not removed within the time limit. The petition form is then filed with the Office of University Records, along with the grade-report form.

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

IP 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 is 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 apply to 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; 3.0 for the Doctor of Physical Therapy) 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 and/or 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 **American Medical Response (AMR) Scholarship** is given to a current or past employee of AMR who demonstrates excellence in the clinical practice of emergency medical service (EMS) and outstanding academic achievement in the Emergency Medical Care Program.

The **CPS Scholarship for Clinical Excellence in Respiratory Care** is given to a student who demonstrates exceptional clinical skills and knowledge in the care of respiratory patients.

The **Emergency Medical Care Alumni Scholarship Award** is presented to a student who has shown exceptional quality of work in the Emergency Medical Care Program and related projects, with contributions to the Emergency Medical Care community through acts of diversity, service, or volunteerism.

The **Faculty Award** is presented to a student who has shown promise of outstanding professional achievement and whose performance is in harmony with the objectives and goals of the University.

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

The **PA Faculty Award** is presented to a 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.

The **William von Pohle Memorial Respiratory Care Clinical Excellence Award** is given each year to the respiratory care student in his/her senior year who demonstrates excellence in clinical practice and an attitude consistent with the mission of Loma Linda University.

CLINICAL LABORATORY SCIENCE

The **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 who intend to pursue a career in the area of medical technology or cytotechnology. Selection is based on recommendation of the faculty.

The **Marlene Ota Scholarship** is awarded to a cytotechnology student who has demonstrated integrity, leadership, and academic excellence.

The **Moncrieff Scholarship Award** is presented annually to a clinical laboratory science student who has demonstrated superior scholarship; professional dedication; financial need; and such personal attributes as dependability, integrity, and initiative.

The **Walsch-Loock Scholarship Award** is presented annually to a clinical laboratory science student on the basis of scholarship, promise of professional achievement, and financial need.

HEALTH INFORMATION MANAGEMENT

In the interest of promoting student involvement in the international mission of Loma Linda University, the **Audrey Shaffer Endowment** provides travel expenses for student clinical and affiliation experiences in health care facilities outside the United States. Candidates must demonstrate academic excellence and leadership qualities. Recommendations from department faculty and students are required.

The **Faculty Award** is presented to students who have shown promise of leadership, scholarship, and potential contribution to their chosen profession. One award is given annually to students graduating from the programs in health information administration and health information systems.

The **Health Information Management Student Awards** are given by classmates to the graduating students who have shown promise of leadership, scholarship, and potential contribution to their chosen profession. One award is given annually to students graduating from the programs in health information administration and health information systems.

The **Margaret B. Jackson Scholarship Award** is presented by the department to a senior on the basis of scholarship, promise of outstanding professional achievement, and financial need.

The **Sally Jo Davidian Scholarship** is presented to a student who demonstrates professionalism, leadership potential, scholastic achievement, and financial need. Preference is given to single mothers returning to college.

The **Smart Corporation Scholarship Award** is presented to a 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 Master of Occupational Therapy degree 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 Master of Occupational Therapy degree 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

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

GENERAL PRACTICES

The 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 or 1-888-442-4551. 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 (2003-2004)
(Subject to change by Board of Trustees action)

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

Tuition information: by department

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

1	2	3	4
CONJOINT—ALLIED HEALTH PROFESSIONS / GRADUATE SCHOOL			

Rehabilitation Science—Doctor of Philosophy			
	24	\$10,680	

CARDIOPULMONARY SCIENCES

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

JR	37	\$13,209
SR	37	\$13,209

CEMSER—Center for EMS Education and Research
(contact CEMSER department for instructor- and certificate-program tuition information)

Physician Assistant—Master of Physician Assistant

1	56	\$24,920
2	50	\$22,250
3	12	\$ 5,340

Polysomnography—Certificate

(contact department for tuition information)

Respiratory Care—Certificate

1	45	\$16,065
2	36	\$12,852

Respiratory Care—Bachelor of Science

JR	52	\$18,564
SR	59	\$21,063

Respiratory Care—Postprofessional Bachelor of Science

New	51	\$18,207
Cont.	4	\$ 1,428

CLINICAL LABORATORY SCIENCE

Phlebotomy—Certificate

3	\$265 per unit (\$795 certificate)
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Cytotechnology—Certificate; Bachelor of Science

1	48	\$17,136	Certificate
2	16	\$ 5,712	Certificate
JR	48	\$17,136	B.S.
SR	56	\$19,992	B.S.

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

JR	62	\$22,134	
SR	62	\$22,134	Track A, B, C

HEALTH INFORMATION MANAGEMENT

Health Information Systems—Master of Health Information Systems

1	37	\$16,465	full-time
2	17	\$ 7,565	full-time
1	18	\$ 8,010	part-time
2	25	\$11,125	part-time
3	11	\$ 4,895	part-time

Health Information Systems—Post-Master's Certificate

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

1 2 3 4
Health Information Administration—Certificate;
Bachelor of Science

JR	52	\$18,564	
SR	48	\$17,136	
Part-time: units and tuition vary.			

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

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

Coding Specialist—Certificate

1	10	\$ 1,733	
2	13	\$ 2,253	
3	6	\$ 1,040	

NUTRITION AND DIETETICS

Dietetic Technology—Associate in Science

Soph	52.5	\$14,018	
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Dietetic Technology—Certificate

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

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

JR	59.5	\$21,242	B.S.
SR	45.5	\$16,244	B.S.
Cert	Units and tuition vary depending upon units transferred into Loma Linda University		

OCCUPATIONAL THERAPY

Occupational Therapy Assistant—Associate in Arts

1	51	\$13,617	
2	6	\$ 1,602	

Occupational Therapy—

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

Entry-Level M.O.T.

JR	69	\$24,633	
SR	44	\$15,708	
Grad	36	\$12,852	
JR	65	\$23,205	Track
SR	42	\$14,994	Track
Grad	36	\$12,852	Track

Progression M.O.T.

(applies only to graduated LLU OTA students)

58	\$20,706	
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Postprofessional M.O.T.

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

1 2 3 4
PHYSICAL THERAPY

Physical Therapist Assistant—Associate in Science

1	57	\$15,219	regular
2	6	\$ 1,602	regular
(Two-year track program varies)			

Physical Therapy—

Entry-Level Master of Physical Therapy.; Progression Master of Physical Therapy; Postprofessional Master of Physical Therapy

Entry-Level M.P.T.		
1	72	\$25,704
2	62.5	\$22,313
3	35.5	\$12,674

Progression M.P.T.		
1	80	\$28,560
2	64.5	\$23,026
3	8	\$ 2,856

Postprofessional M.P.T.		
1	36	\$16,020
2	9	\$ 4,005

Physical Therapy—

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

Entry-Level D.P.T.		
1	83	\$30,959
2	68.5	\$25,551
3	35.5	\$13,242
4	5	\$ 1,865

Postprofessional D.P.T.		
1	36	\$16,020
2	9	\$ 4,005

Postprofessional D.P.T.Sc.		
1	36	\$16,020
2	9	\$ 4,005

RADIATION TECHNOLOGY

Medical Radiography—Associate in Science

New	40	\$10,680
Cont	15	\$ 4,005

Radiation Sciences—Bachelor of Science

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

Radiation Therapy Technology—Bachelor of Science; Certificate

New	27	\$12,015
Cont	2	\$ 890

1 2 3 4
**Radiologist Assistant—Bachelor of Science;
 Bachelor of Science Certificate**

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

Diagnostic Medical Sonography—Certificate

New	17	\$ 7,565	Track 1
Cont 1	19	\$ 8,455	Track 1
Cont 2	2	\$ 890	Track 1
New	22	\$ 9,790	Track 2
Cont	1	\$ 445	Track 2
Cont 2	6	\$ 2,225	Track 2

Nuclear Medicine Technology—Certificate

New	15	\$ 6,675
Cont	3	\$ 1,335

Special Imaging Technology: CT/MRI Certificate

New	18	\$ 8,010
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**SPEECH-LANGUAGE PATHOLOGY AND
 AUDIOLOGY**

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

51	\$18,207
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**Speech-Language Pathology Assistant—Associate
 in Science**

(contact department for tuition information)

**Speech-Language Pathology and Audiology—
 Bachelor of Science**

JR	48-49	\$17,136 to \$17,493
SR	48	\$17,136

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 80 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, nonrefundable (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)
89	Clinical Laboratory Scientist License—California
145	Clinical Laboratory Scientist License—National Certifying Agency
145	Cytotechnology, ASCP Board of Registry
144	Cytotechnology License-California
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)
195	Health Information Management Certified Coding Associate (CCA)
250	Health Information Management Certified Coding Associate (CCA) through AHIMA (member)
275	Health Information Management Certified Coding Associate (CCA) through AHIMA (nonmember)
275	Health Information Management Certified Coding Specialist (CCS), through AHIMA (member)
320	Health Information Management Certified Coding Specialist (CCS), through AHIMA (nonmember)
275	Health Information Certified Coding Specialist Physician Based (CCS-P) through AHIMA (member)
320	Health Information Certified Coding Specialist Physician Based (CCS-P) through AHIMA (nonmember)
125	Medical Technology, ASCP Board of Registry—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)
80	Phlebotomy Technician, ASCP Board of Registry National
54	Phlebotomy Technician License-California
687	Physical Therapist Assistant, California State Board and License
701	Physical Therapy, California State Board and License
125	Radiation Technology, American Registry

50	Radiation Technology, California License
190	Respiratory Therapy, NBRC National Certification
416	Respiratory Therapy, California State Certification.

NOTE: Fees are set by national and state organizations and are subject to change.

Student membership fees

15	American Health Information Management Association (AHIMA) student membership
98	American Physical Therapy Association (APTA) student
15	California Health Information Association (CHIA) student membership

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.

Early application for financial aid

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 2003–2004 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. FAFSA applications are available on line at www.fafsa.edu. 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.”



Assistant dean of finance, Kent Chow, with Janel Said, secretary, Financial Administration Department.



Dean Jackson with those he refers to as "my team"—
(top left) Pamela Reed, administrative secretary; and
(top right) Beverly deForest, assistant to the dean.

III

THE DEPARTMENTS

General Information

Conjoint—Allied Health/Graduate School

REHABILITATION SCIENCE—Doctor of Philosophy

Cardiopulmonary Sciences

POLYSOMNOGRAPHY—Certificate

RESPIRATORY CARE—Certificate; Bachelor of Science;
Postprofessional Bachelor of Science

PHYSICIAN ASSISTANT—Master of Physician Assistant

EMERGENCY MEDICAL CARE—Bachelor of Science

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;
Bachelor of Science-HIT Progression

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;
Postprofessional 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; Postprofessional Master of Physical Therapy

PHYSICAL THERAPY—Entry-Level Doctor of Physical Therapy; Postprofessional Doctor
of Physical Therapy; Postprofessional Doctor of Physical Therapy Science

Radiation Technology

MEDICAL RADIOGRAPHY—Associate in Science

RADIATION SCIENCES—Bachelor of Science

RADIATION THERAPY TECHNOLOGY—Bachelor of Science; Certificate

RADIOLOGIST ASSISTANT—Bachelor of Science; Post-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 portfolio practicum, which—over a one-to-two year period—documents a 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;
- Allied health studies, including the Bachelor of Science degree in health science and the Doctor of Philosophy degree in rehabilitation science;
- The Allied Health Professions—departments and programs of the School (overview).

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
PHTH	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
RTRA	Radiologist Assistant
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 241, 242 Microbiology (2, 2)

Designed for students in the health sciences. History, classification, morphology, growth, control, transmission and pathology of selected bacteria, viruses, fungi, rickettsia, and parasites. Host defenses against microbial pathogens, including specific and nonspecific immunity. Lecture, thirty hours; laboratory, thirty hours. Course covers two quarters. Grade given upon completion of the 241-242 sequence.

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.

Prerequisite: AHCJ 251.

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

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

AHCJ 308 Professional Communications (1-2)

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

AHCJ 311 Medical Terminology (2)

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

AHCJ 321 Dynamics of Communication (2)

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 336 Rehabilitation Specialty Workshops (2-3)

Introduction of advanced clinical models and techniques of rehabilitation that the LLU physical and occupational therapy programs have to offer; e.g., community model of OT, electrotherapy, hydrotherapy, hippotherapy, etc. Topics are also selected to meet the needs and the interests of student groups.

AHCJ 351 Statistics for the Health Professions (3)

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

Prerequisite: Competency math exam at 75%.

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 412 Anatomy (9)

Gross and microscopic anatomy of the human body. Lecture, laboratory, dissection, demonstration, and slides. Orientation to the structure of various systems of the body. Basic medical terminology. (Successful completion of this course is essential for continuation in the program.)

AHCJ 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 418 Physiology I (4)

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

AHCJ 419 Physiology II (3)

Detailed study of neuromuscular physiology.

Prerequisite: AHCJ 418.

AHCJ 421 Psychology of Physical Disability (2)

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

AHCJ 426 Introduction to Computer Applications (2)

Hands-on instruction in Word, Excel, and PowerPoint. Lectures, laboratory assignments, quizzes, projects, and a practical examination. (Course not taught every quarter.)

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 443 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 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)

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 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 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 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 511 Biostatistics I (3)

Fundamental procedures of collecting, summarizing, presenting, analyzing, and interpreting data. Sampling, measures of central tendency and variation, probability, binomial distribution, normal distribution, sampling distributions and standard error, confidence intervals, hypothesis testing, t-tests, chi-square, correlation, and regression. Introduction to computer analysis for solution of statistical problems.

AHCJ 512 Biostatistics II (3)

Introduction to analysis of data using ANOVA (one way, two way, and repeated measures) with multiple comparison; multiple correlation and regression; and nonparametric statistics. Interpretation of computer output and use of the SPSS statistical package for data analysis. Determination of validity and reliability of research instruments.

AHCJ 514 Kinesiology: Motor Control and Learning (3)

Advanced kinesiology, including movement science dealing with behavioral basis of motor control and motor learning from an information-processing perspective.

AHCJ 515 Curriculum Development in Higher Education (3)

Examines principles of curriculum development. Selection, organization, and evaluation of learning experiences. Examines the nature, place, and 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 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 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 (3-6)

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 541 Research Applications I (2)

Development of a group research proposal with the help of a faculty adviser and mentor. Obtaining approval from appropriate institutional review boards. Pilot testing of the research protocol. Implementation of the research proposal in an appropriate research laboratory or practice setting.

AHCJ 542 Research Applications II (3)

Data analysis with the help of a statistician. Presentation of research results in the form of a written research report, an oral presentation, and a poster appropriate for professional meetings.

AHCJ 544 Advanced Functional Neuroanatomy (3)

Analysis and application of neuroanatomy to lesions of the human nervous system, and the clinical significance of such lesions.

AHCJ 545 Legal and Ethical Issues in the Health Professions (3)

History and structure of federal and state governments, including torts, contracts, administrative law, criminal law, and reporting issues. Legal and ethical issues in patient confidentiality and release of patient information. The impact of technology on the collection and dissemination of patient information. Medical legal liability issues, including corporate compliance.

AHCJ 551 Professional Systems in Management I (3)

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

AHCJ 552 Professional Systems in Management II (3)

Administering the clinical setting, including needs assessment, implementing a business plan, contract negotiation, and management philosophies.

AHCJ 556 Administration in Higher Education (3)

Leadership philosophy and styles of administrative leadership in higher education, with particular application to health professions educational programs. Includes personnel management; budgeting; contracting for clinical placement; group leadership in committees; faculty selection, development, and evaluation; strategic planning; and policy development.

AHCJ 558 Stress and Health Behavior (3)

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. Explanation of coping strategies such as nutrition, exercise, humor, time management and organization, cognitive therapies, relaxation, and imagery.

AHCJ 559 Health Communication in Rehabilitation Science (3)

Provides a broad introduction to human communication in a health care context. Provider-client communication, provider communication and education, intercultural health communication, alternative medicine, health ethics, and mass media health images.

AHCJ 564 Group Process and Dynamics (3)

Group guidance, theories of group-individual interaction, and the communication process. Educational orientation to the utilization of groups to enhance motivation, commitment, and learning.

AHCJ 565 Health Communication: Counseling Patients and Personnel (3)

Communication in health care, multiple applications of communication theory to health promotion, and essentials of professional communication in clinical teaching and leading groups of health professionals. Emphasis on counseling techniques, nondefensive communication, and increased communications awareness.

AHCJ 569 Computers and Electronics for Clinicians (3)

Exploration of the role 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)

Introduction to 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 (2-3)

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 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.



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.

ALLIED HEALTH STUDIES

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

CRAIG R. JACKSON, Dean; Department Chair

EDD J. ASHLEY, Associate Dean of Student Affairs

KENT CHOW, Assistant Dean of Finance

CHARLES G. DART, Director of Marketing and Retention

INTITHAR S. ELIAS, Director of Computer Services

HELEN R. GREENWOOD, Director of Admissions

JOYCE W. HOPP, Emeritus Dean; Distinguished Emeritus Professor

KEIKO I. KHOO, Program Director for Bachelor of Science, Health Science

RENATE I. KRAUSE, Director of Development

ARDIS E. WAZDATSKY, Director of Portfolio

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

FACULTY

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Kent Chow

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Charles G. Dart, Jr.

Intithar S. Elias

Helen R. Greenwood

Joyce W. Hopp

Renate I. Krause

Dulce L. Pena

Gail T. Rice

Borge Schantz

Ernest R. Schwab

Arakaki Shigenobu

Ardis E. Wazdataskey

Grenith J. Zimmerman

HEALTH SCIENCE—Bachelor of Science

KEIKO KHOO, Program Director

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 Masahiro Hashimoto
 Fusae Ishibashi
 Takeo Itoh
 Yoshinori Koide
 Miyako Murase
 Naohito Shingu
 Tsuyoshi Soji
 Shigeyuki Suzuki
 Akira Tsushima

THE PROGRAM

The B.S. degree in health science requires completion of the General Education requirements (see section V) and a major area of emphasis in occupational therapy or physical therapy. A minimum of 192 quarter units must be completed. A maximum of 105 quarter units are transferred from Humanitec Rehabilitation College. Instruction is in the Japanese language or with interpretation as needed.

THE PROGRAM OBJECTIVES

Upon completion of the B.S. degree 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.

ADVISORY COMMITTEE

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

DISTANCE EDUCATION

The Health Science Program is offered via distance education in cooperation with Humanitec Rehabilitation College, Yokkaichi, Japan.

ADMISSION

A minimum G.P.A. of 3.0 in the freshman year and two letters of recommendation from Humanitec the program where student is concurrently enrolled are required.

PROGRAM OF INSTRUCTION
HEALTH SCIENCE—Bachelor of Science

BLOCK CURRICULUM

SOPHOMORE YEAR April–March

ENGL	111	English Composition	3*
ENGL	112	English Composition	3*
AHCJ	129	Basic Communication Skills	1*
AHCJ	252	Human Anatomy and Physiology	4
AHCJ	326	Patient-Care Methods	2*
AHCJ	351	Statistics for the Health Professionals	3
AHCJ	419	Physiology II	3*
RELF	440	World Religions	2*-3**

For OT concentration only

OCTH	314	Task Analysis	2
OCTH	315	Therapeutic Media	2
OCTH	331	Functional Kinesiology	3

For PT concentration only

PHTH	437	Therapeutic Procedures	3
PHTH	438	Manual Muscle Testing	3

JUNIOR YEAR April–March

ENGL	113	English Composition	3
SPPA	377	Bilingualism and Biculturalism	2
AHCJ	305	HIV/AIDS and the Health Provider	1
AHCJ	311	Medical Terminology	2
AHCJ	324	Psycho-Social Models and Interventions	2
AHCJ	328	Portfolio Practicum I	1
AHCJ	336	Rehabilitation Specialty Workshops	3
AHCJ	405	Dynamics of Learning and Teaching	1
AHCJ	409	Adult Learning Styles	3
AHCJ	459	Current Issues: National and Global Perspectives	3
RELF	419	The Gospel of John	3**

For OT concentration only

OCTH	309	Human Occupation across the Lifespan	5
OCTH	321	Intervention Techniques and Strategies I	2
OCTH	411	Introduction to Occupational Therapy Research	2
OCTH	431	Intervention Techniques and Strategies II	3
OCTH	442	Case Analysis, Reasoning, and Management	2*
OCTH	451	Disorders of Human Performance I	5
OCTH	452	Disorders of Human Performance II	5***

For PT concentration only

PHTH	401	Neurorehabilitation I	2
PHTH	411	Clinical Orthopaedics	2
PHTH	413	Clinical Neurology	2
PHTH	421	Orthopaedics I	3
PHTH	422, 423	Orthopaedics II, III	3, 3*
PHTH	434	PT Communication and Documentation	2
PHTH	465	Exercise Physiology	3

SENIOR YEAR September–March

PSYC	460	The Exceptional Individual	3
AHCJ	129	Basic Communication Skills	1-2****
AHCJ	131	Communication Skills	1
AHCJ	498	Portfolio II	1
RELF	423	Loma Linda Perspectives	2
RELE	457	Christian Ethics and Health Care	2

For OT concentration only

OCTH	418	Occupational Therapy Practicum IV	(1-2)
OCTH	441	Fundamentals of Case Management	4
OCTH	499	Occupational Therapy Independent Study	4***

For PT concentration only

PHTH	431	Soft-Tissue Techniques	2
PHTH	466	Fundamentals of Physical Therapy and Research	5
PHTH	499	Physical Therapy Independent Study	1-3***

* Class of 2005 must take these courses in junior year because of curriculum transition.

** Starting with Class of 2006, students must take these credits because of curriculum transition.

*** Starting with Class of 2006, students do not need to take these courses, because of curriculum transition.

**** AHCJ 129 Basic Communication Skills may be repeated once for a second unit.

Core course descriptions

Prefix	Department/School	Where to locate in SAHP 2003-2004 BULLETIN
AHCJ	Conjoint courses	Bulletin pages 51-56
OCTH	Occupational Therapy	Bulletin pages 145-147
PHTH	Physical Therapy	Bulletin pages 164-167
SPPA	Speech-Language Pathology	Bulletin page 198-200
RELE/RELF	Faculty of Religion	Bulletin pages 203-205
ENGL	Graduate School	see descriptions below
PSYC	Graduate School	see description below

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

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

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

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.

REHABILITATION SCIENCE—Doctor of Philosophy

GRENITH J. ZIMMERMAN, Associate Dean of Research and Statistics, Program Director 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 of research and statistics, welcomes the opportunity to coordinate the doctoral degree in rehabilitation science for the School of Allied Health Professions.





ALLIED HEALTH STUDIES ADMINISTRATIVE STAFF

(left to right, top to bottom):

- Beverly deForest, assistant to the dean;
- Pamela Reed, administrative secretary, dean's office;
- Karen Rieley, administrative secretary, marketing;
- Janel Said, administrative secretary, finance;
- admissions office staff:
Emmalein Dharmaraj, Leah Natividad-Beck, and Shirley Sing.

The Allied Health Professions

DEPARTMENTS AND PROGRAMS OF THE SCHOOL

The 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.

CARDIOPULMONARY SCIENCES

POLYSOMNOGRAPHY—Certificate

RESPIRATORY CARE—Certificate; Bachelor of Science; Postprofessional Bachelor of Science

PHYSICIAN ASSISTANT—Master of Physician Assistant

EMERGENCY MEDICAL CARE—Bachelor of Science

ROBERT L. WILKINS, Department Chair

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, Program Director of Clinical Education for Bachelor of Science, Emergency Medical Care

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 M. BEDASHI, Didactic Coordinator for Master of Physician Assistant, Physician Assistant Program

JULIE Y. LEE, Assistant Didactic Coordinator for Master of Physician Assistant, Physician Assistant Program

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

YASMIN C. BRACHO, Assistant Clinical Coordinator for Master of Physician Assistant, Physician Assistant Program

N. LENNARD SPECHT, Medical Director for Respiratory Care Program

DAVID LOPEZ, Program Director for Postprofessional 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

ARTHUR B. MARSHAK, Program Director of Clinical Education for Bachelor of Science, Respiratory Care

FACULTY

Ruel A. Alipoon
Allan M. Bedashi
Kenrick C. Bourne
Yasmin C. Bracho
Noha S. Daher
Steven M. Green
Benny Hau
Julie Y. Lee
David Lopez

Traci L. Marin
Arthur B. Marshak
Richard D. Nelson
Ehren B. Ngo
Mark S. Rogers
Frank Sirna
Charles B. Spearman
David M. Stanton
Robert L. Wilkins

CLINICAL FACULTY

Raquel Calderone-Vizcaino
Elizabeth J. Dickinson
Gerald A. Ellis
Laurence A. Feenstra
Linda Ferry
Jeff T. Grange
R. Nadine Knight
Leo M. Langga
Evelyn L. Massey
Richard N. Sample
J. Randall Scott
Loreen K. Scott
Ronald E. Sneider
N. Lennard Specht
Thomas W. Taylor, Jr.

ADVISORY COMMITTEE

**EMERGENCY MEDICAL CARE—
Bachelor of Science**

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Jeff Grange
Jim T. Holbrook
Craig R. Jackson*
Glen R. Kuck
Sarah Momsen
Ehren B. Ngo
Joshua Stapleton
Tamara L. Thomas

ADVISORY COMMITTEE

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Master of Physician Assistant**

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Allan M. Bedashi
Kenrick C. Bourne
Lane Braver
Mark Carr
Shirani de Alwis-Chand
Kent Chow
Neal Dixon
Helen R. Greenwood
Benny Hau
Craig R. Jackson*
Cliff Reeves
Gail T. Rice
Richard Rouhe
Frank Sirna
Robert L. Wilkins
Grenith J. Zimmerman

ADVISORY COMMITTEE

**RESPIRATORY CARE—
Bachelor of Science**

_____, Chair
Racquel Calderone-Vizcaino
Leif Erikson
Craig R. Jackson*
Myron Lewis
David Lopez
Arthur B. Marshak
Dennis Oeding
Curtis Powell
J. Randall Scott
Charles B. Spearman
N. Lennard Specht*
David M. Stanton
Thomas W. Taylor, Jr.
Robert L. Wilkins
Alumni representative
Student representatives

*ex officio

TUITION

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

Bachelor of Science in respiratory care
Faculty Award winner, Milkey Aragaw,
shown receiving her plaque and gift from
Dave Stanton, program director.





Department of Cardiopulmonary Sciences
School of Allied Health Professions awards ceremony, May 21, 2003
Front row (left to right): Jasmine Reid, Helen-Marie Donovan, Christy Eskes,
Milkey Aragaw, Justin Love, Anthony Yvanovich;
Back row (left to right): Dean Jackson, Ken Bourne, Dave Stanton, David Lopez, Ehren Ngo.



To what does the Department of Cardiopulmonary Sciences attribute its organization?
To the skills of its administrative secretaries
Beverley Stocker (left), Physician Assistant Program;
and Barbara Parton (right), Department of Cardiopulmonary Sciences!

POLYSOMNOGRAPHY—Certificate

The 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 will be available beginning 2004 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 taken at Loma Linda University Medical Center and Jerry L. Pettis Memorial Veterans Medical Center in Loma Linda, 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.

RESPIRATORY CARE

Respiratory care is an allied health profession that promotes health and improvement in the cardiopulmonary function of people with heart and lung abnormalities and disease. Newborn, pediatric, adult, and elderly patients are treated for a wide range of problems—infant respiratory distress syndrome; trauma; cardiopulmonary arrest; conditions brought on by shock; postoperative surgical complications; and respiratory diseases such as pneumonia, asthma, cystic fibrosis, chronic bronchitis, and emphysema.

The respiratory care practitioner is a member of the health care team in medical centers, skilled-nursing facilities, outpatient rehabilitation programs, physician offices, and in-home care. Many are involved in research and development of new and innovative care and equipment. They are effective communicators and compassionate caregivers, possessing an awareness of cultural sensitivity and diversity. They have leadership roles in patient education, wellness intervention, and development of respiratory care plans. Respiratory care professionals apply critical-thinking skills in cardiopulmonary diagnostics and patient assessment to optimize decision making and delivery of patient care. In a time of high technology, increasing growth of the elderly population, and increasing numbers of patients with asthma and chronic lung disease, there is a greater demand for educated and skilled respiratory care practitioners.

PROFESSIONAL ACCREDITATION, LICENSURE, AND CREDENTIALING

Respiratory care program accreditation is provided by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) upon recommendation of the Committee on Accreditation for Respiratory Care (CoARC). 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 complete general and respiratory care education courses with grades of “C” or above, resulting in a minimum of an Associate in Science degree in respiratory care. Graduates must

successfully complete an examination for licensure, declare felony convictions, and undergo fingerprinting. License denial may occur due to prior felony conviction(s). Inquiries regarding the RCB can be directed to 444 North 3rd Street, Suite 270, Sacramento, CA 95825; telephone 916/323-9983; FAX 916/323-9999; or Web Site <<http://www.rcb.ca.gov>>.

The National Board for Respiratory Care, Inc. (NBRC), provides nationally recognized credentialing examinations for graduates of accredited respiratory care programs. Those who successfully complete the entry-level examination receive the certified respiratory therapist (CRT) credential. This examination currently is required by the state of California for licensure to practice respiratory care. Advanced practitioner examinations are required for the registered respiratory therapist (RRT) credential, neonatal-pediatric specialist certification (NPS), and certified (CPFT) and registered (RPFT) pulmonary function technologist. NBRC inquiries can be made to 8310 Nieman Road, Lenexa, KS 66214-1579; telephone 913/599-4200; FAX 913/541-0156; or Web site <<http://www.nbrc.org>>.

PROFESSIONAL ASSOCIATION

The American Association for Respiratory Care (AARC) encourages students and graduates to become members and participate in national meetings and local chapters. The AARC's aim is to foster professional growth, encourage research, and provide services and representation for its members. Further information may be obtained from the national office, 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 with laboratory, complete sequence

Microbiology with laboratory

Introductory chemistry with laboratory, complete sequence; **or** general chemistry with laboratory, complete sequence

High school-level physics **or** introductory physics, one quarter/semester in college; **or** general physics, one quarter/semester in college

Two years of mathematics selected from: algebra I (elementary), algebra II (intermediate), or geometry. Course work may be taken in high school or college.

General psychology

English composition, complete sequence

Introduction to computers (high school or college)

Recommended course work

Speech

Required minimum grade

All course work must have a grade of C (2.0) **or better**.

PROFESSIONAL ELIGIBILITY

Upon completion of the program, graduates are eligible to pursue all credentialing examinations offered by the National Board for Respiratory Care (NBRC). Inquiries to NBRC can be made to 8310 Nieman Road, Lenexa, KS 66214-1579; telephone 913/599-4200; email: 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 B.S. degree program)

RSTH	304	Cardiopulmonary Anatomy and Physiology	4
RSTH	323	Pulmonary Function Methodology	3
RSTH	331	Pharmacology I	2
RSTH	332	Pharmacology II	2
RSTH	334	Patient Assessment	2
RSTH	341	Respiratory Therapy Science I	5
RSTH	342	Respiratory Therapy Science II	5
RSTH	343	Respiratory Therapy Science III	4
RSTH	354	Case Studies in Adult Respiratory Care	2
RSTH	366	Diagnostic Techniques	3
RSTH	381	Cardiopulmonary Diseases I	2
RSTH	382	Cardiopulmonary Diseases II	2
RSTH	391	Respiratory Care Practicum I	2
RSTH	392	Respiratory Care Practicum II	2
RSTH	393	Respiratory Care Practicum III	4
RSTH	404	Critical Care	4
AHCJ	305	HIV/AIDS and the Health Provider	1
AHCJ	311	Medical Terminology I	2
AHCJ	326	Patient-Care Methods	2
EMMC	316	12-Lead ECG Interpretation	2



Respiratory therapy Bachelor of Science degree junior, Michael Tran, demonstrates the proper use of the body plethysmograph (body box).

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 addto 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).



Representing the Department of Cardiopulmonary Sciences and its Respiratory Therapy, Emergency Medical Care, and Physician Assistant Programs are:
 (first row) Ehren Ngo, Allan Bedashi, Charles (Bud) Spearman;
 (center row) Frank Sirna, Barbara Parton, Denise Marnella, Traci Marin, Julie Lee, Yasmin Bracho;
 (top row) Dave Stanton, Arthur Marshak, Ken Bourne, and Beverley Stocker.

RESPIRATORY CARE—Bachelor of Science

Loma Linda University offers two Bachelor of Science degree programs in respiratory care. The first program is for students who have had no previous education in respiratory care and who have completed the program prerequisites listed below.

THE PROGRAM

The two-year, upper-division program leading to the Bachelor of Science degree is a sequence of professional course work intended to prepare competent respiratory therapists with advanced abilities in clinical care. Course work may be designed toward meeting entrance requirements for the dentistry, medicine, and physician assistant programs.

THE PROGRAM OBJECTIVES

Upon completion of the program, the graduate should:

1. Collect and review pertinent clinical information and suggest and implement diagnostic procedures according to age-specific criteria.
2. Select, obtain, assemble, maintain, and correct malfunctions on all respiratory therapy equipment.
3. Administer medications via aerosol, subcutaneous, and other appropriate routes of delivery, according to age-specific criteria.
4. Apply current and advanced respiratory care concepts and treatment plans in the areas of ventilatory support systems (invasive and 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—
 - 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 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 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 B. S. degree program)			
RSTH	304	Cardiopulmonary Anatomy and Physiology	4
RSTH	323	Pulmonary Function Methodology	3
RSTH	331	Pharmacology I	2
RSTH	332	Pharmacology II	2
RSTH	334	Patient Assessment	2
RSTH	341	Respiratory Therapy Science I	5
RSTH	342	Respiratory Therapy Science II	5
RSTH	343	Respiratory Therapy Science III	4
RSTH	354	Case Studies in Adult Respiratory Care	2
RSTH	366	Diagnostic Techniques	3
RSTH	381	Cardiopulmonary Diseases I	2
RSTH	382	Cardiopulmonary Diseases II	2
RSTH	391	Respiratory Therapy Practicum I	2
RSTH	392	Respiratory Therapy Practicum II	2
RSTH	393	Respiratory Therapy Practicum III	4
RSTH	404	Critical Care	4
AHCJ	305	HIV/AIDS and the Health Provider	1
AHCJ	311	Medical Terminology I	2
AHCJ	326	Patient-Care Methods	2
AHCJ	328	Portfolio Practicum I	1
AHCJ	402	Pathology I	4
AHCJ	403	Pathology II	3
EMMC	316	12-Lead ECG Interpretation	2
REL_	___	Religion elective	2
YEAR TWO			
RSTH	421	Perinatal and Pediatric Respiratory Care	2
RSTH	422	Advanced Perinatal and Pediatric Respiratory Care	2
RSTH	424	Exercise Physiology and Pulmonary Rehabilitation	3
RSTH	434	Advanced Patient Assessment	2
RSTH	441	Respiratory Therapy Science IV	3
RSTH	444	Case Studies in Neonatal/Pediatric Respiratory Care	2
RSTH	464	Case Management in Respiratory Care	2
RSTH	466	Advanced Diagnostic Techniques	2
RSTH	471	Instructional Techniques I	2
RSTH	474	Cardiopulmonary Health Promotion and Disease Prevention	2
RSTH	481	Research in Cardiopulmonary Sciences	1
RSTH	494	Respiratory Care Practicum IV	2
RSTH	495	Respiratory Care Practicum V	2
RSTH	496	Respiratory Care Practicum VI	3
AHCJ	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—Postprofessional Bachelor of Science

Loma Linda University offers two Bachelor of Science degree programs in respiratory care. The second program is for students who have an Associate in Science degree in respiratory care from a CAAHEP-accredited respiratory care program and who wish to earn a Bachelor of Science degree in respiratory care. This program is designated the Postprofessional Bachelor of Science degree in respiratory care.

THE PROGRAM

The two-year, upper-division program leading to the Bachelor of Science degree is a sequence of professional course work intended to graduate individuals who have acquired advanced knowledge in the respiratory care profession, including assessment, therapeutic interventions, and management of patients with cardiopulmonary-related disorders; and who uphold the standards of the mission and goals of the School of Allied Health Professions.

THE PROGRAM GOALS

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

Upon completion of the program, the graduate should:

1. Apply fundamental and advanced adult, pediatric, and neonatal respiratory care concepts and treatment plans in the areas of pathophysiology, diagnostics and advanced interventions, gas-exchange therapy, medical gas therapy, airway care, and ventilatory support systems (invasive and noninvasive).
2. Apply problem-solving skills in the areas of advanced pulmonary physiology, related diagnostics, and comprehensive pulmonary rehabilitation programs.
3. Perform fundamental and advanced patient assessment and diagnostic skills for various cardiopulmonary diseases.
4. Develop fundamental skills to conduct and interpret research in the health care arena.
5. Develop fundamental skills in leadership.
6. Develop fundamental skills in topic presentation to the health care profession and patient-care community, using appropriate lecture and demonstration techniques.

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:

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 **or** general chemistry with laboratory

High school-level physics; **or** introductory physics, one quarter/semester in college; **or** general physics, one quarter/semester in college

Two years high school mathematics with grades of C or above **or** intermediate algebra in college
 General psychology **or** sociology
 Cultural anthropology **or** an approved course dealing with cultural diversity
 Select 4 more quarter units from sociology, psychology, economics, geography, political science
 English composition, complete sequence
 Speech

Computers
 Personal health **or** nutrition
 Two physical activity courses
 Electives to meet minimum total requirements of 96 quarter units

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

PROGRAM OF INSTRUCTION

RESPIRATORY CARE—Postprofessional 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
AHCJ	305	HIV/AIDS and the Health Provider	1
AHCJ	328	Portfolio Practicum I	1
AHCJ	351	Statistics for the Health Professions	3
AHCJ	465	Seminars in Leadership	2
AHCJ	498	Portfolio Practicum II	1
RELF	406	Adventist Beliefs and Life	2

Winter Quarter (17)

RSTH	424	Exercise Physiology and Pulmonary Rehabilitation	3
RSTH	431	Senior Project I	2
RSTH	451	Respiratory Care Affiliation I	2
RSTH	466	Advanced Diagnostic Techniques	2
RSTH	471	Instructional Techniques I	2
AHCJ	402	Pathology I	4
AHCJ	461	Research Methods	2

Spring Quarter (17)

RSTH	432	Senior Project II	2
RSTH	464	Case Management in Respiratory Care	2
RSTH	481	Research in Cardiopulmonary Sciences	1
EMMC	315	Cardiology	3
EMMC	316	12-Lead ECG Interpretation	2
AHCJ	403	Pathology II	3-4
RELE	457	Christian Ethics and Health Care	2

Summer Quarter (4)

RSTH	433	Senior Project III*	4
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.

PHYSICIAN ASSISTANT—Master of Physician Assistant

Physician 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 by certification by the National Commission on Certification of Physician Assistants. Within the physician/PA relationship, the PA exercises autonomy in medical decision making and provides a broad range of diagnostic and therapeutic services. The clinical role of a PA includes primary and specialty care in medical and surgical settings in rural and urban areas. The PA's practice is centered on patient care and may also include educational, research, and administrative activities.

THE PROGRAM

Loma Linda University offers a professional course of study leading to the Master of Physician Assistant (M.P.A.) degree. The 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 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 is fully accredited by the Accreditation Review Commission on Education for the Physician Assistant, Inc. (ARC/PA).

PROGRAM OBJECTIVES

Upon completion of the program, the graduate will be qualified to:

1. Obtain detailed and accurate patient histories.
2. Perform appropriate physical examinations.
3. Evaluate patients and make diagnoses.
4. Order, perform, and interpret diagnostic tests.
5. Order and perform selected therapeutic procedures.
6. Develop, implement, and monitor patient-management plans.
7. Present patient data in oral and written forms.
8. Provide continuity of patient care.
9. Assist in surgical procedures.
10. Perform life-saving procedures in emergency situations.
11. Counsel and instruct patients regarding issues of health care management, mental health, therapeutic regimens, normal growth and development, and family planning.
12. Refer patients to appropriate health/mental/social service agencies in the community.

13. Write drug orders.
14. Conduct a medical literature search.
15. Conduct an investigation of a medical, health, or psychosocial topic; perform a statistical evaluation; and present data in appropriate oral and written formats.

CPR CERTIFICATION

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

ADMISSION

A baccalaureate degree is required for admission to the Master of Physician Assistant program:

1. The baccalaureate degree is—
 - preferred in health care or life sciences;
 - acceptable in any field **plus** an associate degree in a health-related field.
2. All degrees must be from an accredited institution(s).
3. One year (2000 hours) of documented patient-care experience preferred but not required, prior to admission.
4. Cumulative G.P.A. of at least 3.0 on a 4.0 scale for all college work.
5. G.P.A. of 3.0 on a 4.0 scale for all science courses completed.
6. Three letters of recommendation (including one from a practicing physician assistant, medical doctor, or osteopath).
7. Applications processed through CASPA (www.caspaonline.org).
8. Selected applicants will be invited for an interview prior to acceptance into the program.

9. Preference for admission granted to—
- applicants with documented health care experience
 - Seventh-day Adventists
 - graduates of Loma Linda University
 - applicants from under-represented populations
 - applicants with documented community-service linkages.

Prerequisites for Physician Assistant, M.P.A.

All degrees must be earned from an accredited institution(s). A baccalaureate degree is required—

- preferred in health care or life sciences;
- acceptable in any field **plus** an associate degree in a health related field.

College-level prerequisite courses:

Sciences

Human anatomy and physiology (complete sequence with laboratory)
Introductory chemistry with laboratory, sequence (inorganic, organic, and biochemistry), **or** one year of general chemistry with laboratory
Microbiology (with laboratory)

Humanities

General psychology
General sociology **or** Cultural anthropology
College algebra
English, one year (freshman composition & literature)

Recommended courses:

Medical terminology
Statistics
Computer literacy



Allan Bedashi, didactic coordinator; Yasmin Bracho, assistant clinical coordinator; Frank Sirna, clinical coordinator—all with our highly acclaimed Physician Assistant Program.

PROGRAM OF INSTRUCTION

PHYSICIAN ASSISTANT—Master of Physician Assistant

The program of instruction outlined as follows is for students enrolled during the 2003-2004 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	4
PAST	517	Case Study Writing	2
PAST	___	Clinical Rotations I	4
AHCJ	519	Graduate Portfolio	(complete)

FIFTH QUARTER (AUTUMN)

PAST	516	PA Professional Issues	2
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	12
Incomplete Work			(complete)

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

** Research projects are presented during this quarter.

EMERGENCY MEDICAL CARE—Bachelor of Science

THE PROGRAM

The two-year, upper-division program leading to the Bachelor of Science degree is a sequence of additional professional course work intended to prepare emergency medical care (EMC) providers for positions in education, management, or advanced clinical practice. Course work may be applied toward meeting entrance requirements for dentistry, medicine, and other graduate programs.

Those electing to study on a part-time basis must complete the junior and senior years within a four-year period. Students new to the profession should be employed a minimum of sixteen hours per week in an emergency medical care-related position in order to gain the most from the program.

THE PROGRAM OBJECTIVES

Upon completion of the program, the graduate should be qualified to:

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 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 among the different areas of a Level I trauma center and the significance each area of the hospital has in the care of a critical patient.
6. Effectively modify practice within the discipline, using the knowledge learned in the program.

ADMISSION

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

1. Be an EMT or a paramedic, a registered nurse, or a respiratory therapist;
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/Corequisites 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 118 quarter units

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

*denotes EMC Progression B.S. degree 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 to 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 308	Pharmacology	3
EMMC 314	ECG Interpretation and Analysis	2
EMMC 315	Cardiology	3
EMMC 316	12-Lead ECG Interpretation	2
EMMC 325	Current Issues in Emergency Medical Care	2
EMMC 331	Introduction to Theories of Emergency Medical Services	2
EMMC 332	Theories of Emergency Medical Services	2
EMMC 427	Cardiopulmonary Therapeutics	2
EMMC 435	Disasters, WMD, and Terrorism	2
EMMC 444	Diversity in EMS	2
EMMC 445	Perinatal and Pediatric Care	3
EMMC 446	Physical Diagnosis	2
EMMC 447	Geriatrics and Aging	2
EMMC 451	Health Care Management for Prehospital Providers	2
EMMC 452, 453	Seminars in EMS Management I, II	2, 2
EMMC 471, 472	Senior Project I, II	2, 2
EMMC 484	Legal Issues in Health Care	2
EMMC 489	Senior Seminars	1
RTCH 464	Moral Leadership	2
RTCH 475	Curriculum Development in Health Sciences	2
RSTH 471	Instructional Techniques I	2
AHCJ 305	HIV/AIDS and the Health Provider	1
AHCJ 324	Psycho-Social Models and Interventions	2
AHCJ 328	Portfolio Practicum I	1
AHCJ 351	Statistics for the Health Professions	3
AHCJ 402, 403	Pathology I, II	4, 4
AHCJ 461	Research Methods	2
AHCJ 498	Portfolio Practicum II	1
RELE 457	Christian Ethics and Health Care	3
RELF 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 A. Alipoon
Jeff T. Grange
Ehren B. Ngo



The Emergency Medical Care (EMC) Bachelor of Science degree program, Life Support Education (LSE), and the LLUMC 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

The Center for Emergency Medical Services 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

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

EMERGENCY MEDICAL CARE (EMC)— Bachelor of Science degree program

The two-year EMC B.S. degree program is open to the EMT, paramedic, RN, or respiratory therapist who has completed two years of undergraduate work. (See additional admission requirements and program information on page 80.)

LIFE SUPPORT EDUCATION (LSE)

Life Support Education offers basic and advanced classes related to cardiac emergency care, as listed below. Life Support Education is in the University Arts building located 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
- Basic Life Support Renewal

Advanced Cardiac Life Support (ACLS)

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

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

Pediatric Advanced Life Support (PALS)

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

- Pediatric Advanced Life Support
- Pediatric Advanced Life Support Instructor course
- Pediatric Advanced Life Support Renewal

Neonatal Resuscitation Program

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

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

Heartsaver Automated External Defibrillator (AED)

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

- Automatic External Defibrillation

LLUMC EMERGENCY DEPARTMENT (ED)

The Emergency Department offers basic and advanced education related to emergency care, as listed below:

Grand Rounds and Lectures

- Grand Rounds
- Lectures for Emergency Medicine Residents

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

- Critical Care Transport
- National Registry EMT Refresher Program
- National Registry Paramedic Refresher Program
- Paramedic Skills 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 Emergency Medical Service
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



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.

COURSES

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

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 ECG Interpretation and Analysis (2)

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 325 Current Issues in Emergency Medical Care (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 331 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 332 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 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 EMMC 471.

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.

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. Systematic presentation of the pharmacology and therapeutic value of drugs used in medicine. Related topics—with special consideration of pediatric and geriatric pharmacology—include drug legislation, PDR, routes of administration, pharmacokinetics, pharmacodynamics, adverse effects, drug interactions, and drug toxicity. Overview of physician assistant's responsibilities in prescribing and/or dispensing pharmaceuticals.

PAST 422 Pharmacology for PAs II (3)

Part II of a two-part course that covers basic concepts of pharmaceuticals used in diagnosis, prevention, and treatment of disease. Systematic presentation of the pharmacology and therapeutic value of drugs used in medicine. Related topics—with special consideration of pediatric and geriatric pharmacology—include drug legislation, PDR, routes of administration, pharmacokinetics, pharmacodynamics, adverse effects, drug interactions, and drug toxicity. Overview of PA's responsibilities when prescribing and/or dispensing pharmaceuticals.

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 (4)

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, use of various tubes and drains, emergency medicine, and surgery for physician assistants.

PAST 507 Preventive Medicine Concepts (2)

Selected topics dealing with aspects of disease prevention. Relevance of statistics, epidemiology, research designs, and clinical trials; as well as selected disease trends, lifestyle modification, the role of physical activity, nutrition and immunization, 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 517 Case Study Writing (2)

Selection of a case-study patient and preparation of a case study for publication in journals appropriate to the PA's profession. Must be enrolled in PA program.

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 out-patient 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. 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.

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 or 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 Postprofessional 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 at 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 (3)

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

Prerequisites: RSTH 304, 331.

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

Comprehensive study of cardiopulmonary diseases and their adverse effects. 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 postanesthesia room, and arterial blood-gas laboratory.

Prerequisite: RSTH 343, 381, 392.

Corequisite: RSTH 382, 404.

RSTH 401 Cardiopulmonary Intensive Care (2-4)

Management of the patient with cardiopulmonary failure. Theory and capabilities of various life-support and monitoring systems.

Prerequisite: 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 a 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 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 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.)

RSTH 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, 472, 473 must be taken in sequence.

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.

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.

RELE 505 Clinical Ethics (3)

Case-based analysis of bioethics, with emphasis on clinical applications. 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 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 475 Curriculum Development in Health Sciences (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.

CLINICAL LABORATORY SCIENCE

PHLEBOTOMY—Certificate

CYTOTECHNOLOGY—Certificate; Bachelor of Science

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

KENNETH A. CANTOS, M.D., Department Chair

MONIQUE K. GILBERT, Program Director for Phlebotomy

MARLENE M. OTA, Program Director for Cytotechnology

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

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

SALLY S. GREENBECK, 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
Beverly Bryant
Linda S. Buckert
Elizabeth Cea
Jeffery G. Chambers
Andrew Chia
Louis J. Cota
Betty M. Fitzsimmons
Barbara J. Ganchingco
Joel C. Gillmore
J. Kapua Hollands
Ronald S. Johnson
James D. Kettering
Sonia D. Laing
Dorothy Lajom

Tuyhoa T. Le
John E. Lewis
Phillip Liang
Kelly C. Liu
Jon A. Loriezo
Claro Y. Masangcay
Donald W. Miller
Y. Kathleen Nowland
Shashank Patel
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

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

PHLEBOTOMY—Certificate

Procedures in phlebotomy are designed to train individuals to collect blood for laboratory analysis, which is necessary for the diagnosis and care of the patient. Ideal for health professionals seeking to expand their current skills, for currently employed phlebotomists, or for those interested in a profession in laboratory medicine, this training program is approved by the California Department of Health, Laboratory Field Services. Successful participants receive a certificate in phlebotomy.

THE PROGRAM

The program trains the modern phlebotomist to perform venipuncture, capillary puncture, and CPR; 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, 2151 Berkeley Way, Annex 12, Berkeley, CA 94707-1011, telephone: 510/873-6449; and by the National Accrediting Agency for Clinical Laboratory Science (NAACLS), 8410 West Bryn Mawr Avenue, Suite 670, Chicago, IL 60631-3415.

PROFESSIONAL REGISTRATION

Upon successful completion of the certificate program, participants receive a certificate in phlebotomy and are eligible to take the national certifying examination offered by the Board of Registry, American Society of Clinical Pathologists (ASCP), 2100 West Harrison Street, Chicago, IL 60612; telephone, 800/621-4142. Successful participants are also eligible to be licensed by the state of California.

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 be 18 years of age or older and have a high school diploma with a minimum grade point average of 2.0; or GED. All registrants must have current immunizations (measles, mumps, rubella, tetanus) and PPD skin test.

How to apply

Prospective students should contact the Department of Clinical Laboratory Science for an application packet with instructions.

PROGRAM OF INSTRUCTION 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

Cytotechnology is a specialty within the broad field of clinical laboratory science. The cytotechnologist, working under the direction of a pathologist, detects cell changes caused by different disease processes; and is able to differentiate between normal, atypical, and malignant cell changes. In recognizing microscopic abnormalities of cells and cellular patterns from various body sites, the cytotechnologist assists the pathologist in detecting cancer at its earliest and potentially most curable stage. As a result, physicians are able to diagnose and treat cancer long before discovering its existence by alternate methods.

OPPORTUNITIES

Cytotechnologists work in hospitals, clinics, and independent pathology laboratories. The employment outlook for cytotechnologists is favorable, with the demand for trained workers exceeding the supply. Cytotechnologists can advance to supervisory positions, participate in research activities, or become teachers in the field. Advancement is based on experience, skill, and advanced education.

THE PROGRAM

The Cytotechnology Program, based on the completion of two years of study at an accredited college or university, leads **either** to a certificate **or** to a certificate and a Bachelor of Science degree. The program of study begins with the Autumn Quarter. A certificate is awarded at the completion of the fourth quarter of study, and those electing to continue are awarded the Bachelor of Science degree upon the completion of an additional two quarters of study. With the certificate in cytotechnology and the baccalaureate degree, the student is eligible to take a national examination and become a registered cytotechnologist.

Registered cytotechnologists entering the program to receive the Bachelor of Science degree are considered to have completed, on the basis of registry, the equivalent course work listed in the first four quarters of the program. A total of 64 quarter units is applied toward the graduation requirements, provided the course work in pathology is equivalent to that offered in the certificate program at this University. Where credit in pathology is not equivalent, the requirement may be met by taking 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 and a mathematics competency examination will be administered to all students. For those students achieving a score of less than 4 on the Wholistic Writing Score Sheet, remedial writing must be taken within the first academic year. Upon retest, the student must achieve a score of 4 or higher. A passing score of 75% must be achieved in the mathematics competency examination.

Accreditation

The program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP), 35 East Wacker Drive, Suite 1970, Chicago, IL 60601-2208, in collaboration with the Cytotechnology Programs Review Committee—telephone: 302/429-8802; FAX: 302/429-8807; email: caahep@caahep.org or ASCP@cytopathology.org; or Web site: <http://www.cytopathology.org>.

PROFESSIONAL REGISTRATION

Upon completion of the certificate program (fourth quarter of study) and the completion of a baccalaureate degree, the student is eligible to sit for the certifying examination given by the Board of Registry of the American Society of Clinical Pathologists, P. O. Box 12277, Chicago, IL 60612-0277. Information about qualifying examinations can be obtained at the office of the department chair.

THE PROGRAM OBJECTIVES

Upon completion of the program, the graduate should be qualified to:

1. Determine and implement the appropriate procedures for collecting and processing biological specimens for cytologic analysis.
2. Detect, differentiate between, and diagnose presence and absence of disease in gynecologic and nongynecologic samples.
3. Integrate and relate data generated by the various clinical departments, making judgments regarding possible discrepancies; confirm cytologic results; verify quality-control procedures; and develop solutions to problems concerning the generation of laboratory data.
4. Use contemporary and uniform diagnostic terminology in reporting laboratory results.
5. Judge the results of quality-assurance measures and institute proper procedures to maintain accuracy and precision.
6. Evaluate current and new techniques, instruments, and procedures in terms of their clinical and diagnostic usefulness and practicality.
7. Demonstrate professional conduct and interpersonal communication skills with patients, laboratory personnel, other health care professionals, and the public.
8. Recognize, encourage, and act upon the individual's need for continuing education as a function of growth and maintenance of professional competence.
9. Apply sound principles of management and supervision.
10. Understand and apply sound principles of scientific research.

ADMISSION

PLEASE NOTE: GRADES OF C- ARE NOT TRANSFERABLE FOR CREDIT.

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 2003-2004 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	4
CLSC 491, 492	Cytology Affiliation I, II	6, 6
AHCJ 328	Portfolio Practicum I	1
AHCJ 402, 403	Pathology I, II	4, 4

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

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	Human-Resource Management	3
AHCJ 426	Introduction to Computer Applications I	2
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.



Always ready, willing, and able to help—especially the Department of Clinical Laboratory Science students—Margie Martinez, senior administrative secretary, offers that help with a welcoming smile.



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: Kathy 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

Employment of clinical laboratory workers is expected to parallel the growth of other health care occupations through the year 2010, particularly as the volume of laboratory tests increases with population growth and with the development of new technology. Employment opportunities are excellent, with current vacancy rates of 12 percent. The 21st century is offering clinical laboratory scientists new avenues for test development, experimental design, administration, and education.

Clinical laboratory scientists work in hospitals or similar medical facilities, clinical and reference laboratories, home-health diagnostics, transfusion services, physicians' offices, and private medical clinics. Employment is also available in health information systems, DNA-technology and genetic engineering corporations, research laboratories, federal government agencies, forensics and crime investigation, veterinary hospitals, U.S. Public Health Service facilities, and in the areas of medical product development, as well as in 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.

Clinical affiliations

Multiple clinical affiliations enrich the student's clinical training by providing exposure to procedures in different types of medical facilities. During the forty week clinical practicum, supplemental training may be scheduled at any of the following clinical sites:

Primary Affiliation:

Loma Linda University Medical Center
Loma Linda, California

Supplemental Affiliations:

Blood Bank of San Bernardino and Riverside
Counties
San Bernardino, California

Hoag Memorial Hospital
Newport Beach, California

Jerry L. Pettis Memorial Veterans
Medical Center
Loma Linda, California

Kaiser Permanente Medical Center
Fontana, California

Redlands Community Hospital
Redlands, California

Riverside Community Hospital
Riverside, California

Arrowhead Regional Medical Center
(formerly:
San Bernardino County Medical Center)
San Bernardino, California

Transportation to training laboratories is the responsibility of the student. Senior students must coordinate their time with the operational schedules of the Loma Linda University Medical Center Clinical Laboratory and affiliate laboratories in the community. The senior schedule is a full-time week (forty clock hours) arranged on a Monday through Friday day-shift schedule. On occasion, days or times outside of this typical schedule may be necessary to allow students exposure to unique 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 (NAACLS), 8410 West Bryn Mawr Avenue, Suite 670, Chicago, IL 60631-3415; telephone: 773/714-8800; FAX: 773/714-8886; Email: naacinfo@naacils.org; <www.naacils.org>. It also satisfies the requirements in medical technology of the American Society of Clinical Pathologists' Board of Registry for Medical Technology, P. O. Box 12277, Chicago, IL 60612-0277. The program is approved by the State of California Department of Health Laboratory Field Services, 2151 Berkeley Way Annex 12, Berkeley, CA 94707-1011, telephone: 510/873-6348.

PROFESSIONAL REGISTRATION

Completion of the required sequence of academic course work and directed professional experience prepares the graduate to take the certifying examinations of the ASCP Board of Registry of Medical Technologists and the National Certification Agency for Medical Laboratory Personnel, P. O. Box 15945-289, Lenexa, KS 65285; 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

Applications (paper and on-line) are accepted beginning January 1. Applications continue to be reviewed and accepted until the program is filled. Preference will be given to applicants whose completed applications and transcripts are received by March 1. To receive an application, call 1-800-422-4558; or complete an on-line application at <www.llu.edu>. BULLETINS may also be viewed at <www.llu.edu>. Printed BULLETINS may be requested and cost \$10.00 each.

A high school diploma or the GED is required for acceptance. Applicants must complete prerequisite course work at any accredited college before being admitted to the School of Allied Health Professions; projected course work that will be completed before beginning the program will be considered in application process.

Regardless of nationality or citizenship, an applicant whose native language is not English is required to pass the Michigan Test of Language Proficiency (MTELP), or the Test of English as a Foreign Language (TOEFL), the Test of Written Language (TWE) and the Test of Spoken English-A; or their equivalents. The requirements are: MTELP 90th percentile; TOEFL 550 (paper based) or 213 (computer based); TWE minimum score of 5; TSE-A minimum score of 5 (see Admissions Information, INTERNATIONAL STUDENTS in the front of this BULLETIN).

Test requirement

Upon acceptance, a self-study syllabus will be sent to the student in preparation for a mathematics screening examination, which will be scheduled during the first week of class. Those achieving scores below the acceptable minimum will be required to take CLSM 301 Laboratory Mathematics Review.

ACADEMIC PROGRESSION

A minimum grade of C (2.0) is required for all courses in the program; C- grades are not acceptable. A grade of less than C in any course, or unsatisfactory clinical 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- (C minus) grades are not acceptable for transfer. A minimum G.P.A. of 2.75 for science is recommended. Prerequisites and transfer patterns may be viewed at <www.llu.edu/llu/sahp/transfer/>.

Prerequisites for Clinical Laboratory Science, B.S.

20 quarter units total or 14 semester units total selected from at least two of the humanities and religion areas:

- art/music (performing arts limited to 2 quarter units)
- civilization/history, foreign language, literature, philosophy, religion—
a maximum of 8 quarter units of religion may be applied to the above 20 quarter/14 semester units: for students who attended or are enrolled in an Adventist college, 4 quarter units of religion are required per year attended

College mathematics (algebra or higher level)
General chemistry with laboratory, complete sequence

Organic chemistry with laboratory, complete sequence
General physics with laboratory, complete sequence.

Pre-medical and pre-dental students should verify current admission requirements.

General biology with laboratory, one course.

Pre-medical and pre-dental students should verify current admission requirements.

Cultural diversity or cultural anthropology (one course); (select remainder of social science 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 (one course)

Two physical education courses

Electives as necessary to meet the minimum total requirement of 96 quarter units. Recommended: anatomy and physiology, biochemistry, cellular or molecular biology, genetics, speech, computer applications, critical thinking

For total unit requirements for graduation, see Division of General Studies, 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 2003-2004 academic year.

JUNIOR YEAR

POST-SUMMER SESSION

CLSM	301	Laboratory Mathematics Review*	1
CLSM	303	Urine and Body-Fluid Analysis I	1
CLSM	309	Quantitative Analysis (Chemical)	5
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	328	Portfolio Practicum I	(continued)
AHCJ	418	Physiology I	4
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)

* a mathematics examination is given during the first week of school. A student who passes this examination is not required to register for CLSM 301.

SENIOR YEAR DIDACTICS

POST-SUMMER SESSION*

CLSM 431 Immunoassay 2

AUTUMN QUARTER

CLSM 451 Clinical Laboratory Management I 2

CLSM 496 Clinical Laboratory Science Seminar I 1

AHCJ 498 Portfolio Practicum II 1

WINTER QUARTER

CLSM 452 Clinical Laboratory Management II 2

CLSM 497 Clinical Laboratory Science Seminar II 1

AHCJ 498 Portfolio Practicum II (continued)

REL_ ___ Religion elective 2

SPRING QUARTER

CLSM 453 Clinical Laboratory Management III 2

CLSM 498 Clinical Laboratory Science Seminar III 2

AHCJ 498 Portfolio Practicum II (continued)

REL_ ___ Religion elective 2

*Clinical practicum begins concurrently; see section below

SENIOR YEAR CLINICAL PRACTICUM*

CLSM 471 Clinical Practicum I* 6

Corequisite: (7 units)

CLSM 411 Urine and Body-Fluid Analysis II 1

CLSM 422 Hematology III 6

CLSM 472 Clinical Practicum II** 6

Corequisite: (11 units)

CLSM 413 Diagnostic Microbiology 8

CLSM 442 Hematology III 3

CLSM 473 Clinical Practicum III *** 6

Corequisite: (9 units)

CLSM 434 Clinical Chemistry III 5

CLSM 455 Special Procedures 4

*Clinical Practicum I is a thirteen-week clinical rotation in the areas of hematology, urinalysis, and parasitology.

**Clinical Practicum II is a thirteen-week clinical rotation in the areas of microbiology and immunohematology.

***Clinical Practicum III is a thirteen-week clinical rotation in the areas of chemistry, immunology, and special procedures.

Clinical Practicum I, II, and III require block registration and are taken successively, beginning with the post-summer session.

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 (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 309 Quantitative Analysis (Chemical) (5)

Provides a rigorous background in those chemical principles particularly important to analytical clinical chemistry. Develops an appreciation for the task of judging the accuracy and precision of experimental data and the application of statistical methods. Covers both fundamental and practical aspects of chemical analysis: neutralization titrations, acid-base titrations, spectrophotometric methods, and electrochemical and chromatographic methodologies. Lecture and laboratory.

CLSM 321 Hematology I (3)

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. Stresses proficiency in evaluation of normal and abnormal cellular morphology. Lecture and laboratory.

CLSM 322 Hematology II (3)

Theory and background of routine and special laboratory procedures used in diagnosis and treatment of hematologic and other diseases. 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 hepatitis 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 of theory and clinical experience with—and their application to—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 of theory and clinical experience with—and their application to—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 of theory and clinical experience with—and their application to—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 of theory and clinical experience with—and their application to—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 (2)

Fundamentals and principles of radioisotopic and nonradioisotopic immunoassays. Methods discussed include fluorescence polarization, enzyme immunoassay, chemiluminescence, radioassay, and molecular diagnostic techniques. Clinical uses of the above methods discussed and applied to clinical laboratory science.

Prerequisite: CLSM 332 or consent of instructor.

CLSM 434 Clinical Chemistry III (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.

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, 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 project 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 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; Health Information Technology (HIT) Progression Bachelor of Science

CODING SPECIALIST—Certificate

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

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

KIMBERLY S. RICHARDS, Recruitment Coordinator

TERRI L. ROUSE, Clinical Coordinator

FACULTY

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Marilyn H. Davidian
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Helen R. Greenwood
Debra L. Hamada
Diana S. Medal
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Kimberly S. Richards
Terri L. Rouse
Michael Scofield
Donna G. Thorpe
Ardis E. Wazdatskey

CLINICAL FACULTY

Amy Bolin
Jere E. Chrispens
Karen C. Darnell
Jennifer L. Guerrero
Melissa Hingula
Linda M. Palmer
Audrey J. Shaffer
Rita M. Stiffler
Betty Ann Wagner
Douglas F. Welebir

TUITION

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

ADVISORY COMMITTEE, B.S.

Betty Ann Wagner, Chair
F. Faye Brown
George DeLange
Cynthia M. Doyon
Joyce W. Hopp*
Margaret B. Jackson
Irvin Kuhn
Barbara Pinkowitz
Rita M. Stiffler

ADVISORY COMMITTEE, M.H.I.S.

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Padmini Davamony
David Holt
Craig R. Jackson*
Kristin Krug-Schmidt
Damon Needleman
Betty Ann Wagner
Grenith J. Zimmerman

ADVISORY COMMITTEE, CODING SPECIALIST

Rita M. Stiffler, Chair
Karen C. Darnell
Darlene Downs
Kate Haggerty
Melissa Hingula

*ex officio

HEALTH INFORMATION SYSTEMS—Master of Health Information Systems

Currently there is a strong need for expertise in information systems in the health care setting. According to the U.S. Bureau of Labor Statistics, the two strongest areas of career growth are computer science and health care. Current research indicates that a limited number of graduate programs are available in information systems with a health care emphasis.

The role of the graduate is to facilitate the flow of information throughout a health care facility to enhance administrative and management decision making, financial systems, medical record department functions, and strategic planning; and to interface with health care information systems, when appropriate.

THE PROGRAM

The Health Information Systems Program leads to a Master of Health Information Systems (M.H.I.S.) degree. The degree may be completed in five quarters (fifteen months).

Evening courses are offered twice a week for four quarters (twelve months). The internship follows completion of all course work.

Completion of the course work in two years (twenty-four months) is possible by special arrangement.

ADMISSION

To be eligible for admission, 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

Upon completion of the program, the graduate should be qualified to:

1. Plan, develop, implement, monitor, and maintain information systems in the health care setting.
2. Design and evaluate information/security systems.
3. Evaluate and modify existing health information systems.
4. Implement and evaluate data-communication systems, including local-area and wide-area networks.
5. Use organizational theory and behavioral and management principles.
6. Participate in strategic management.
7. Demonstrate a knowledge of human-resources management, including the human-computer interaction systems.
8. Demonstrate awareness of current issues affecting health care and their implications for health information systems.
9. Demonstrate knowledge of research and statistical methods.
10. Demonstrate knowledge of the legal and ethical issues of health information systems.

PROGRAM OF INSTRUCTION**HEALTH INFORMATION SYSTEMS—Master of Health Information Systems**

The program of instruction outlined as follows is for full-time students enrolled during the 2003-2004 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	3
MHIS	515	Maintenance and Operation of Information Systems	3
MHIS	574	Project-Management Skills	3
MHIS	575	Market-Research Methods in Health Care	3
MHIS	595	Seminar in Health Information Systems	3
MHIS	602	Health-Systems Operations Management	3
MHIS	604	Strategic Health Information-Systems Management	3
MHIS	605	Health Information-Systems Internship	5
AHCJ	511	Biostatistics I	3
AHCJ	519	Graduate Portfolio	1
AHCJ	536	Health Care Financial Management	3
AHCJ	537	Organizational Structure and Behavior	3
AHCJ	539	Technology and Health Care Organizations	3
AHCJ	545	Legal and Ethical Issues in the Health Professions	3
REL_	___	Religion electives	3

HEALTH INFORMATION SYSTEMS—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	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

Health care records are part of an integrated system of health information. The data provide a basis for patient care, quality assurance, legal defense, reimbursement, risk management, accreditation, planning, and decision making. The health information department has assumed increased importance with the advent of prospective-payment corporate compliance and the necessity for diagnostic and procedural information.

A career in health information management is likely to appeal to a person who has organizational and leadership abilities and who is interested in and has aptitude for medical science but whose talents are suited for participation other than physical involvement in human illness. The health information administrator (formerly known as medical record administrator) designs, develops, and maintains systems for storage, retrieval, and dissemination of information in accordance with federal, state, and local statutes and regulations. This person works with the medical staff and other health professionals in research, administrative studies, functions relative to health information, and patient-care evaluation. The health information administrator in a health care facility will provide management leadership in planning and organizing the department, motivating and evaluating employees, and providing in-service programs for departmental employees or other personnel in the facility.

OPPORTUNITIES

While many health information administrators are employed in various areas of acute-care facilities, others work in alternative-delivery health care systems, research facilities, quality assurance, data companies, industrial establishments, governmental agencies, medical departments of insurance companies, accounting firms, or as consultants to skilled nursing and other facilities.

The multiplicity of new technologies, the advent of electronic 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

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, Certificate

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

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

Upon completion of the program, and upon recommendation of the faculty, graduates are eligible to write the qualifying examination of the American Health Information Management Association (AHIMA), 233 North Michigan Avenue, Suite 2150, Chicago, IL 60611-5519, for the designation of RHIA (registered health information administrator).

Meet Martha Casey,
 administrative secretary
 in the Department of Health
 Information Management.
 Just ask! The students know
 they can depend on Martha to
 offer a solution to any problem.



PROGRAM OF INSTRUCTION

HEALTH INFORMATION ADMINISTRATION—Certificate

The program of instruction outlined as follows is for full-time students enrolled during the 2003-2004 academic year.

FIRST YEAR

HLIN	301	Introduction to Health Records Science	4
HLIN	303, 304	Basic Coding Principles and Techniques I, II	3, 3
HLIN	305	Hospital Census and Administrative Statistics	2
HLIN	325	Pharmacology for Health Information Administration	2
HLIN	441	Legal Aspects of Health Information Administration	4
HLIN	461	Professional Practice Experience	1-5
HLIN	483	Long-Term and Alternative Delivery Systems in Health Care	4
AHCJ	305	HIV/AIDS and the Health Provider	1
AHCJ	402-403	Pathology I, II	4, 3
AHCJ	408	Health Care Management	4

SECOND YEAR

HLIN	306	E & M Coding for Billing and Reimbursement	2
HLIN	401	Survey of Health-Systems Management	4
HLIN	421	Survey of Health-Systems Management—Applied	4
HLIN	444	Corporate Compliance in Health Care	3
HLIN	445	Coding Seminar	3
HLIN	451	Quality Improvement in Health Care	3
HLIN	461	Professional Practice Experience	1-5
HLIN	484	Current Topics in Health Information Administration	3
HLIN	494	Health Information Management	5
HLIN	495	Professional Practice Experience Affiliation	3
AHCJ	407	Financial Management	2
AHCJ	432	Database Management II	2
AHCJ	433	Special Projects in Computer Applications	2
RELE	457	Christian Ethics and 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.



Talk about accuracy—that's what the Health Information Administration Program is about. Here to provide exceptional training to handle the demands of health information administration or systems and coding specialists are (from left to right): Kim Richards, Debbie Hamada, Martha Casey, Diana Medal, Marilyn Davidian (department chair), and Terri Rouse.

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>—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 2003-2004 academic year.

JUNIOR YEAR

HLIN 301	Introduction to Health-Records Science	4
HLIN 303, 304	Basic Coding Principles and Techniques I, II	3, 3
HLIN 305	Hospital Census and Administrative Statistics	2
HLIN 325	Pharmacology for Health Information Administration	2
HLIN 361-363	Professional Practice Experience I, II, III	1, 1, 1
HLIN 395	Professional Practice Experience 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	Professional Practice Experience 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.

HEALTH INFORMATION ADMINISTRATION—Health Information Technology (HIT) Progression Bachelor of Science

ADMISSION

To be eligible for admission, the applicant must be a graduate of an accredited Health Information Technology (HIT) program or hold a current RHIT credential.

Subject Requirements for 2003-2004

A maximum of 70 semester units or 105 quarter units of transfer credit is accepted from accredited junior colleges.

Prerequisites for HIT Progression, B.S.

(a minimum of 52 units must be taken at a 4-year college or university):

General education requirements of Domains I through IV per BULLETIN—Division of General Studies, section V.

In addition, courses must be completed in the following subjects:

Human anatomy and physiology,* complete sequence
 Pathology*
 Pharmacology*
 Medical terminology*
 College algebra (intermediate algebra accepted)
 General psychology
 Introduction to computer applications
 Word processing (Microsoft Word preferred)

Spreadsheet applications* (Microsoft Excel preferred)

Database applications* (Microsoft Access preferred)

Professional communications* (business communications accepted)

Introductory accounting

Research statistics*

Research methods*

Required core professional courses from the HIT program:

Introduction to health-record science*

Basic [ICD-9-CM] coding principles and techniques* (taken within two years, or current work experience; equivalency examination may be required)*

Hospital census and administrative statistics*

Human-resources management*

Principles of management*

Legal aspects of health care* (taken within two years, or current work experience, or evidence of ten hours of recent training in HIPAA legislation; equivalency examination may be required)

Quality improvement in health care*

Professional practice experience (160 hours)*

*available at LLU

PROGRAM OF INSTRUCTION

HIT PROGRESSION/ HEALTH INFORMATION ADMINISTRATION—Bachelor of Science

The program of instruction outlined as follows is for full-time students enrolled during the 2003-2004 academic 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	462	Professional Practice Experience V	1
HLIN	463	Professional Practice Experience VI	1
HLIN	483	Long-Term and Alternative Delivery System in Health Care	4
HLIN	484	Current Topics in Health Information Administration	3
HLIN	494	Health Information Management	5
HLIN	495	Professional Practice Experience-Affiliation	3
AHCJ	305	HIV/AIDS and the Health Provider	1
AHCJ	328	Portfolio Practicum I	1
AHCJ	407	Financial Management	2
AHCJ	433	Special Projects in Computer Applications	2
AHCJ	498	Portfolio Practicum II	1
RELE	457	Christian Ethics and Health Care	2
RELF	423	Loma Linda Perspectives	2

CODING SPECIALIST—Certificate

H 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 2003-2004 academic year.

HLCS	236	Pharmacology	3
HLCS	239	Introduction to Medical Records	3
HLCS	242	Coding I	4
HLCS	243	Coding II	4
HLCS	245	Coding III	4
HLCS	254	Evaluation and Management Coding for Billing and Reimbursement	3
HLCS	257	Coding Special Topics	3
HLCS	261	Coding Practicum I	3
HLCS	262	Coding Practicum II	3

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

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.

Prerequisite: Human anatomy and physiology

HLCS 239 Introduction to 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 242 Coding I (4)

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

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 (80 clock hours) at the end of the junior year in a health facility or health-related organization. Written and oral reports of experience, with classroom discussion. Not required of accredited health information technicians.

Prerequisite: Completion of junior-year courses and clinical assignments, or permission of the department chair.

HLIN 401 Survey of Health-Systems Management (4)

The science of information and its applications to management and patient care in the health care industry. Information systems concepts, theories, technologies, and models; as well as an in-depth review of information-system creation and adaptation. General systems concepts in health care: analysis, design, implementation, and maintenance. Strategies for the successful management of information systems in an integrated or interfaced environment, with emphasis on health-information applications. Future trends in information-system elements presented in conjunction with analysis of these trends in the health-record profession. Major term project includes the development of database specifications, inputs, outputs, implementation schedules, and maintenance plans.

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 Professional Practice Experience (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 Professional Practice Experience V (1)

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

HLIN 463 Professional Practice Experience 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 Professional Practice Experience 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 (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, Department Chair

GEORGIA W. HODGKIN, Associate Chair, Program Director, Dietetic Technology

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

CINDY L. KOSCH, M.S., RD, Academic Coordinator of Certificate Program

FACULTY

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Kenneth I. Burke
Bertrum C. Connell
Noha S. Daher
Elaine K. Fleming
Ronald H. Hillock
Georgia W. Hodgkin
Martina I. Karunia
Cindy L. Kosch
Maxine J. Taylor
Crystal G. Whitten

Betty Licciardo
Susan K. Lewis
Carmen G. Llerandi-Phipps
Merijane Malouin
Deanna Nakmura
Leh C. Ota
Marjorie E. Quigley
Jennifer Radice
Inherla H. Rivera
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Pamela Yong

CLINICAL FACULTY

Caroline R. Adame
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Aurea Burgos
Margie I. Carson
Nilsa V. Cruz
Laura L. Darnell
Barbara B. Dickinson
Lorraine W. Fisher
Danetta Frost
Constance L. Garrett
Dottie Gibson
Aleida E. Gordon
Ruby S. Hayasaka
Sondra D. Henderson
Richard A. Jacobs
Merrill L. King
Evonne J. Leiske
John E. Lewis

ADVISORY COMMITTEE

James Lumsden, Chair
Caroline R. Adame
Carol S. Baker
Bertrum C. Connell
Donna Galluzzo
Craig R. Jackson*
Richard A. Jacobs
Stella Jones
Merijane T. Malouin
Norman H. Meyer
Elmar P. Sakala
Grenith J. Zimmerman

*ex officio

TUITION

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

DIETETIC TECHNOLOGY—Associate in Science

The dietetic technician is a support member of the nutrition-care team. At the direction of the dietitian, the dietetic technician screens patients for nutrition-care needs, marks menus, teaches individuals or groups, monitors effectiveness of nutrition care, and documents findings in the patient's medical record. Dietetic technicians contribute to the overall success of the food service by developing menus, supervising food-service employees, monitoring quality of food, and providing in-service training for employees.

OPPORTUNITIES

The dietetic technician practices with other members of the nutrition-care team, including the registered dietitian, the dietetic assistant, and food-production and food-service personnel. Employment may be found in a variety of environments, including hospitals and other health care facilities, retirement centers, schools and universities, government and community agencies, food-management companies, and industrial feeding sites.

THE PROGRAM

The 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 Dietetics Education of The American Dietetic Association, 120 South Riverside Plaza, Suite 2000, Chicago, IL 60606-6995; telephone: 312/899-0040, ext. 5400. Web site <www.eatright.org/cade>; FAX: 312/899-4817.

PROFESSIONAL REGISTRATION

Upon satisfactory completion of the program and upon recommendation of the faculty, the graduate will be eligible to take the registration examination of the Commission on Dietetic Registration in order to become a dietetic technician, registered (DTR).

PROFESSIONAL ASSOCIATION

Students and graduates are eligible for membership in The American Dietetic Association. The

mission of the association is to provide direction and leadership for quality practice, education, and research; and to promote optimal health and nutritional status of the American population. This organization grants student membership at a nominal cost to undergraduates of accredited programs. The national office of The American Dietetic Association is at 120 South Riverside Plaza, Suite 2000, Chicago, IL 60606-6995. Along with membership in the American Dietetic Association, students become members of the California Dietetic Association. Students are encouraged to join the Inland District Dietetic Association and, where possible, the Seventh-day Adventist Dietetic Association.

THE PROGRAM OBJECTIVES

Upon completion of the program, the graduate should be qualified to:

1. Perform competently at the entry level of technical practice.
2. Value life-long learning.
3. Utilize current technology.
4. Participate as a leader in nutrition care.
5. Recognize the option to pursue a bachelor's degree program upon completion of the Associate in Science degree.
6. Fill the need for registered dietetic technicians, where appropriate, within the health care and educational network of Seventh-day Adventist institutions as well as local organizations.

ADMISSION—Associate in Science

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

- a 2.5 G.P.A. or above;
- an interview;
- a letter of application; 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

Human nutrition

Electives to meet the total minimum requirements of 43 quarter units

Literally caught on the run, administrative secretary Debra Richman of the Department of Nutrition and Dietetics is in perpetual motion just trying to keep up with the demands of the department's extraordinary faculty.



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

The program of instruction outlined below is for full-time students enrolled during the 2003-2004 academic year.

SOPHOMORE YEAR

POSTSUMMER SESSION (4 weeks): August 18–September 12, 2003

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

AUTUMN QUARTER: September 22–December 12, 2003

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 5–March 19, 2004

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

SPRING QUARTER: March 29–June 11, 2004

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 2003-2004

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

**PROGRESSION TO THE BACHELOR OF
SCIENCE PROGRAM**

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 dietetic technician, registered, (DTR), before applying to the bachelor's degree program.

NUTRITION AND DIETETICS—Bachelor of Science

Dietetics, a vital profession in the field of health promotion, focuses on the sciences of nutrition and management in feeding individuals and groups throughout the life cycle. The Coordinated Program in Dietetics combines supervised professional practice with didactic curriculum to develop professional skills concurrently with cognitive and technical skills to enable the graduate to establish eligibility to become a registered dietitian.

Admission to the program is based on a selective process. To be eligible for consideration, the applicant must meet the following criteria: completion of subject requirements, as indicated, at an accredited college or university; a 3.0 G.P.A. or above; an interview; a letter of application; and recommendations.

OPPORTUNITIES

Dietetic practice is the application of principles derived from integrating knowledge of food, nutrition, biochemistry, physiology, business and management, journalism, behavioral and social sciences, and the arts to achieve and maintain health, prevent disease, and facilitate recovery from illness.

Members of the dietetics profession practice in a variety of environments, including hospitals and other health care facilities, schools and universities, government and community agencies, business, and industry. A growing number of dietitians are employed in physicians' offices, clinics, home-health care agencies, mass communication, and many other entrepreneurial roles.

By successfully passing the registration examination for dietitians, practice opportunities as a specialist in medical nutrition therapy, administrative dietetics, nutrition education, community nutrition, or research are available. There is increased recognition of the importance of nutrition in the fields of medicine, dentistry, and health promotion—with emphasis on fitness and optimal well-being. This indicates that the dietitian's scope of practice is steadily widening.

MEDICAL-NUTRITION THERAPY

The Registered Dietitian in medical nutrition therapy applies the science of nutrition to the care of people through health promotion and disease prevention and uses medical-nutrition therapy in the treatment of disease. The effective dietitian must be aware of the cultural, social, economic, aesthetic, and psychological factors that affect eating patterns. As a member of the patient-care team, the registered dietitian (RD) is responsible for assessing, implementing, and monitoring the nutritional care of patients. In

addition, the RD may serve professionally as a nutrition practitioner in health care; a teacher in an educational institution; a research dietitian; or a nutrition consultant-educator in municipal, state, or federal departments of health.

ADMINISTRATIVE DIETETICS

The registered dietitian (RD) in management is accountable for the food-service systems. In a health care institution, the RD is responsible for the effective functioning of food service from the standpoint of patients, administration, medical staff, and personnel. The administrative RD may also teach; manage food systems in educational, public, or commercial facilities; serve as consultant to health care or educational institutions; or enter the field of research.

COMMUNITY DIETITIAN

Community registered dietitians practice in diverse settings, translating nutrition science into improved health status. Challenges may include forming partnerships with various organizations, mastering technology, enacting regulations and policies that protect and improve the public's health, and creatively managing scarce resources. Dietitians working in the community exhibit high-quality leadership and planning skills, and many create positions that are entrepreneurial as well as financially rewarding.

THE PROGRAM

The Nutrition and Dietetics Program is established to prepare entry-level dietitians to join the profession and contribute to the wholeness of mankind. The graduate is awarded the Bachelor of Science degree and is eligible to write the registration examination of the Commission on Dietetic Registration. The program is composed of didactic and supervised professional practice experiences in an environment of liberal arts education to prepare an educated graduate. Admission to the professional program at this University begins with the postsummer session of the sophomore year. The applicant will present at least two years of preprofessional education from an accredited college or university to meet the specific subject requirements for 2003-2004.

The professional program of seven or eight quarters includes theory, laboratory, research, and clinical experiences. Ten weeks of clinical experience are scheduled at the end of the junior year and ten weeks during the Spring Quarter of the senior year. Students participate as active members of the nutrition-care team in multiple clinical settings. Administrative affiliation experiences involve decision-making assignments in volume-feeding operations.

Accreditation

The Coordinated Program in Dietetics is currently granted continuing accreditation by the Commission on Accreditation for Dietetics Education of The American Dietetic Association, 120 South Riverside Plaza, Suite 2000, Chicago, IL 60606-6995, 312/899-5400.

PROFESSIONAL REGISTRATION

Upon satisfactory completion of the program and upon recommendation of the faculty, the graduate will be eligible to take the registration examination for dietitians in order to become a registered dietitian.

PROFESSIONAL ASSOCIATION

Students and graduates are eligible for membership in The American Dietetic Association. The 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 120 South Riverside Plaza, Suite 2000, Chicago, IL 60606-6995. Along with membership in The American Dietetic Association, students become members of the California Dietetic Association. Students are encouraged to join the Inland District Dietetic Association and, where possible, the Seventh-day Adventist Dietetic Association.

THE PROGRAM OBJECTIVES

Upon completion of the program, the graduate should be qualified to:

1. Perform competently at the entry level of professional practice.
2. Exhibit Christian ethical and moral values.
3. Exhibit an investigative spirit to continue attaining knowledge and developing professional competency beyond the entry level.
4. Communicate effectively and be computer literate, using and analyzing data in the decision-making process.
5. Develop leadership skills to achieve personal and corporate goals.
6. Incorporate critical-thinking skills into professional and personal decisions.
7. Demonstrate, from a historical and contemporary basis, the value of diversity in the personal and professional life from ethnic, gender, generational, and ideological points of view.

ADMISSION

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

- a 3.0 G.P.A. or above
- an interview
- a letter of application
- recommendations
- completion of program prerequisites

Prerequisites for Nutrition and Dietetics, 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
- 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

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

English composition, complete sequence

Speech

Two physical activity courses

Human nutrition

DTCS 302 Food Selection and Preparation

DTCS 303 The Art of Food Presentation

Electives to meet the total minimum requirements of 87 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 2003-2004 academic year.

JUNIOR YEAR

POSTSUMMER SESSION (4 weeks)

DTCS	301	Human Nutrition*	3
DTCS	302	Food Selection and Preparation*	4
DTCS	303	The Art of Food Presentation*	3
TOTAL			10

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 with Laboratory	5
TOTAL			15.5

*Required only if not completed as a prerequisite

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	334	Biochemistry	<u>5</u>
TOTAL			17

*Required only if not completed as a prerequisite

SPRING QUARTER

DTCS	304	Community Nutrition	4
DTCS	321	Nutrition and Human Metabolism	4
DTCS	343	Medical Nutrition Therapy II	5
DTCS	442	Nutrition Counseling	3
AHCJ	305	HIV/AIDS and the Health Provider	<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
DTCS	476	Exercise Physiology in Medical Nutrition Therapy	3
AHCJ	351	Statistics for the Health Professions	3
RELE	___	Religion elective	<u>3</u>
TOTAL			15.5-17.5

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



(Seated, left to right) Maxine Taylor and Ken Burke.
 (Standing, left to right) Bert Connel (department chair),
 Jana Bowen, Martina Karunia, Georgia Hodgkin, and Cindy Kosch.
 It is impossible to corner all of the Department of Nutrition and Dietetics
 faculty members at one time. Their quest for keeping the curricula up to date
 is a never-ending task and occupies their time when not in the classrooms.

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 2003-2004

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

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 nutrition 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 4 hours.

Prerequisite: DTCS 301 or equivalent; general chemistry; anatomy and physiology; biochemistry.

DTCS 339 Life-Cycle Nutrition (2)

Management of the normal nutrition needs of individuals across the 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 neurologic disorders—including Parkinson's, Alzheimer's, epilepsy, Wilson's disease, and HIV/AIDS. Continued practice in interviewing and counseling the patient, nutrition assessment and documentation, and use of computer-assisted nutritional analysis. Ongoing study of medical terminology. Advanced topics: lipids, antioxidants, and phytochemicals. Per week: lecture 3 hours, practicum 6 hours.

Prerequisite: DTCS 341 or equivalent course; 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, metabolic disorders; and neurologic disorders, including spinal cord injury and stroke. 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. Per week: lecture 2 hours, practicum 9 hours.

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 6 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 food systems. Performance review and evaluation. Ten 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 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, case 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; AHJ 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.

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.

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; Postprofessional Master of Occupational Therapy

LIANE H. HEWITT, Department 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 Postprofessional 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

FACULTY

L. Christine Billock
 Anne Marie Connor-Schisler
 Noha S. Daher
 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
 Ernest R. Schwab
 Donna G. Thorpe
 Grenith J. Zimmerman

CLINICAL FACULTY

Sheryl L. Clemons
 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

Paula Artz
 Andre Carrington
 Anne Connor-Schisler
 Mary Foto
 Mary Groves
 Liane H. Hewitt
 Esther Huecker
 Craig R. Jackson*
 John Kerr
 Rebecca Larson
 LeRoy Nattress
 Madge Oh
 Christine O'Hagan
 Annette Richardson
 Clarissa Saunders-Newton

*ex officio

TUITION

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



Here they are, the administrative staff for the Department of Occupational Therapy:



(from top to bottom)
Madge Oh,
Michelle Frasco,
and Cerise Bender.
You might say
they are the
Three Musketeers.
Truly they are the
heroines of the
OTA and OT
programs.

The occupational therapist and occupational therapy assistant work with persons who find it difficult to cope with psychological or physiological dysfunction.

The primary concern of both therapist and assistant is to stimulate those changes in behavior patterns that will increase the patient's personal independence and ability to work within his/her cultural and personal milieu. To accomplish this goal, the occupational therapist evaluates the patient; sets up treatment goals; and works together with the occupational therapy assistant in selecting tasks from the gamut of normal daily self-care activities, using them to assist the patient in gaining independent-living skills regardless of disability or handicap.

Essential to the role of occupational therapy is an interest in the behavioral sciences and a concern for the individual's need to find proper adjustments to life's circumstances. A desire to teach and a background or interest in medical science are beneficial. Those inclined to mechanical or scientific techniques are suited to helping patients develop their capacities for employment. Others find that they can use their interests in creative arts, crafts, music, and teaching to work with disabled homemakers, children, and retired persons.

OPPORTUNITIES

Occupational therapists and occupational therapy assistants practice in general hospitals, rehabilitation centers, pediatric or psychiatric clinics, schools, skilled-nursing facilities, home care, and outpatient community-centered programs (including hand-rehabilitation, work-evaluation, and adult day-care facilities). Occupational therapy professionals have a wide choice of positions (using varied therapeutic skills with individuals of varying age and disability) and opportunities for advancement.

ACCREDITATION

Both the Occupational Therapy Program and Occupational Therapy Assistant Program are accredited by the Accreditation Council for Occupational Therapy Education (ACOTE), P. O. Box 31220, Bethesda, MD 20824-1220, 301/652-2682. Graduates of the programs will be able to take the national certification examination for occupational therapist and occupational therapy assistant, administered by the National Board for Certification in Occupational Therapy (NBCOT). After successful completion of this examination, the individual will be an occupational therapist, a registered (OTR), or a certified occupational therapy assistant (COTA).

PROFESSIONAL REGISTRATION

Upon satisfactory completion of the occupational therapy A.A. or entry-level M.O.T. degree—including completion of Level II fieldwork within twenty-four months following completion of academic preparation, and upon recommendation of the faculty—the graduate is eligible to take the national certification examination administered by The National Board for Certification for Occupational Therapy (NBCOT). The board offers computerized examinations on demand throughout the year.

Many states require licensure in order to practice; however, state licenses are based on the results of the NBCOT certification examination. The American Occupational Therapy Association provides recognition essential to the practice of occupational therapy in the United States and most foreign countries. Information about qualifying examinations can be obtained at the office of the department chair.

When the graduate applies to write the certification examination with the NBCOT, s/he will be asked to answer questions related to the topic of felonies. For further information on these limitations, contact NBCOT at 800 South Frederick Avenue, Suite 200, Gaithersburg, MD 20877-4150; or telephone 301/990-7979.

PROFESSIONAL ASSOCIATIONS

Students are eligible for membership in The American Occupational Therapy Association and Occupational Therapy Association of California, two organizations that foster development and improvement of service and education. The student is encouraged to become a member, read the journal, and attend local professional meetings. The national office address is: The American Occupational Therapy Association, P. O. Box 31220, Bethesda, MD 20824-1220.

OCCUPATIONAL THERAPY ASSISTANT—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 building, 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. (See section II, Admissions Information: ENTRANCE REQUIREMENTS—Pre-entrance health requirement/Immunizations.)

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 2003-2004 academic year.

AUTUMN QUARTER

OCTA 201	Introduction to Occupational Therapy	1
OCTA 215	Introduction to Functional Neuroanatomy	2
OCTA 224	Therapeutic Activities I	2
OCTA 228	Intervention Techniques	2
OCTA 233	Occupational Therapy Practice I	5
OCTA 241	Rehabilitation Principles	2
OCTA 251	Human Pathology I	2

WINTER QUARTER

OCTA 214	Applied Anatomy	2
OCTA 217	Occupational Therapy Assistant Practicum I	2
OCTA 225	Therapeutic Activities II	2
OCTA 234	Occupational Therapy Practice II	5
OCTA 252	Human Pathology II	2
OCTA 271	Group Dynamics	2
REL_ ___	Religion elective	2

SPRING QUARTER

OCTA 218	Occupational Therapy Assistant Practicum II	2
OCTA 226	Occupational Therapy Assistant Seminar	2
OCTA 235	Occupational Therapy Practice III	5
OCTA 253	Human Pathology III	2
OCTA 256	Professional Self-Management	2
OCTA 261	Aging	2
AHCJ 305	HIV/AIDS and the Health Provider	1
RELE 457	Christian Ethics and Health Care	2

SUMMER QUARTER

OCTA 291	Occupational Therapy Assistant Affiliation I	3
OCTA 292	Occupational Therapy Assistant Affiliation II	3

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



Under the guidance of Liane Hewitt, staff and faculty of the Occupational Therapy (OT) Program and Occupational Therapy Assistant (OTA) Program go out of their way to mentor their students.
 Seated: Judy Palladino (OT fieldwork coordinator), Cerise Bende, and Michelle Frasco (staff).
 Standing: Madge Oh (staff), Esther Huecker (program director), Karen Pendleton (faculty), Liane (department chair), Ruth Jeffries (OTA fieldwork coordinator); 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 listed under Admission—Option Two.

The curriculum is built on three levels of learning: foundation, practice, and professional. These levels of learning represent curriculum content that supports the student's progressive growth and knowledge. Initially, students focus primarily on foundation-knowledge courses in basic sciences combined with concepts of wholeness and looking at their own, as well as others' occupational worlds. Next, the curriculum emphasizes student learning of core occupational therapy practice. Subsequently, the curriculum provides opportunities for the student to develop professional competency in research and in program development/ evaluation; and to envision how the occupational therapy profession enhances health care trends. Classroom instruction is integrated with supervised fieldwork practice at approved community programs.

Clinical experience

For the two three-month fieldwork experiences (Winter Quarter and Spring Quarter of the second year), the student is assigned for experience at approved hospitals and in community health care programs. Assignments cannot always be arranged in the immediate community because of limited facilities; students are responsible for their own transportation. Level II fieldwork must be completed within twenty-four months of the didactic course work.

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. (See section II, Admissions Information: (See section II, Admissions Information: ENTRANCE REQUIREMENTS.)

THE PROGRAM OBJECTIVES

Upon completion of the program, the graduate should be qualified to:

1. Support the mission of the University to make humankind whole through the healing ministry of Jesus Christ.
2. Practice lifelong learning as it pertains to professional and personal growth.
3. Integrate Christian and ethical values in personal living and professional practice, with respect for diversity.
4. Promote occupation and client-centered practice.
5. Engage in global critical thinking and envision future possibilities for the profession.
6. Demonstrate an entry-level competency in knowledge and skills for safe and effective delivery of occupational therapy services.

ADMISSION—Option One: 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

Select one additional course from chemistry **or** college mathematics (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 2003-2004

The applicant must complete the following subject requirements at an accredited college or university:

Human anatomy and physiology with laboratory, complete sequence

Select one additional course from chemistry **or** college mathematics

Physics with laboratory

(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 2003-2004 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 Provider	1
AHCJ 311	Medical Terminology	2
AHCJ 351	Statistics for the Health Professions	3
AHCJ 402, 403	Pathology I, II	4, 3
AHCJ 404	Pharmacology	1
AHCJ 412	Anatomy	9
REL_ __, __	Religion electives	2, 2

YEAR TWO

OCTH 411	Introduction to Occupational Therapy Research	2
OCTH 417	Occupational Therapy Practicum III	2
OCTH 418	Occupational Therapy Practicum IV	2
OCTH 431	Intervention Techniques and Strategies II	3
OCTH 434	Intervention Techniques and Strategies III	3
OCTH 443	Case Analysis, Reasoning, and Management II	2
OCTH 491	Fieldwork Experience I	6
OCTH 492	Fieldwork Experience II	6
OCTH 513	Case Analysis, Reasoning, and Management III	3
OCTH 525	Program Seminar	2
OCTH 526	Business Topics in Health Care	2
OCTH 541	Current Trends in Occupational Therapy Practice I	3
AHCJ 461	Research Methods	2
RELE 457	Christian Ethics and Health Care	2*
REL_ __	Religion elective	2

*Religion course required for M.O.T. track students.

YEAR THREE

OCTH 542	Current Trends in Occupational Therapy Practice II	3
OCTH 544	Advanced Occupational Therapy History	3
OCTH 551	Theoretical Perspectives on Occupation	3
OCTH 552	Practice Perspectives in Occupational Therapy	3
OCTH 561, 562	Program Development/Design I, II	3, 3
OCTH 563	Professional Competency Development	3
OCTH 571-573	Research I, II, III	2, 2, 2
AHCJ 509	Teaching and Learning Styles	3
AHCJ 601	Research-Proposal Writing	3
RELR 536	Spirituality and Occupation	3*

A minimum grade of C with an overall G.P.A. of 2.5 is required for all courses in the program. The program of instruction is full time for each quarter. Academic credit of less than 12 units per quarter does not indicate less than full-time work.

*Religion course required for M.O.T. track students.

OCCUPATIONAL THERAPY—Postprofessional Master of Occupational Therapy

THE PROGRAM

The postprofessional master's degree program is designed for the occupational therapist with an entry-level baccalaureate degree in occupational therapy who wishes to pursue advanced studies in the profession.

ADMISSION

To be eligible for admission, the applicant must have earned a bachelor's degree or 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 Postprofessional Master of Occupational Therapy, M.O.T.

Baccalaureate degree in occupational therapy from an accredited institution

PROGRAM OF INSTRUCTION

OCCUPATIONAL THERAPY—Postprofessional Master of Occupational Therapy

The program of instruction outlined as follows is for full-time students enrolled during the 2003-2004 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 II	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 511	Biostatistics I	3
AHCJ 526	Computer Applications II	3
AHCJ 591	Research I	3
AHCJ 592	Research II	3
_____	Elective	3
_____	Elective	3
_____	Elective	3
REL_ _____	Religion elective	3

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 412.

OCTH 341 Neuroanatomy (3)

Basic anatomy and function of the central and peripheral nervous systems, common clinical manifestations of neurologic dysfunction, and occupational performance impact on the individual with neurological dysfunction. Per week: lecture 2 hours, laboratory 2 hours.

Prerequisite: AHCJ 412.

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 and Strategies III (3)

Introduction to hand rehabilitation and uniqueness of the occupational therapy approach, including: anatomical review of the upper extremity, etiology of common hand diseases and trauma tissue healing, evaluation of the hand, intervention planning, outcome measures, advanced certification, and relevant California laws. Laboratory includes current concepts in the design and fabrication of upper-extremity orthotics and custom-made assistive devices for the hand. Emphasis on the use of low-temperature thermoplastics and alternative splinting materials. Per week: lecture 2 hours, laboratory 2 hours.

Prerequisite: OCTH 451, 452, 453.

OCTH 441 Fundamentals of Case Management (4)

Introduction to application of critical reasoning process; effective communication, documentation and overall professional skill building. Application of case-management skills, evaluation, intervention planning, implementation, re-evaluation, and termination when appropriate.

OCTH 442 Case Analysis, Reasoning, and Management I (2)

Introduction to application of critical reasoning process; effective communication skills with clients, 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, evaluation, intervention planning, implementation, re-evaluation, and termination when appropriate. Emphasis on critical reasoning through clinically based case presentations. Per week: seminar/discussion 2 hours.

Prerequisite: OCTH 442, 451, 452.

OCTH 451 Disorders of Human Performance I (5)

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, evaluation, intervention planning, implementation, re-evaluation, and termination when appropriate. Emphasis on critical reasoning through community-based case practice.

Prerequisite: OCTH 442, 443, 451.

OCTH 525 Program Seminar (2)

Development of critical 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 (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. Exploration will lead to a better understanding of the uniqueness of occupation.

OCTH 552 Practice Perspectives in Occupational Therapy (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; AHCJ 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 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.



In the foreground, graduated Master of Occupational Therapy degree students Dan Barnett, Aileen Villanova, and Shannon Gibson were happy to be able to share ideas before final examinations started.

PHYSICAL THERAPY

PHYSICAL THERAPIST ASSISTANT—Associate in Science

PHYSICAL THERAPY—Entry-Level Master of Physical Therapy; Progression Master of Physical Therapy; Postprofessional Master of Physical Therapy

PHYSICAL THERAPY—Entry-Level Doctor of Physical Therapy; Postprofessional Doctor of Physical Therapy; Postprofessional Doctor of Physical Therapy Science

EDD J. ASHLEY, Department Chair

HOWARD W. SULZLE, Associate Department Chair

LAWRENCE E. CHINNOCK, Program Director for Entry-Level Master of Physical Therapy, Progression Master of Physical Therapy, and Entry-Level Doctor of Physical Therapy

EVERETT B. LOHMAN III, Program Director for Postprofessional Master of Physical Therapy, Post-professional Doctor of Physical Therapy, and Postprofessional Doctor of Physical Therapy Science

JEANNINE STUART-MENDES, Academic Coordinator of Clinical Education for Entry-Level Master of Physical Therapy Program and 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

Carol J. Appleton
Edd J. Ashley
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
Bradford D. Martin
Jerold S. Petrofsky
Gail A. Polvoorde
Ronald M. Rea
Gail T. Rice
Ernest R. Schwab
Jeannine Stuart-Mendes
Howard W. Sulzle
James M. Syms
Desmyrna R. Taylor
Donna G. Thorpe
Antonio Valenzuela
Melanie A. Westberg
Grenith J. Zimmerman

CLINICAL FACULTY

Mei Lee Chiu
Christine Eddow
Henry Garcia
Ronald A. Hershey
Patricia A. Hokama
Norma C. Huckaby
Robert F. Landel
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
Craig R. Jackson*
Wendy Lantz
Lee Nattress
Lyn Nattress
Theresa O. DeLao

*ex officio

TUITION

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

PHYSICAL THERAPIST ASSISTANT—Associate in Science

The physical therapist assistant is a skilled paraprofessional health worker who, under the supervision of a physical therapist, carries out the patient's treatment program. The extent to which the physical 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

Physical therapy offers a career for men and women who are interested in medical science and who enjoy working with people. Physical Therapist Assistant graduates have a wide choice of opportunities with medical groups, hospitals, rehabilitation centers, outpatient clinics, national and state agencies, and school systems. For those who desire to further their education, Progression Master of Physical Therapy and Post-professional Doctor of Physical Therapy and Doctor of Physical Therapy Science programs are available.

THE PROGRAM

The Physical Therapist Assistant Program leads to the Associate in Science degree and professional licensure. The program begins with the sophomore year. Instruction begins in June; graduation is the following June. Official program completion, however, is when clinical affiliations are completed—usually by the end of September.

Clinical experience

Supervised clinical experience is obtained in a variety of settings during the program. Students complete a two-week practicum and three major clinical assignments, each six weeks in length.

All clinical assignments will be made by the coordinator of clinical education or a designate (or program director). Because of the limited number of local facilities available, assignments cannot be made on the basis of the student's family/marital status or personal preference. Although the department makes an effort to accommodate the student's preference, the student agrees to accept the clinical assignment made by the department at any of the affiliated facilities, whether local or out of state.

Accreditation

The program is accredited by the Commission on Accreditation in Physical Therapy Education of the American Physical Therapy Association, 1111 North Fairfax Street, Alexandria, VA 22314; telephone, 703/706-3245.

CPR CERTIFICATION

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

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. (See section II, Admissions Information: ENTRANCE REQUIREMENTS—Pre-entrance health requirements/Immunizations.)

PROFESSIONAL REGISTRATION

Satisfactory completion of the degree requirements and clinical affiliation qualifies the student to sit for the National Physical Therapy Assistant Licensing Examination. Licensure is not

required in all states for the physical therapist assistant to practice. Information about licensure or registration in the state in which one wishes to practice can be obtained on the Web at <www.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 as a physical therapist assistant.
- demonstrate Christian values, attitudes, and behaviors to themselves, to others, and to their profession.
- demonstrate ethical and legal accountability to themselves and their patients.
- commit to proactive, long-term involvement in professional and personal growth.
- participate as part of the resource personnel assisting the Seventh-day Adventist Church to achieve its global mission.

In addition, the physical therapist assistant faculty and staff have identified four “core objectives” that are being addressed in each class each quarter. The student will:

- demonstrate effective written, verbal, and nonverbal communication with instructors, classmates, and clinical personnel.
- demonstrate effective problem-solving skills.
- exhibit professionalism to instructors, classmates, and clinical personnel.
- 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.

Four units of religion are required only if the applicant has attended a Seventh-day Adventist college or university

Select 4 units from one area: history, literature, philosophy, foreign language, art/music appreciation/history

Human anatomy and physiology with laboratory, complete sequence

Introductory physics with laboratory, one quarter/semester

Two years high school mathematics with grades of C or above **or** intermediate algebra in college

General psychology

Human growth and development **or** developmental psychology **or** abnormal psychology

English composition, complete sequence

Speech

Personal health **or** nutrition **or** two physical activity courses

Electives to meet the minimum total requirements of 48 quarter units or 32 semester units

Work/Observation experience

Twenty hours in an inpatient physical therapy setting, plus an additional sixty hours in an inpatient or outpatient setting—for a total of eighty hours—are required.



Representing the Department of Physical Therapy and its many programs are:
 (front row) James Syms and Eric Johnson,
 (second row) Jan Fisher, Nicceta Davis, Donna Thorpe, Jeannine Stuart-Mendes,
 Tony Valenzuela, Bonnie Forrester, Andrea Walker,
 (third row) Howard Sulzle, Carol Appleton, Jerry Petrofsky, Edd Ashley,
 (fourth row) Larry Chinnock, Steve Swen, and Everett Lohman
 and that's not all of our PT/PTA faculty!



Jan Fisher (below), administrative assistant, has seen many changes in our Department of Physical Therapy over the years . . . and things just keep getting better.



(Left, from top down) the administrative secretaries—Jodee Shaw of the Physical Therapy Assistant program and Barbara Cassimy and Andrea Walker of the various physical therapy master's and doctoral degree programs—help keep the faculty and all the students on the right track.

**PROGRAM OF INSTRUCTION
PHYSICAL THERAPIST ASSISTANT—Associate in Science**

The program of instruction outlined as follows is for students enrolled during the 2003-2004 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 Exercise	2
PTAS 231	Physical Therapy Modalities	3
PTAS 236	Applied Electrotherapy	3
PTAS 238	Wound Care I	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	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.



We call him "Mr. Physical Therapy." Dr. Edd Ashley, who began teaching in the Department of Physical Therapy in 1968, has been department chair since 1979. If you would like to learn more about Edd, just ask him. You'll probably never meet a more interesting person.

PHYSICAL THERAPY—**Entry-Level Master of Physical Therapy****Progression Master of Physical Therapy****Postprofessional Master of Physical Therapy****Entry-Level Doctor of Physical Therapy****Postprofessional Doctor of Physical Therapy****Postprofessional Doctor of Physical Therapy Science**

Physical therapists evaluate and treat patients with disease, injury, or disabilities. In many states, registered physical therapists work as independent practitioners. The physical therapy techniques are applied to restore strength, flexibility, and coordination; to reduce pain; and generally to prepare the patient to function more effectively at work and in activities of daily living. Agents such as heat, light, electricity, water exercise, and massage are used. While working with patients, psychological and sociological principles are used to motivate and instruct.

Within the profession there are many specialties, including orthopaedics, neurology, pediatrics, geriatrics, cardiopulmonary, hand rehabilitation, and sports physical therapy. Physical therapists work in acute-care and convalescent hospitals, rehabilitation centers, children's centers, private practice, athletic training and sports-medicine programs, research institutions, school systems, and home-care agencies.

CPR CERTIFICATION

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

PROFESSIONAL ASSOCIATION

Students and graduates are eligible for membership in the American Physical Therapy Association (APTA). The objective of the association is to foster development and improvement of service and education. This organization grants student membership at a nominal cost to students of approved schools. The student is required to become a member of this association while in the program and is encouraged to read the journal and attend the APTA-sponsored meetings.

PROFESSIONAL REGISTRATION

Satisfactory completion of the 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. The program will no longer be offered as of June 2004. Individuals are encouraged to apply to the entry-level DPT program.

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 2003-2004

To be eligible for admission, the applicant must have a minimum G.P.A. of 3.0 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.

Prerequisites for Entry-Level Master of Physical Therapy, M.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. If applicants have attended a Seventh-day Adventist college or university, they must have a minimum of 4 units religion per year (up to 12).

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. For the remaining units to meet the 28, students may take additional religion or humanities course work.

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 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

+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

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 Master of Physical Therapy

The program of instruction outlined as follows is for students enrolled during the 2003-2004 academic year.

YEAR ONE

PHTH 413	Clinical Neurology	2
PHTH 427	Human Life Sequences	3
PHTH 434	PT Communication and Documentation	2
PHTH 435	Hydrotherapy and Massage	3
PHTH 436	Kinesiology	3
PHTH 437	Therapeutic Procedures	3
PHTH 438	Manual Muscle Testing	3
PHTH 465	Exercise Physiology	3
PHTH 471	Physical Therapy Practicum I	1
PHTH 477	Locomotion Studies	3
PHTH 484	Therapeutic Exercise	4
AHCJ 305	HIV/AIDS and the Health Provider	1
AHCJ 311	Medical Terminology	2
AHCJ 328	Portfolio Practicum I	1
AHCJ 402, 403	Pathology I, II	4, 3
AHCJ 412	Anatomy	9
AHCJ 418, 419	Physiology I, II	4, 3
AHCJ 426	Introduction to Computer Applications I	2
AHCJ 443, 444	Neuroanatomy I, II	4, 2
AHCJ 538	Histology	2
REL_ 4__	Adventist selective	2
REL_ 4__	Religion selective	3

YEAR TWO

PHTH	401-403	Neurorehabilitation I, II, III	2, 3, 3
PHTH	404, 405	Pediatric Care I, II	3, 2
PHTH	411	Clinical Orthopaedics	2
PHTH	412	Clinical Psychiatry	2
PHTH	415	Hand Rehabilitation for the Physical Therapist	2
PHTH	421-423	Orthopaedics I, II, III	3, 3, 3
PHTH	424	Electrotherapy	3
PHTH	425, 426	General Medicine I, II	3, 3
PHTH	431	Soft-Tissue Techniques	2
PHTH	461	Physical Therapy Administration	4
PHTH	472	Physical Therapy Practicum II	1.5
PHTH	495, 496	Research I, II	3, 2
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	473	Physical Therapy Practicum III	1.5
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.

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 clinical affiliations.

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 2003-2004

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

*One additional Biology course (Microbiology preferred)

*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

*One course in basic communication skills

*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 2003-2004 academic year.

YEAR ONE

PHTH	402, 403	Neurorehabilitation II, III	3, 3
PHTH	404, 405	Pediatric Care I, II	3, 2
PHTH	421-423	Orthopaedics I, II, III	3, 3, 3
PHTH	438	Manual Muscle Testing	3
PHTH	465	Exercise Physiology	3
PHTH	495, 496	Research I, II	3, 2
PMPT	421	Kinesiology	2
PMPT	427	Human Life Sequence	2
PMPT	476	Therapeutic Exercise	3
PMPT	477	Locomotion Studies	3
AHCJ	311	Medical Terminology	2
AHCJ	328	Portfolio Practicum I	1
AHCJ	402, 403	Pathology I, II	4, 3
AHCJ	412	Anatomy	9
AHCJ	418, 419	Physiology I, II	4, 3
AHCJ	443, 444	Neuroanatomy I, II	4, 2
AHCJ	538	Histology	2
HPRO	508	Aspects of Health Promotion	2
REL_	4__	Religion selective	3

YEAR TWO

PHTH	402	Neurorehabilitation II	3
PHTH	411	Clinical Orthopaedics	2
PHTH	412	Clinical Psychiatry	2
PHTH	415	Hand Rehabilitation for the Physical Therapist	2
PHTH	425, 426	General Medicine I, II	3, 3
PHTH	431	Soft-Tissue Techniques	2
PHTH	461	Physical Therapy Administration	4
PHTH	595-597	Applied Research I, II, III	1, 2, 1
PMPT	474	Physical Therapy Practicum	1.5
PMPT	524	Electrotherapy	2
PMPT	534	Physical Therapy Communication and Documentation	2
PMPT	535	Hydrotherapy and Massage	2
PMPT	583	Physical Therapy Affiliation I	4
PMPT	591	Advanced Orthopaedic Studies	5
PMPT	592	Advanced Neurologic Studies	5
PMPT	593	Advanced General Medicine Studies	3
AHCJ	305	HIV/AIDS and the Health Provider	1
AHCJ	404	Pharmacology	1
AHCJ	405	Dynamics of Learning and Teaching	1
AHCJ	421	Psychology of Physical Disability	2
AHCJ	426	Introduction to Computer Applications	2
AHCJ	498	Portfolio Practicum II	1
RELE	457	Christian Ethics and Health Care	3
REL_	4__	Religion selective	2
RELF	4__	Adventist selective	

YEAR THREE

PMPT	584, 585	Physical Therapy Affiliation II, III	4, 4
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PHYSICAL THERAPY—Postprofessional 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 Postprofessional 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. Postprofessional education cannot be used for this purpose.

DISTANCE EDUCATION

The Postprofessional Master of Physical Therapy Program is offered on site at Antillean Adventist University, Mayaguez, Puerto Rico.

PROGRAM OF INSTRUCTION

PHYSICAL THERAPY—Postprofessional Master of Physical Therapy

The program of instruction outlined as follows is for students enrolled during the 2003-2004 academic year.

PHTH	529	Pathokinesiology of Gait	3
PHTH	531	Soft-Tissue Techniques	3
PHTH	545	Orthopaedic Interventions: Mobilization of Peripheral Nerves and Diarthroidal Joints of the Extremities	3
PHTH	548	Function-Based Rehabilitation	3
PHTH	598	Advanced Specialty Tracks	3
AHCJ	505	Educational Psychology for Health Professionals	3
AHCJ	509	Teaching and Learning Styles	3
AHCJ	511	Biostatistics I	3
AHCJ	526	Computer Applications II	3
AHCJ	538	Histology	2-3
AHCJ	544	Advanced Functional Neuroanatomy	3
AHCJ	591	Research I	3
AHCJ	592	Research II	3
MFAM	558	Advanced Human Growth and Development	3
RELR	575	Art of Integrative Care	3

PHYSICAL THERAPY—Entry-Level 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 2003-2004

To be eligible for admission, the applicant must have a minimum G.P.A. of 3.0 and must have completed a minimum of 138 quarter units at a regionally accredited college or university. Admission is a selective process. Criteria used include: G.P.A., completion of subject requirements, interview, essay, recommendations, and work experience.

The minimum subject admission requirements in quarter units are listed below. Grades 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. If applicants have attended a Seventh-day Adventist college or university, they must have a minimum of 4 units religion per year (up to 12).

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. For the remaining units to meet the 28, students may take additional religion or humanities course work.

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

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 2003-2004 academic year.

YEAR ONE

PHTH 413	Clinical Neurology	2
PHTH 427	Human Life Sequence	3
PHTH 434	Physical Therapy Communication and Documentation	2
PHTH 435	Hydrotherapy and Massage	3
PHTH 436	Kinesiology	3
PHTH 437	Therapeutic Procedures	3
PHTH 438	Manual Muscle Testing	3
PHTH 465	Exercise Physiology	3
PHTH 471	Physical Therapy Practicum I	1
PHTH 477	Locomotion Studies	3
PHTH 483	Therapeutic Exercise	4
PHTH 495	Research I	3
AHCJ 305	HIV /AIDS for the Health Provider	1
AHCJ 311	Medical Terminology	2
AHCJ 328	Portfolio Practicum I	1
AHCJ 402, 403	Pathology I, II	4, 3
AHCJ 412	Anatomy	9
AHCJ 418, 419	Physiology I, II	4, 3
AHCJ 426	Introduction to Computer Applications	2
AHCJ 443, 444	Neuroanatomy I, II	4, 2
AHCJ 511, 512	Biostatistics I, II	3, 3
AHCJ 538	Histology	2
AHCJ 605	Critical Analysis of Scientific Literature	2
REL_ 4__	Religion selective	3
REL_ 4__	Adventist selective	2

YEAR TWO

PHTH 401-403	Neurorehabilitation I, II, III	2, 3, 3
PHTH 404, 405	Pediatric Care I, II	3, 2
PHTH 411	Clinical Orthopaedics	2
PHTH 412	Clinical Psychiatry	2
PHTH 415	Hand Rehabilitation for the Physical Therapist	2
PHTH 421-423	Orthopaedics I, II, III	3, 3, 3
PHTH 424	Electrotherapy	3
PHTH 425, 426	General Medicine I, II	3, 3
PHTH 431	Soft-Tissue Techniques	2
PHTH 461	Physical Therapy Administration	4
PHTH 472	Physical Therapy Practicum II	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 for Health Professionals	3
AHCJ 532	Research and Statistics III	3
AHCJ 551	Professional Systems in Management I	3
AHCJ 601	Research-Proposal Writing	3
HPRO 508	Aspects of Health Promotion	2
RELE 457	Christian Ethics and Health Care	3
REL_ 4__	Religion elective	2

YEARS THREE, FOUR

PHTH 473	Physical Therapy Practicum III	1.5
PHTH 583	Physical Therapy Affiliation I	5
PHTH 586-588	DPT Affiliation I, II, III	5, 5, 5
PHTH 591	Advanced Orthopaedic Studies	6
PHTH 592	Advanced Neurologic Studies	6
PHTH 594	Advanced General Medicine Studies	4
AHCJ 533	Research and Statistics IV	3

PHYSICAL THERAPY—Postprofessional Doctor of Physical Therapy

ADMISSION

The Postprofessional 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 degree prior

to beginning the program. The applicant must have completed a full research project. Upon evaluation of transcripts, additional co-requisites may be required, and sequencing of courses may be modified. There is no GRE requirement for acceptance into this program.

Since some courses are Web based, students admitted into the program must have access to a personal computer (minimum: 300 MHz multimedia) with Internet access (minimum: 56 kbs [v.90 standard]).

PROGRAM OF INSTRUCTION

PHYSICAL THERAPY—Postprofessional Doctor of Physical Therapy

PHTH	541	Advanced Clinical Practice I	3
PHTH	542	Advanced Clinical Practice II	3
PHTH	543	Advanced Clinical Practice III	3
PHTH	629	Lower-Quarter Biomechanical Relationships	3
AHCJ	507	Pharmacology in Rehabilitation	3
AHCJ	516	Clinical Imaging	3
AHCJ	518	Neurobiology	3
AHCJ	527	Medical Screening for Rehabilitation Professionals	3
AHCJ	551	Professional Systems in Management I	3
AHCJ	605	Critical Analysis of Scientific Literature	3
AHCJ	699	Directed Study	3
RELR	525	Health Care and the Dynamics of Christian Leadership	3
—	—	Electives	9

PHYSICAL THERAPY—Postprofessional Doctor of Physical Therapy Science

ADMISSION

The Postprofessional 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, the applicant must have completed 75-quarter units beyond the bachelor's degree and must have earned a Doctor of Physical Therapy degree. The applicant must have completed a full research

project. Upon evaluation of transcripts, additional co-requisites may be required, and sequencing of courses may be modified. There is no GRE requirement for acceptance into this program; however, successful completion of a comprehensive written examination is required.

Since some courses are Web based, students admitted into the program must have access to a personal computer (minimum: 300 MHz multimedia) with Internet access (minimum: 56 kbs [v.90 standard]).

PROGRAM OF INSTRUCTION

PHYSICAL THERAPY—Postprofessional Doctor of Physical Therapy Science

AHCJ	506	Educational Evaluation and Clinical Assessment	3
AHCJ	515	Curriculum Development in Higher Education	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	6
AHCJ	534	Advanced Neurological Rehabilitation	3
AHCJ	535	Exercise and Thermoregulation	3
AHCJ	556	Administration in Higher Education	3
AHCJ	564	Group Process and Dynamics	3
AHCJ	569	Computers and Electronics for Clinicians	3
AHCJ	599	Directed Teaching	3
RELF	557	Theology of Human Suffering	3
—	—	Electives	3

COURSES

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

PHTH 401 Neurorehabilitation I (2)

Basic physiological and neurophysiological mechanisms specific to therapeutic concepts. Clinical approach to pathology and trauma of the central and peripheral nervous systems. Stroke, spinal cord injury, and head injuries. Emphasis on clinical application.

PHTH 402 Neurorehabilitation II (3)

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 427 Human Life Sequence (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 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 436 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 437 Therapeutic Procedures (3)

Blood pressure determination and aseptic techniques. Principles and utilization of posture and body mechanics. Selection and use of wheelchairs, ambulation aids, and other equipment. Progressive planning toward complete activities of daily living.

PHTH 438 Manual Muscle Testing (3)

Methods of evaluating muscle strength and function by use of specific and gross manual muscle tests. Lecture, demonstration, and laboratory.

PHTH 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, constraint-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 467 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.

PHTH 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.

PHTH 484 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 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 515 Topics in Rehabilitation (1-6)

Lecture and discussion of current topics relating to the practice of physical therapy. Content varies from quarter to quarter. (May be repeated for additional credit for a maximum of 6 quarter units.)

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 541 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.

PHTH 542 Advanced Clinical Practice II (3)

Emphasizes the skills utilized by clinical specialists in neurophysical therapy. Content based on the description of PHTH 541.

PHTH 543 Advanced Clinical Practice III (3)

Advanced clinical decision-making skills, with focus on patient classification, clinical-diagnosis practice parameters, and practice guidelines. Emphasizes development of clinical algorithms, clinical prognostic skills, and outcome measures.

PHTH 544 Physical Therapy Business Development Concepts (1)

Discussion and practice designed to enhance the knowledge of the practitioner who desires to own, manage, or direct a physical therapy practice or department. General trends, start-up considerations, HRM, finance, marketing research and development; learning to bill, collect, and interpret EOB's coding and compliance issues (Medicare and state); and locating capital to finance the venture.

PHTH 545 Orthopaedic Interventions: Mobilization of Peripheral Nerves and Diarthroidal Joints of the Extremities (3)

Advanced study of the management of orthopaedic and neurological disorders of the extremities. Clinical course designed to strengthen student's knowledge and application of mobilization techniques to the joints and nerves of the periphery. Lecture, laboratory sessions, case studies, and cadaveric specimen-guided study (as specimens available).

PHTH 546 Women's Health Issues I (3)

Clinical aspects of women's health issues. How to develop a women's health program in the clinical setting. Introduction to various pathologies and treatment strategies for specific diagnoses encountered in the clinical setting. Women's health issues during adolescence, the reproductive years, and the geriatric years.

PHTH 547 Women's Health Issues II (3)

Advanced course further exploring women's health issues—including treatment strategies for women during various phases of their lives. Anatomy and physiology during adolescence, the reproductive years, and the geriatric years.

Prerequisite: PHTH 546.

PHTH 548 Function-Based Rehabilitation (3)

Manual therapy approach for the treatment of common musculoskeletal problems, integrating orthopaedic and neurological rehabilitation. Course based on a working knowledge of anatomy, muscle-balance theory, neurodevelopmental treatment (NDT), muscle-length testing, soft-tissue mobilization (STM), and proprioceptive neuromuscular facilitation (PNF) principles. Emphasizes use of clinical reasoning during patient evaluation and patient management.

PHTH 551 Advanced Orthopaedic Procedures I (3)

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

PHTH 552 Advanced Orthopaedic Procedures II (3)

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

PHTH 553 Advanced Orthopaedic Procedures III (3)

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

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 572, 573 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 583 Physical Therapy Affiliation I (5)

Nine eleven-week clinical assignment to be completed in the Summer, Winter, and Spring Quarters during the third 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 584 Physical Therapy Affiliation II (5)

Nine eleven-week clinical assignment to be completed in the Summer, Winter, and Spring Quarters during the third 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 585 Physical Therapy Affiliation III (5)

Nine eleven-week clinical assignment to be completed in the Summer, Winter, and Spring Quarters during the third 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—the third of three affiliations required in the final year. Emphasis in any of a variety of settings: acute care, outpatient care, neurorehabilitation, orthopaedics, geriatrics, pediatrics, sports medicine, and preventive care/wellness. 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.

PHTH 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.

PMPT 421 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 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 474 Physical Therapy Practicum (1.5)

A three-week assignment in affiliated clinical settings. Forty clock hours per week of supervised clinical experience.

PMPT 476 Therapeutic Exercise (3)

Application of physical, mechanical, and soft-tissue biomechanical considerations in the formulation of exercise prescriptions. Considerations of the neuro-physiological basis of motor control and motor-learning acquisition, and selection of exercise modes for treatment of musculoskeletal and neurological disorders and the nonpathological individual. Class modified for the progression-program PTA graduate, who already has some basic knowledge.

PMPT 477 Locomotion Studies (3)

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 524 Electrotherapy (2)

Principles and techniques of electrotherapy procedures, including electrodiagnosis. Basic physical and physiological indications and contraindications. Lecture, demonstration, and laboratory. Modified for the Progression M.P.T. Program.

PMPT 534 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 considerations, and computer documentation programs. Class modified for the Progression M.P.T. Program.

PMPT 535 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 583 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 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.

PMPT 591 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 592 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 593 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.

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, 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 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, 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.

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.

RELE 456 Personal and Professional Ethics (2)

The foundations, norms, and patterns of personal integrity and professional responsibility. Additional project required for third unit. 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.

RELF 423 Loma Linda Perspectives (2)

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

RELR 475 Art of Integrative Care (2)

The integration of psychosocial and spiritual care in the clinical setting.

RELR 575 Art of Integrative Care (3)

The integration of psychosocial and spiritual care in the clinical setting.

RADIATION TECHNOLOGY

MEDICAL RADIOGRAPHY—Associate in Science

RADIATION SCIENCES—Bachelor of Science

RADIATION THERAPY TECHNOLOGY—Bachelor of Science; Certificate

RADIOLOGIST ASSISTANT—Bachelor of Science; Certificate

DIAGNOSTIC MEDICAL SONOGRAPHY—Certificate

NUCLEAR MEDICINE TECHNOLOGY—Certificate

SPECIAL IMAGING TECHNOLOGY: CT/MRI—Certificate

ARTHUR W. KROETZ, Department 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

NORIECE R. KINSINGER, Clinical Coordinator, Radiation Therapy Program

MARIE M. DELANGE, Clinical Program Director for Certificate, Diagnostic Medical Sonography

TERESE R. PFEIFFER, Program Coordinator, Radiation Therapy Technology Distance Education

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

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Kelly A. Burk
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Barbara S. Holshouser
Noriece R. Kisinger
Arthur W. Kroetz
Steven L. Leber
Terese R. Pfeiffer

CLINICAL FACULTY

Brenda S. Holden
Helen J. King
Glenn A. Rouse

TUITION

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

You can count on a friendly greeting and a helping hand from Beverly Martinez, administrative secretary in the Department of Radiation Technology.



MEDICAL RADIOGRAPHY—Associate in Science

The medical radiographer, or radiologic technologist, is responsible for the accurate imaging of body structures on a radiograph or other image receptor. The technologist determines proper exposure factors, manipulates medical imaging equipment, evaluates the radiographic image for quality, and provides for patient protection and comfort.

The technologist frequently assists the physician team member in specialized procedures. These often require the administration of chemical mixtures to the patient for enhanced viewing of the function of body systems.

THE PROGRAM

The Medical Radiography Program begins with the Autumn Quarter and is based on the completion of one year of prerequisite course work at any accredited college or university. The first quarter at Loma Linda University primarily emphasizes the theoretical aspects of radiography, with one day per week in clinical orientation. The remaining five quarters combine clinical training on a two-to-five-days-per-week basis, with more advanced classroom topics. The schedule extends through vacation periods and 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

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

PROFESSIONAL REGISTRATION AND CERTIFICATION

Upon completion of the requirements for the Associate in Science degree, the graduate is eligible to write the qualifying examination of The American Registry of Radiologic Technologists (ARRT) and become certified by the state of California.

PROFESSIONAL ASSOCIATION

Students 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

Upon completion of the program, the graduate should be qualified to:

1. Complete all certification requirements of the state of California and the American Registry of Radiologic Technologists.
2. Anticipate and provide basic patient care, comfort, and education, as needed.
3. Practice radiation protection by utilizing principles of basic x-ray production and interactions to limit radiation exposure to the patient, self, and other members of the health care team.
4. Understand the limits of equipment operation, including the recognition of equipment malfunctions and problem-reporting procedures.
5. Obtain optimum images by properly utilizing equipment, accessories, techniques, and procedures; and apply knowledge of human structure, function, and pathology to varying patient situations.

6. Demonstrate knowledge and skills relating to quality-assurance activities.
7. Provide services to humanity, with full respect for the dignity of all persons.
8. Communicate appropriately with patients, colleagues, and others with whom s/he comes in contact.
9. Have 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 chemistry **or** physics **or** physical science; **or** introductory chemistry, introductory physics or physical science in college (one quarter/semester)

General psychology **or** sociology

English composition, complete sequence

Speech

Computers, one year high school computer courses; **or** one qtr/sem college computer course

Electives to meet the minimum total requirements of 42 units

Observation experience

A minimum of twelve hours of observation in a radiology department is required. Contact the department to obtain the appropriate form.

PROGRAM OF INSTRUCTION

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, 3
RTMR	253L-254L	Medical Radiography Procedures Laboratory I, II	1, 1
RTMR	283	Radiologic Physics	3
RTMR	284	Radiation Protection and Biology	2
RTMR	285, 286	Principles of Radiography I, II	3, 4
RTMR	371	Medical Radiography Affiliation I	1
AHCJ	326	Patient-Care Methods	2
RELE	457	Christian Ethics and Health Care	2
REL_	—	Religion elective	2

CLINICAL YEAR

RTMR	255	Medical Radiography Procedures III	2
RTMR	287	Principles of Radiography III	2
RTMR	314	Research/Writing for Radiologic Technologists	1
RTMR	321	Radiographic Film Critique	1
RTMR	331	Special Technical Procedures	2
RTMR	334	CT and Cross-sectional Anatomy	2
RTMR	342	Computer Applications in Radiology	1
RTMR	345	Radiologic Pathology	2
RTMR	363	Comprehensive Review	1
RTMR	372-375	Medical Radiography Affiliation II, III, IV, V	2, 3, 2, 2
AHCJ	305	HIV/AIDS and the Health Provider	1
AHCJ	328	Portfolio Practicum I	1

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

RADIATION SCIENCES—Bachelor of Science

For radiologic technologists educationally prepared beyond the level of the Associate in Science degree, there are numerous career options. Radiology departments in large hospitals offer career opportunities in management, supervision, and research. Excellent opportunities also exist for those who are qualified to teach radiologic technology. In addition, commercial enterprises and state governments continually need technologists with advanced training to serve as customer representatives, technical consultants, and health physicists.

THE PROGRAM

The Bachelor of Science degree program, which begins at the level of the junior year, emphasizes the more advanced areas in radiologic technology and is designed to prepare graduates for careers in administration, clinical specialties, teaching, or health physics.

Students choosing to study on a part-time basis must complete the junior and senior years within a four-year period.

Accreditation

Loma Linda University is regionally accredited by 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 building, 24887 Taylor Street, Suite 102.

THE PROGRAM OBJECTIVES

Upon completion of the program, the graduate should be qualified to:

1. Demonstrate leadership skills through advanced and multilevel thinking in the areas of administration and education, science, and clinical practice.
2. Develop and refine critical thinking skills to enhance his/her ability to analyze and develop the most effective means of care for patients, to manage a department, or to educate students.
3. Behave in a professional manner in all interactions, including communicating appropriately with patients, colleagues, and others with whom s/he comes in contact.
4. Demonstrate teamwork in the clinical setting and other situations where this concept leads to completion of goals that an individual could not easily meet alone.

5. Continue to improve knowledge and skills by participating in educational and professional activities, sharing knowledge with colleagues, and investigating new and innovative aspects of professional practice.
6. Support the profession's code of ethics and comply with the profession's scope of practice.
7. Utilize Loma Linda University's program as a linkage to other programs and disciplines, as desired.

ADMISSION

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, one semester/quarter minimum; **or** general biology with laboratory, complete sequence
 Additional natural science units from: chemistry, geology, mathematics, physics, and statistics
 Must have a total of 12 quarter hours, including up to 6 units from anatomy and physiology

Two years high school mathematics with grades of C or above, **or** intermediate algebra in college
 Cultural anthropology **or** an approved course dealing with cultural diversity
 Select 8 quarter units from: economics, geography, political science, psychology, sociology, or anthropology
 English composition, complete sequence
 Personal health or nutrition
 Two physical activity courses
 Electives to meet the minimum total requirements of 42 quarter units

**PROGRAM OF INSTRUCTION
 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
AHCJ 465	Seminars in Leadership	2
AHCJ 498	Portfolio Practicum II	1
REL_ ___	Religion electives	8

AREA OF EMPHASIS

A. ADMINISTRATION AND EDUCATION (10 units)

RTCH 411-412	Student-Teaching Practicum I, II	2, 2*
RTCH 413-414	Radiologic Management Practicum I, II	2, 2*
RTCH 475	Curriculum Development in Health Sciences	2
RTMR 454	Quality Management in Radiation Sciences	2
RSTH 471	Instructional Techniques I	2

A minimum grade of C (2.0) is required for all classes.
 *Total of 4 units to be chosen from RTCH 411, 412, 413, 414.

B. CLINICAL PRACTICE

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. DEGREE
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.

RADIATION THERAPY TECHNOLOGY—Bachelor of Science

Radiation therapy is a multifaceted career that combines working in a highly technical environment with the opportunity to work closely with patients and members of many other professions to provide a high standard of clinical care. Radiation therapy is the therapeutic application of ionizing radiation to malignant and benign conditions. The therapist is responsible for delivering the treatment, which is prescribed by a radiation oncologist; maintaining accurate treatment records; and implementing quality-assurance plans. A radiation therapist must be detail oriented; able to work accurately under pressure; and, most important, able to interact empathically with patients. Individuals who show initiative and are capable of critical thinking and problem solving make good radiation therapists. The job demand in this well-paying field is currently high.

PROGRAM DESCRIPTION

This B.S. degree program is designed to accommodate both x-ray technologists and professionals who are currently licensed and working in the field of radiation therapy.

TRACK A is for ARRT-registered radiologic technologists, registered nurses, or graduates from another accredited allied health program who have fulfilled the prerequisites and who wish to be educated as radiation therapists. It is designed as a full-time, twenty-four month degree course and will fully prepare students to pass the national board examinations at the end of the program.

TRACK B is designed for radiation therapists who are ARRT registered in radiation therapy and who wish to obtain a baccalaureate degree. It is a twenty-four-month program that is didactic in nature and helps prepare the therapist for duties in the areas of teaching or administration.

Courses will be a combination of Web-based learning and traditional learning; some classes, therefore, may not meet weekly.

CPR CERTIFICATION

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

PROFESSIONAL REGISTRATION AND CERTIFICATION

Upon completion of the certificate requirements, the student is eligible to write the qualifying examination 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 471	Applied Research Methods	1
RTCH 494	Senior Project	2
RTMR 451	Management of a Radiologic Service	3
RTMR 454	Quality Management in Radiation Sciences	2
AHCJ 305	HIV/AIDS and the Health Provider	1
AHCJ 328	Portfolio Practicum I	1
AHCJ 351	Statistics for the Health Professions	3
AHCJ 461	Research Methods	2
AHCJ 498	Portfolio Practicum II	1
EMMC 314	Introduction to 12-Lead ECG Interpretation	1
EMMC 484	Legal Issues in Health Care	2
RELF 416	God and Human Suffering	3
RELF 423	Loma Linda Perspectives	2
RELE 457	Christian Ethics and Health Care	3

Track A (45-46 units)

RTTH 332	Radiation Biology	1
RTTH 342	Patient-Care Practices in Radiation Therapy	2
RTTH 344	Radiation Therapy Procedures	2
RTTH 345	Quality Assurance in Radiation Therapy	1
RTTH 348	Radiation Therapy Review	1
RTTH 353	Psycho-Oncology	2
RTTH 355	Physical Principles of Radiation Therapy	3
RTTH 356	Physical Principles of Dosimetry	3
RTTH 357	Applied Dosimetry	2
RTTH 358	Advanced Dosimetry (with laboratory)	3
RTTH 364	Radiation Oncology I	3
RTTH 365	Radiation Oncology II	3
RTTH 371-374	Radiation Therapy Affiliation I, II, III, IV	1, 1, 1, 1
RTTH 381, 382	Topics in Radiation Therapy	2, 2
AHCJ 402	Pathology I	4
AHCJ 403	Pathology II	3-4
AHCJ 404	Pharmacology	1
DTCS 301	Human Nutrition	3

Track B (26 units)

RTCH 411	Student Teaching Practicum I	2
RTCH 413	Radiologic Management Practicum I	2
RTCH 464	Moral Leadership	4*
RTCH 470	Curriculum Development in Health Science	2
RTTH 353	Psycho-Oncology	2
RTTH 358	Advanced Dosimetry (with laboratory)	3
AHCJ 402	Pathology I	4
AHCJ 403	Pathology II	3-4
AHCJ 404	Pharmacology	1
AHCJ 465	Seminars in Leadership	2*
DTCS 301	Human Nutrition	3
RSTH 471	Instructional Techniques I	2

*Either RTCH 464 or AHCJ 465 may be taken.

RADIATION THERAPY TECHNOLOGY—Certificate

During the twelve-month certificate program of clinical studies in radiation therapy technology, students take formal course work along with instruction in the clinical aspects of radiation therapy. The program begins with the Autumn Quarter. The clinical portion of the program consists of practical demonstrations in the use of radiation therapy equipment and an opportunity to participate, under close supervision, in actual radiation therapy procedures in a variety of radiation oncology departments. The clinical calendar varies from the University calendar in that the clinical schedule is full time (forty clock hours per week), arranged around lectures, and coordinated with the operation of the Loma Linda University Medical Center radiation medicine department.

ACCREDITATION

The program is accredited by the Joint Review Committee on Education in Radiologic Technology, 20 North Wacker Drive, Suite 900, Chicago, IL 60606-2901; telephone 312/704-5300.

DISTANCE EDUCATION

The Radiation Therapy Technology Program is offered via distance education at Fresno City College, Fresno, California.

CPR CERTIFICATION

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

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 two prerequisites:

- Be an ARRT-registered radiologic technologist; **and/or**
- Be a graduate of an accredited radiologic technology program;

and

Must have credits in the following:

- Radiation physics
- Human anatomy and physiology with laboratory, complete sequence
- Intermediate algebra in college
- Radiation protection (available in professional program for those who have not taken it)
- Patient-care methods
- Computers

or

- Be a registered nurse **or**
- Be a graduate of an accredited allied health program (minimum training of two years)

and

Must have credits in the following:

- Human anatomy and physiology with laboratory, 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 required

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 2003-2004 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

RADIOLOGIST ASSISTANT—Bachelor of Science

The American Society of Radiologic Technologists (ASRT) supports this mid-level provider, the radiologist assistant (RA). The RA is an advanced-level radiologic technologist who enhances patient care by extending the capacity of the radiologist in the diagnostic imaging-environment position.

According to the American Society of Radiologic Technologists (ASRT) "the radiologist assistant has three primary areas of responsibility—all performed under the supervision of a radiologist:

1. Participate in patient assessment, patient management, and patient education.
2. Perform selected radiology procedures, including, but not limited to, fluoroscopy.
3. Participate in the systematic analysis of the quality of patient care delivered within the radiology environment."

The radiologist assistant also makes initial observations of diagnostic images but does not provide an official interpretation.

PROGRAM DESCRIPTION

The program is twenty-one months (seven quarters) long. The student will need to be in the vicinity of the campus for the first three quarters (nine months), and will then have the opportunity for distance education for the remaining four quarters. The student will receive didactic and clinical mentoring on neonatal, pediatric, adult, and geriatric populations.

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 building, 24887 Taylor Street, Suite 102.

CERTIFICATION

1. CPR certification (adult, child)—students will not be allowed to attend clinical without proof of a current CPR card.#
2. Venipuncture*
3. ECG/EKG interpretation*

If the student is unable to complete the venipuncture and/or ECG certifications prior to entering the program, then equivalent courses** can be taken concurrently with the program.

**offered by:

LLU Life Support Education or

* LLU Medical Center Staff Development

THE PROGRAM OBJECTIVES

Upon completion of the program, the graduate should be qualified to:

1. Develop and refine critical thinking skills to enhance their ability to analyze and develop the most effective means of care for their patients.
2. Demonstrate leadership skill through advanced and multilevel thinking in clinical practice.
3. Synthesize pertinent patient data from diagnostic images and patient interviews to suggest and implement appropriate patient management and clinical pathways.
4. Develop and refine their skills in performing fluoroscopy and other radiology procedures.
5. Exhibit professional behavior in all interactions, including communicating appropriately with patients, colleagues and others with whom they come in contact.
6. Demonstrate teamwork in the clinical setting and other situations where this concept leads to completion of goals that an individual could not easily meet alone.
7. Participate in educational and professional activities, sharing knowledge with colleagues, and investigating new and innovative aspects of professional practice.
8. Support the profession's code of ethics and comply with the profession's scope of practice.

be accepted as transfer credit, including units for clinical education. Students who have completed a hospital training program are allowed 48-quarter units (as part of the maximum) of academic credit on the basis of their registry certificate.

- Certification from the American Registry of Radiologic Technologists (ARRT)
- A minimum of two years of full-time radiography work experience
- Prerequisites for Radiologist Assistant, B.S. degree

Prerequisites for Radiologist Assistant, B.S. degree

Please contact the program director for guidance concerning prerequisites.

20 quarter or 14-semester units minimum (choose a minimum of two areas from: history, literature, philosophy, foreign language, art/music appreciation/history).

Also included in the above minimum, 4 units of religion per year of attendance at a Seventh-day Adventist college or university

9 quarter or 6 semester units from 2 areas, to include anatomy and physiology.

8 quarter or 6 semester units, to include cultural anthropology or an approved course dealing with cultural diversity

9 quarter or 6 semester units, to include a complete sequence of freshman English

3 quarter or 2 semester units to include two physical activities and a personal health or nutrition course

Electives to bring the total units, to 71 quarter or 48 semester units of General Education

ADMISSION

To be eligible for admission, the applicant must have:

- A maximum of 105 quarter or 70 semester units from an accredited community college, which will

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

PROGRAM OF INSTRUCTION

RADIOLOGIST ASSISTANT—Bachelor of Science

The program of instruction outlined below is for students admitted during the 2003-2004 academic year. Entrance to the clinical year is contingent upon the completion of all prior requirements. The Bachelor of Science degree program consists of 63 units:

JUNIOR YEAR		(48 units)
RTCH 464	Moral Leadership	2
RTRA 331	Pharmacology I	2
RTRA 332	Pharmacology II	2
RTRA 345	Patient Assessment	2
RTRA 346	Clinical Management and Education	2
RTRA 371	Clinical Internship	1
RTRA 372	Clinical Internship	1
RTRA 373	Clinical Internship	2
RTRA 384	Radiobiology and Health Physics	2
RTRA 385	Radiology Procedures and Image Evaluation I	3
RTRA 386	Radiology Procedures and Image Evaluation II	4
RTRA 387	Radiology Procedures and Image Evaluation III	4
AHCJ 328	Portfolio Practicum I	1
AHCJ 351	Statistics for the Health Professions*	3
AHCJ 402	Pathology I	4
AHCJ 403	Pathology II	3

AHCJ	461	Research Methods*	2
REL_		Religion	3
REL_		Religion	3
REL_		Religion	2
CLINICAL YEAR			(15 units)
ACLS	___	Advanced Clinical Life Support	0
RTRA	388	Radiology Procedures and Image Evaluation IV	3
RTRA	471	Clinical Internship	2
RTRA	472	Clinical Internship	2
RTRA	473	Clinical Internship	2
RTRA	474	Clinical Internship	2
RTRA	484	Radiologist Assistant Research Project	2
RTRA	488	Comprehensive Review	1
AHCJ	498	Portfolio Practicum II	1

* Statistics and research methods are required if they have not already been taken.
 To take research methods at LLU, the student must have taken statistics at LLU or must pass a statistics test.

RADIOLOGIST ASSISTANT—Bachelor of Science Certificate

The American Society of Radiologic Technologists (ASRT) supports this mid-level provider, the radiologist assistant (RA). The RA is an advanced-level radiologic technologist who enhances patient care by extending the capacity of the radiologist in the diagnostic imaging-environment position.

According to the American Society of Radiologic Technologists (ASRT), "the radiologist assistant has three primary areas of responsibility—all performed under the supervision of a radiologist.

1. Participate in patient assessment, patient management, and patient education.
2. Perform selected radiology procedures, including, but not limited to, fluoroscopy.
3. Participate in the systematic analysis of the quality of patient care delivered with in the radiology environment."

The radiologist assistant also makes initial observations of diagnostic images but does not provide an official interpretation.

PROGRAM DESCRIPTION

The program is twenty-one months, or seven quarters long. The student will need to be in the vicinity of the campus for the first three quarters (nine months), and will then have the opportunity for distance education for the remaining four quarters. The student will receive didactic and clinical mentoring on neonatal, pediatric, adult, and geriatric populations.

CPR CERTIFICATION

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

CERTIFICATION

1. CPR certification (adult, child)—students will not be allowed to attend clinical without proof of a current CPR card.#
2. Venipuncture*
3. ECG/EKG interpretation*

If the student is unable to complete the venipuncture and/or ECG certifications prior to entering the program, then equivalent courses** can be taken concurrently with the program.

** offered by:

- # LLU Life Support Education or
- * LLU Medical Center Staff Development

THE PROGRAM OBJECTIVES

Upon completion of the program, the graduate should be qualified to:

1. Develop and refine critical thinking skills to enhance his/her ability to analyze and develop the most effective means of care for their patients.
2. Demonstrate leadership skill through advanced and multi-level thinking in clinical practice.
3. Synthesize pertinent patient data from diagnostic images and patient interviews to suggest and implement appropriate patient management and clinical pathways.
4. Develop and refine their skills in performing fluoroscopy and other radiology procedures.
5. Exhibit professional behavior in all interactions including communicating appropriately with patients, colleagues and others with whom they come in contact.
6. Demonstrate teamwork in the clinical setting and other situations where this concept leads to completion of goals that an individual could not easily meet alone.
7. Participate in educational and professional activities, sharing knowledge with colleagues and investigating new and innovative aspects of professional practice.
8. Support the profession's Code of Ethics and comply with the profession's scope of practice.

ADMISSION

To be eligible for admission, the applicant must have:

- Certification from the American Registry of Radiologic Technologists (ARRT)
- A minimum of two years of full-time radiography work experience
- A Bachelor of Science degree from an accredited institution

**PROGRAM OF INSTRUCTION
RADIOLOGIST ASSISTANT—Certificate**

The program of instruction outlined below is for students enrolled during the 2003-2004 academic year. Entrance to the clinical year is contingent upon the completion of all prior requirements. For the student who has already completed a Bachelor of Science degree, the Radiologist Assistant Certificate Program consists of 51-56 units.

FIRST YEAR		(38 units)
RTRA 331	Pharmacology I	2
RTRA 332	Pharmacology II	2
RTRA 345	Patient Assessment	2
RTRA 346	Clinical Management and Education	2
RTRA 371	Clinical Internship	1
RTRA 372	Clinical Internship	1
RTRA 373	Clinical Internship	2
RTRA 385	Radiology Procedures and Image Evaluation I	3
RTRA 386	Radiology Procedures and Image Evaluation II	4
RTRA 387	Radiology Procedures and Image Evaluation III	4
RTRA 388	Radiology Procedures and Image Evaluation IV	3
RTRA 384	Radiobiology and Health Physics	2
RTMR 464	Moral Leadership	2
AHCJ 351	Statistics for the Health Professions	3*
AHCJ 461	Research Methods	2*
AHCJ 402	Pathology I	4
AHCJ 403	Pathology II	3
REL_ —	Religion	3

CLINICAL YEAR		(18 units)
ACLS	—	Advanced Clinical Life Support
RTRA	388	Radiology Procedures and Image Evaluation IV
RTRA	471	Clinical Internship
RTRA	472	Clinical Internship
RTRA	473	Clinical Internship
RTRA	474	Clinical Internship
RTRA	484	Radiologist Assistant Research Project
RTRA	488	Comprehensive Review

* Statistics and research methods are required if they have not already been taken. To take research methods at LLU, the student must have taken statistics at LLU or must pass a statistics test.

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 building, 24887 Taylor Street, Suite 102.

ADMISSION**Requirements for 2003-2004**

The applicant must fulfill one of the following four requirements*—

- be an ARRT-registered radiologic technologist; **or**
- be a graduate of an accredited allied health program, including nursing (two years minimum training), licensed vocational nurse, or registered nurse;

or

have any Associate degree;

or

have any baccalaureate degree;

and

must have credits in the following:*

Human anatomy and physiology with laboratory, complete sequence

Intermediate algebra

Medical terminology

Patient-care methods

Introduction to computers

*Specific course requirements must be completed at an accredited college or university.



Some of the people you will see when enrolled in one of the many programs in our Department of Radiation Technology are (left to right) Mark Clements, Laura Alipoon, and Dolly Kisinger (faculty); Art Kroetz (department chair); Carol Davis (faculty); Beverly Martinez (department secretary); and Steve Leber and Erma Ezpeleta (faculty).

PROGRAM OF INSTRUCTION

DIAGNOSTIC MEDICAL SONOGRAPHY—Certificate

The program of instruction outlined below is for students enrolled during the 2003-2004 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 Clinical Affiliation	1, 1, 1, 1, 1, 1, 1
RTMS 379	Ultrasound Physics and Instrumentation I	2
RTMS 381-384	Topics in Medical Sonography I-IV	1, 1, 2, 2
RTMS 387	Ultrasound Physics and Instrumentation II	2
HPRO 443	Writing for Publication	2
RELE 457	Christian Ethics and Health Care	2-3

Option: Third credential (RDCS) requires additional nine 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	2
RELE 457	Christian Ethics and Health Care	2-3
EMMC 315	Cardiology	3

Option: RVT or RDMS credential requires one additional year

TRACK 3:

One-year certificate (Prerequisite: RDMS certification)

One credential—Vascular (RVT)

RTMS 344	Introduction to Medical Sonography	4
RTMS 346	Vascular Technology/Doppler/Scan Techniques	5
RTMS 361-364	Vascular Ultrasound Clinical Affiliation	1, 1, 1, 1
RTMS 379	Ultrasound Physics and Instrumentation I	2
RTMS 383	Topics in Medical Sonography III	2
RTMS 387	Ultrasound Physics and Instrumentation II	2

Option: 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

Nuclear medicine uses radioactivity to diagnose and treat disease. This medical specialty provides information about both the structure and the function of virtually every major organ system within the body. Nuclear medicine procedures are safe, involve little or no patient discomfort, and do not require the use of anesthesia. The nuclear medicine technologist is responsible for preparing and administering radiopharmaceuticals; performing patient-imaging procedures; accomplishing computer processing and image enhancement; analyzing biologic specimens; and providing images, data analysis, and patient information for diagnostic interpretation by the physician health care-team member.

THE PROGRAM

During the twelve-month certificate 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 the Western Association of Schools and Colleges, Accrediting Commission for Senior Colleges and Universities, 985 Atlantic Avenue, Suite 100, Alameda, CA 94501; and by the Department of Health Services, Radiologic Health Branch, P.O. Box 942732, Sacramento, CA 94234-7320.

DISTANCE EDUCATION

The Nuclear Medicine Technology Program is offered via distance education at Fresno City College, Fresno, California.

CPR CERTIFICATION

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

PROFESSIONAL REGISTRATION AND CERTIFICATION

Upon completion of the certificate requirements, the student is eligible to write the qualifying examination in nuclear medicine of The American Registry of Radiologic Technologists (ARRT), and the certifying examination of the Nuclear Medicine Technology Certification Board (NMTCB) and of the state of California (CTNM).

ADMISSION

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.

If the student is unable to complete these three certifications prior to entering the program, then equivalent courses** can be taken concurrently with the program.

Certifications

1. CPR certification (adult, child)
2. Venipuncture*
3. ECG/EKG interpretation*

**offered by:
 # LLU Life Support Education or
 * LLU Medical Center Staff Development

PROGRAM OF INSTRUCTION

NUCLEAR MEDICINE TECHNOLOGY—Certificate

The program of instruction outlined below is for students enrolled during the 2003-2004 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, doing 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 building, 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

this experience is provided in the application packet or may be obtained by calling the Department of Radiation Technology.

Schedule

The program is full time and requires forty hours per week of the student's time in clinical and didactic learning experience. Clinical rotations are normally scheduled during daytime hours, Monday through Friday; but several four-week evening rotations are required. Didactic classes are held once each week during daytime hours at Loma Linda University. Students at affiliated sites will be required to drive to the campus for classes each week. Students are given vacation, holiday, and sick time appropriate to the total length of the program.

PROFESSIONAL REGISTRATION AND CERTIFICATION

Upon completion of the 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.

PROGRAM OF INSTRUCTION

SPECIAL IMAGING TECHNOLOGY—CT/MRI Certificate

The program of instruction outlined below is for students enrolled during the 2003-2004 academic year.

RTSI	361, 362	MRI Physics I, II	2, 2
RTSI	364	Patient Care in Special Imaging	2
RTSI	367	Cross-sectional Radiographic Anatomy	3
RTSI	369	CT Physics	3
RTSI	371-373	Special Imaging Affiliation I, II, III	1, 1, 1
RTMR	451	Management of a Radiologic Service*	1-3
RELE	457	Christian Ethics and 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.

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 461.

RTCH 475 Curriculum Development in Health Sciences (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, 3, 2)

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 (1-3, 1-3, 1-3, 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 Radiation 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)

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 (2)

Study and review of the basic physical principles and instrumentation of ultrasound, with additional emphasis on Doppler and artifacts.

Prerequisite: RTMS 379

RTMS 401, 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.

RTRA 331, 332 Pharmacology I, II (2, 2)

Survey of pharmacological agents currently used in medicine, including their kinetics, dynamics, and therapeutics. Special emphasis placed on pharmaceuticals commonly used by and given to radiology patients including contrast media, antineoplastic agents, and radioactive isotopes.

RTRA 345 Patient Assessment (2)

Assists with developing skills in interviewing, physical examination, and interpretation of laboratory data. Increases understanding of the pathophysiology behind patient care. Emphasis on analysis and interpretation of physiological data to assist in patient assessment and management.

RTRA 346 Clinical Management and Education (2)

Focuses on analysis and interpretation of physiological data to assist in patient assessment and management. Utilizes critical thinking, action plans, and protocols. Includes relationship-centered patient care, effective communication, and patient education. Introduces clinical pathways, multidisciplinary clinical practice, and a focus on quality and coordination of care.

RTRA 371, 372, 373 Clinical Internship (1, 1, 2)

During the mentored clinical experience, students complete a wide variety of competencies and generate a report stating initial observations of diagnostic images on neonatal, pediatric, adult, and geriatric populations. Students utilize clinical contracts and a clinical portfolio.

RTRA 384 Radiobiology and Health Physics (2)

Reviews the effects of ionizing and nonionizing radiation and fundamental concepts of radiation protection. Designed to promote the conscientious operation of radiologic and fluoroscopic devices. Provides a complement to guided practice in operating the fluoroscopic device during clinical mentoring. Procedures and techniques to optimize image quality while reducing radiation exposure to patients, operator, and ancillary personnel.

RTRA 385, 386, 387, 388 Radiology Procedures and Image Evaluation I, II, III, IV (3, 4, 4, 3)

Provides a framework for various imaging procedures and the role of the radiologist assistant in the radiology department. Designed to provide the framework for systematic observation of static, digital, X-sectional, and dynamic diagnostic images for the purpose of evaluating the presence of abnormalities, anomalies, and pathological conditions.

RTRA 471, 472, 473, 474 Clinical Internship (2, 2, 2, 2)

During the mentored clinical experience, students complete a wide variety of competencies and generate a report stating initial observations of diagnostic images on neonatal, pediatric, adult, and geriatric populations. Students utilize clinical contracts and a clinical portfolio.

RTRA 484 Radiologist Assistant Research Project (2)

Student completes a faculty-facilitated research project related to radiation sciences. Radiation sciences faculty must approve all projects.

RTRA 488 Comprehensive Review (1)

Review of the major content areas covered in the radiologist assistant program. Student evaluation and performance analysis accomplished.

RTSI 361 MRI Physics I (2)

Basic principles, physics, imaging parameters, biological effects, management, and patient protocol of magnetic resonance imaging (MRI).

RTSI 362 MRI Physics II (2)

Basic principles, physics, imaging parameters, biological effects, management, and patient protocol of magnetic resonance imaging (MRI).

Prerequisite: RTSI 361.

RTSI 364 Patient Care in Special Imaging (2)

Overview of patient care in MRI and CT imaging. General aspects of patient care, pharmacology and drug administration, radiation safety. Examines some areas of radiology management. Prepares students for the additional areas required in the National Registry for the specialty areas of CT and MRI.

RTSI 367 Cross-sectional Radiographic Anatomy (3)

Overview of gross anatomy. 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 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 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 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 12 Lead 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 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.

RSTH 471 Instructional Techniques I (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, 472, 473 must be taken in sequence.

SPEECH-LANGUAGE PATHOLOGY AND AUDIOLOGY

SPEECH-LANGUAGE PATHOLOGY—Associate in Science

SPEECH-LANGUAGE PATHOLOGY AND AUDIOLOGY—Bachelor of Science

SPEECH-LANGUAGE PATHOLOGY—Post-Bachelor of Science Certificate

KEIKO KHOO, Department Chair

JEAN B. LOWRY, Program Director for Master of Science and Certificate, Speech Language Pathology

PAIGE SHAUGHNESSY, Academic Coordinator for Clinical Education, Speech-Language Pathology and Audiology Program

KAREN MAINESS, Program Director for Associate in Science, Speech-Language Pathology Assistant

FACULTY

Noha S. Daher
Keiko I. Khoo
Jean B. Lowry
Karen J. Mainess
Jan McFarland
Paige Shaughnessy
Susan Steffani

CLINICAL FACULTY

Melissa K. Backstrom-Gonzales
Yoomi S. Kim
David G. McGann
Juli Ann Spiller
Anne-Marie Stauble

TUITION

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

Speech-language pathologists evaluate and treat children and adults with communication disorders. Difficulties in the areas of speech, language, fluency, swallowing, and voice are associated with a variety of disorders—including developmental delay, hearing impairment, cleft palate, cerebral palsy, stroke, and head injury. Audiologists are concerned with prevention, identification, assessment, and rehabilitation of hearing disorders. Students who choose these professions should have an interest in working with people.

Speech-language pathology assistants work under the direction of a qualified speech-language pathologist. The assistant's duties include conducting nonskilled therapeutic activities and assisting in therapy, as directed by the supervising speech-language pathologist.

OPPORTUNITIES

Employment opportunities for speech-language pathologists and audiologists exist in speech and hearing clinics, public schools, hospitals, universities, health departments, skilled-nursing facilities, home-health agencies, rehabilitation centers, industry, and private practice. These environments allow for considerable flexibility relative to personal interest within the profession. There is ample opportunity for employment.

Employment opportunities for speech-language pathology assistants include working with children in schools; or with children and adults in private clinics, hospitals, or skilled-nursing facilities.

GRADUATE PROGRAM

A program leading to the Master of Science degree in speech-language pathology is described in 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

Any 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	276	Communication Across the Lifespan	4
SPPA	314	Language Analysis for Speech-Language Pathologists	4
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	4
SPPA	486	Diagnostic Methods in Speech-Language Pathology	4

Students who plan to complete a Clinical Rehabilitative Services Credential—Language, Speech, and Hearing will need to take the following additional course:

PSYC	305	Psychological Foundations of Education	4
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NOTE: Students who plan to complete the requirements for the Certificate of Clinical Competence from the American Speech-Language Hearing Association will need to have their undergraduate course work reviewed by the faculty adviser.

Jeanne Stoddard is the administrative secretary for the Department of Speech-Language Pathology and Audiology. If you want to hear someone properly articulate the department's name, telephone Jeanne.



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.

In January 2000, the State of California Board of Examiners in Speech-Language Pathology and Audiology, and the American Speech-Language-Hearing Association issued regulations for training, credentialing, licensing, and supervision for a new category of paraprofessional, i.e. the speech-language pathology assistant (SLPA). The program has been approved by the California State Department of Consumer Affairs and the Speech-Language Pathology and Audiology Board.

For more information, please contact the Department of Speech-Language Pathology and Audiology.

SPEECH-LANGUAGE PATHOLOGY AND AUDIOLOGY—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 college/university afford the fundamentals of a liberal education. The emphasis in the junior and senior years is on professional courses and practical experience.

Clinical experience

Supervised clinical practicum is an integral part of the student's education. Completion of specific theoretical courses precedes placement for practicum. Clinical practicum is available for students who have a GPA of 3.0 or above in the major courses.

Accreditation

The program is approved by the Council on Academic Accreditation of the American Speech-Language-Hearing Association, 10801 Rockville Pike, Rockville MD 20852; telephone 301/897-5700.

PREPARATION FOR CREDENTIAL

The Speech-Language Pathology and Audiology Program is approved by the Commission on Teacher Credentialing to prepare students for the California Clinical Rehabilitative Services Credential in Language, Speech, and Hearing. Requirements for this credential include the completion of specific academic and clinical work at the graduate level.

A student preparing for a career in California schools should consult the department regarding specific course and practicum requirements for this credential.

THE PROGRAM OBJECTIVES

Upon completion of the program, the graduate should be qualified to:

1. Demonstrate a basic knowledge of the human communication processes, including:
 - the anatomic and physiologic bases for the normal development and use of speech, language, and hearing;
 - the physical bases and processes of the production and perception of speech, language, and hearing;
 - the linguistic variables related to normal development of speech, language, and hearing.
2. Demonstrate a basic knowledge of the major types of human communication disorders.
3. Demonstrate ethical behavior in his/her personal and professional life.

4. Demonstrate a commitment to the communicatively handicapped community and to the betterment of humankind.

and

5. Seek employment for positions that require a college degree or are indirectly related to speech-language pathology and audiology.

or

6. Seek admission to a graduate program in speech-language pathology or audiology or related disciplines.

CPR CERTIFICATION

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

PROFESSIONAL REGISTRATION

In most states, including California, graduate study is required before entering the profession. After satisfactorily completing the Master of Science degree, the graduate is eligible to take the qualifying examination for licensure in the state of California and for the Certificate of Clinical Competence. After completing a one-year clinical fellowship, the graduate is eligible to apply for California licensure and for certification by the American Speech-Language-Hearing Association (ASHA).

STUDENT PROFESSIONAL ASSOCIATION

Students are eligible for membership in the National Student Speech-Language-Hearing Association. The student is encouraged to become a member, read the journals, and attend local meetings. The national office address is the National Student Speech-Language-Hearing Association, 10801 Rockville Pike, Rockville, MD 20852.

ADMISSION

To be eligible for admission, the applicant must have completed a minimum of 96 quarter units at an accredited college or university. The student completes—

- the General Education requirements and
- the speech-language pathology and audiology core. Electives to meet the needs of the individual student are selected from existing courses after consultation with the department chair.

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, a minimum of 4 units of religious studies also required per year of attendance at a Seventh-day Adventist college or university.

Select a total of 12 quarter units natural sciences, including one biological science (anatomy and physiology recommended), one physical science (introductory physics recommended). Select from chemistry, geology, biology, physics, mathematics. (No more than 6 units may count toward one area.)

Two years high school mathematics with grades of C or above **or** intermediate algebra in college

General psychology

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

Human growth and development **or** developmental psychology

English composition, complete sequence

Speech or interpersonal communication

Personal health **or** nutrition

Two physical activity courses

Electives to meet a minimum total requirement of 96 quarter units

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

PROGRAM OF INSTRUCTION

SPEECH-LANGUAGE PATHOLOGY AND AUDIOLOGY—Bachelor of Science

CORE COURSES

SPPA	276	Communication Across the Lifespan	4
SPPA	284	Introduction to Speech-Language Pathology and Audiology	3
SPPA	304	Hearing Science	4
SPPA	314	Language Analysis for Speech-Language Pathology	4
SPPA	317	Acoustic, 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	477	Bilingualism and Biculturalism II	2
AHCJ	305	HIV/AIDS and the Health Provider	1
AHCJ	328	Portfolio Practicum I	1
AHCJ	351	Statistics for the Health Professions	3
AHCJ	461	Research Methods	2
AHCJ	498	Portfolio Practicum II	1
PSYC	305	Psychological Foundations of Education	4
PSYC	404	Psychological Tests and Measurements	3
PSYC	460	The Exceptional Individual	3
PSYC	479	Human Neuropsychology	4

Select 22 units from:

SPPA	217	Beginning Sign Language	3
SPPA	375	Assistive Technology	2
SPPA	377	Bilingualism and Biculturalism I	2
SPPA	424	Adult Language Pathology	4
SPPA	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 Pathology	4
SPPA	486	Diagnostic Methods in Speech-Language Pathology	4

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

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. Course may not be taught every year.

SLPA 224 Language Disorders in Children (4)

Study of language disorders in children. Description of disorders in infancy through adolescence. Treatment strategies discussed. Course may not be taught every year.

SLPA 234 Speech Disorders in Children (4)

Study of articulation, phonological, and fluency disorders in children. Treatment strategies discussed. Course may not be taught every year.

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. Course may not be taught every year.

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. Course may not be taught every year.

SLPA 267 Fieldwork (2)

Guided observation of clinical management of individuals with communication disorders. Supervised clinical experience in assisting the speech-language pathologist in a school setting and in a hospital setting.

Prerequisite: SLPA 224, 234. Course may not be offered every year.

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. Course may not be taught every year.

SLPA 277 Bicultural and Bilingual Issues in Communication Disorders (2)

Clinical competencies and cultural sensitivity needed in interactions with bicultural and bilingual clients. The impact of such knowledge on assessment and intervention. Course may not be taught every year.

SLPA 285 Speech-Language Pathology Assistant Methods and Procedures (3)

Technical assistant-level skills: clerical skills, maintenance of environment, preparation of materials, record keeping and documentation, behavior management, discrete trial training, screening, and skills necessary for understanding and implementing treatment plans. Course may not be taught every year.

SLPA 286 Workplace Issues and Ethics (2)

Interpersonal skills, workplace conduct, ethical conduct, scope of practice, national and state regulations. 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. Course may not be taught every year.

SPPA 216 Deaf Bicultural Bilingual Development (2)

Issues important to speech, language, and literacy development. Clinicianship that is sensitive to deaf culture. Course may not be taught every year.

SPPA 217 Beginning Sign Language (3)

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. 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 individuals with 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 Pathology (4)

Principles and procedures of speech-language therapy within and across disorders. Methods of determining treatment effectiveness. Regulations governing public school services. Observation of speech therapists working in schools, hospitals, and private clinics.

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 only to upper-division, undergraduate, and postgraduate students.

PSYC 479 Human Neuropsychology (4)

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

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 575 Instrumentation in Speech and Hearing (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 (1-3)

SPPA 688 Seminar: Articulation (3)

SPPA 697 Research (1-4)

SPPA 698 Thesis (1-6)

SPPA 699 Directed Study (1-3)



Our wonderful representatives from the Department of Speech-Language Pathology and Audiology are (back, left to right) Keiko (Kay) Khoo (department chair); Karen Mainess, Jean Lowry, and Paige Shaughnessy (faculty members); (front, left to right) Susan Steffani and Jan McFarland (faculty members); and Jeanne Stoddard (staff).

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, historical, and mission).
 - 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

RELF 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.

RELF 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.

RELF 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.

RELF 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.

RELF 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.

RELF 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.

RELF 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.

RELF 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.

RELF 468 Daniel (2-3)

Nature, purpose, and message of the apocalyptic book of Daniel.

Additional project required for third unit.

RELF 469 Revelation (2-3)

Nature, purpose, and message of the apocalyptic book of Revelation.

Additional project required for third unit.

RELF 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.

RELF 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.

RELF 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.

RELF 499 Directed Study (1-3)

Prerequisite: Consent of the instructor.

RELF 558 Old Testament Thought (3-4)

Introduction to the literature and key theological themes of the Old Testament.

Additional project required for fourth unit.

RELF 559 New Testament Thought (3-4)

Introduction to the literature and key theological themes of the New Testament.

Additional project required for fourth unit.

RELF 699 Directed Study (1-6)

Prerequisite: Consent of the instructor.

THEOLOGICAL STUDIES

RELF 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.

RELF 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.

RELF 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.

RELF 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.

RELF 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.

RELF 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.

RELF 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.

RELF 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.

RELF 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.

HISTORICAL STUDIES

RELF 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.

RELF 425 Contemporary Religious Issues (2-3)

Analysis of prominent topics in religion discussed in contemporary journals.

Additional project required for third unit.

RELF 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.

RELF 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.

RELF 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 Offered by the School

LLU General Education Courses—Online and 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 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 English composition 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 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: Competency math exam at 75%.

AHCJ 402 Pathology I (4)

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

AHCJ 403 Pathology II (3-4)

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

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

Prerequisite: AHCJ 402.

AHCJ 418 Physiology I (4)

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

AHCJ 419 Physiology II (3)

Detailed study of neuromuscular physiology.

Prerequisite: AHCJ 418.

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 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 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 (2)
Language of medicine, including word construction, definitions, and the use of terms related to medical science. Course organized by body systems.

AHCJ 331 Human Resources 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)
Examination of the theories of learning applied to teaching process. Includes evaluation of current research and methods of instruction.

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 (2)
Hands-on instruction in Word, Excel, and PowerPoint. Lectures, laboratory, assignments, quizzes, projects, and a practical examination.

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)**

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 each academic term at this University to meet general education domain requirements is included on the Loma Linda University Web Site at <www.llu.edu/ssweb/> under the course schedules.

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

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Director, Center for Emergency Medical Services Education and Research (CEMSER)
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 All Med Rehabilitation Center, Bronx, NY
 All Saints Saint Mary's Medical Center, Racine, WI
 All Sports Therapy Athletic Rehabilitation, Hanford
 All Star Physical Therapy, Denver, CO
 Allcare Therapy Services, Ridgecrest
 Allentown Sports Medicine & Human Performance Center, Allentown, PA
 Alliance Imaging, Anaheim
 Alliant Health Systems, dba Alliant Medical Pavilion, Louisville, KY
 Allied Services Skilled Nursing Center, Scranton, PA
 Almaden Health & Rehab Center, San Jose
 Alpine Special Treatment Center, Alpine
 Alta Loma School District, Alta Loma
 Alternatives to Domestic Violence (ADV), Riverside
 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
 Andrews County Hospital District, Permain Regional Medical Center, Andrews, TX
 AngMo Kio Community Hospital, Singapore
 Anleiter Physical Therapy, Gilbert, AZ
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 Antelope Valley Hospital Medical Center, Lancaster
 Anza Nursing and Rehabilitation, El Cajon
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 Apple Valley Physical Therapy, Apple Valley
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 Arthritis and Orthopedic Medical Center, Los Gatos
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 Avalon Municipal Hospital and Clinic, Avalon
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 Baptist Hospital Affiliate of the Voluntary Hospital, Nashville, TN
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 Barton Memorial Hospital, South Lake Tahoe
 Bauer Physical Therapy, Laguna Hills
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 Beverly Health Care Center, Monterey
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 Bothwell Regional Health Center, Sedalia, MO
 Bradley Rehab Center, Cleveland, TN
 Brea Community Hospital, Brea
 Breech Medical Center, Lebanon, MO
 Brooktrails P.T., Willits
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- 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
 Campbell Clinic, Memphis, TN
 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
- Cardenas & Associates, Studio City
 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, So Cal, Northridge Hospital Medical Center, Northridge
 Catholic HealthCare West-San Bernardino, St. Bernardine Medical Center and Community Hospital of San Bernardino, San Bernardino
 Catholic HealthCare West-San Gabriel, San Gabriel Valley Medical Center, San Gabriel
 Catholic HealthCare West-Southern California Hospital, Methodist Hospital-So, Arcadia
 Catholic HealthCare West-Southern California, Northridge Hospital Medical, Northridge
 Catholic HealthCare West-Southern California, St. Mary Medical Center, Long Beach
 Catholic HealthCare West/St. John's Regional, St. John's Regional Medical Center, S.F./Oxnard
 CCS Parkard, Torrance
 Cedars-Sinai Medical Center, Los Angeles
 Center for Comprehensive Rehab, Tampa, FL
 Center for Developing Kids, Pasadena
 Center for Rehab Excellence, Longview, TX
 Center for Sports & Wellness, Mission Viejo
 Center for Rehabilitative Medicine Watson Clinic, Lakeland, FL
 Centinela Hospital Medical Center (Tenet Health System), Inglewood
 Central Peninsula General Hospital, Soldotna, AK
 Central Unified School District, Fresno
 Central Washington Hospital, Wenatchee, WA
 Centre for Neuro Skills, Bakersfield
 Centre for Plastic Surgery, San Bernardino
 Centro de Desarrollo y Servicios 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 Development Institute, Woodland Hills
 Child Health Disability Prevention Program, San Diego
 Child Nutrition Services, Norco
 Children's Center of Riverside, Riverside
 Children's Healthcare of Atlanta at Egleston,
 Atlanta, GA
 Children's Hospital Central California (formerly Valley
 Children's Hospital), Fresno
 Children's Hospital and Health Center, San Diego
 Children's Hospital of Los Angeles at USC, Los Angeles
 Children's Hospital of Orange County, Orange
 Children's Medical Center, Dayton, OH
 Children's Medical Services CCS-Ventura, Ventura
 Children's Mercy Hospital, Kansas City, MO
 Children's Therapy Center, Camarillo
 Children's Therapy Center, Las Vegas
 Child's Play Physical Therapy, Anchorage, AK
 Chino Valley Medical Center, Chino
 Christ Hospital (The), Cincinnati, OH
 Citrus Valley Medical Center/Queen of Angels, Covina
 City of Hope National Medical Center, Duarte
 Cleburne PT & Fitness Center, Cleburne, TX
 Cleveland Community Hospital, Cleveland, TN
 Clinicas Del Camino Real, Inc., Ojai/Oxnard
 CMPT Associates PT, Greenville, PA
 Coast Physical Therapy, La Jolla
 Coastal Communities Hospital (Tenet Health System),
 Santa Ana
 Coastal Physical Therapy, Heritage Gardens, Loma
 Linda
 Coastal Physical Therapy, Valley Healthcare Center,
 San Bernardino
 Coastal Physical Therapy, Brookings, OR
 Coasttherapy, Huntington Beach
 College Hospital of Costa Mesa, Costa Mesa
 Colorado Physical Therapy Institute,
 Broomfield, CO
 Colorado River Medical Center, Needles
 Colorado Sports and Spine Center, Colorado
 Springs, CO
 Colton Joint Unified School District, Colton
 Columbia Chugach PT & Health Center, Anchorage, AK
 Columbia Rehab, Longview, WA
 Combined Therapy Specialists, Ashland, NC
 Commonwealth Physical Therapy, Lexington, KY
 Community Convalescent Center, Riverside
 Community Convalescent of San Bernardino/Premier
 Health, Orange
 Community Health Center of King County, Kent, WA
 Community Hospital, Santa Rosa
 Community Hospital of Chula Vista, Chula Vista
 Community Hospital of Onaga, Onaga, KS
 Community Hospital of San Bernardino, a Catholic
 Healthcare West facility, San Bernardino
 Community Hospitals of Central California, Fresno
 Community Medical Center, Clovis
 Community Medical Center, Fresno
 Community Medical Center, Missoula, MT
 Community Medical Group of Riverside, Riverside
 Community Memorial Hospital of Buena Ventura,
 Ventura
 Community Physical Therapy, Riverside
 Comprehensive Cancer Center, Palm Springs
 Comprehensive PT and Sports Medicine,
 Coon Rapids, MN
 Comprehensive Rehabilitation, Hendersonville, TN
 Concentra Health Services, Carrolton, 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/Norco Unified School District (Child Nutrition
 Services), Norco
 Corona Physical Therapy, Corona
 Corona-Temecula Orthopedic Association, Corona, CA
 Cottonwood Hospital Back Institute, Murray, UT
 Cottrell's Sports Physical Therapy, Kappa, HI
 County of Los Angeles-Children's Medical Center, El
 Monte
 County of Orange Health Care Agency, Orange
 County of Riverside Department of Public Health,
 Riverside
 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.,
 Victorville
 Desert Life Rehabilitation and Care Center,
 Tucson, AZ
 Desert Regional Medical Center (Tenet Health System),
 Palm Springs
 Desert Sands Unified School District, La Quinta

- Desert Springs Therapy Center, Desert Hot Springs
 Desert Valley Hospital, Victorville
 DeSoto Memorial Hospital, Arcadia
 Detroit Medical Center, Detroit, MI
 Developing Aging Solutions with Heart, dba DASH, Redlands
 Developmental Pathway for Kids, Detroit, MI
 Devonshire Care Center/Locomotion Therapy, Hemet
 Dewitt Physical Therapy, Merced
 Diamondback Physical Therapy, Gilbert, AZ
 Dimensions in Food and Nutrition, Inc., Burtonsville, MD
 Doctors Hospital Medical Center, Montclair
 Doctors Hospital of Sarasota, Sarasota, FL
 Dolphin Human Therapy, Miami, FL
 Dominican Hospital, Santa Cruz
 Dos Caminos Physical Therapy and Sports Rehab, Camarillo
 Downey Regional Medical Center, Downey
 Downey Unified School District, Downey
 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, Zephyrillus, FL
 East Valley, SELPA, Colton
 Easter Seal Children's Guild Therapy Center, Salem, OR
 Easter Seal Society, Sacramento
 Easter Seal Society of Inland Counties, San Bernardino
 Easter Seals—Central California, Fresno
 Eclipse Therapies, Inc., San Rafael
 Ed Ayub Ortho and Sports, San Diego
 Egleston's Children's Hospital at Emory University, Inc., Atlanta, GA
 Eisenhower Memorial Hospital, Rancho Mirage
 El Centro Regional Medical Center, El Centro
 El Paso Physical Therapy Services, El Paso, TX
 Elite Performance, Newport Beach
 Elkin's Park Hospital (Tenet Health System) Elkin's Park, PA
 Elks Rehabilitation Hospital, Boise, ID
 Elmhurst Memorial Hospital, Elmhurst, IL
 Ember Healthcare, Pomona
 Emerald Bay Physical Therapy, South Lake Tahoe
 Emilie Gamelin Institute, Portland, OR
 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 Hospital, Fallbrook
 Fallbrook Physical & Occupational Therapy, Fallbrook
 Fayetteville Therapy Services, Fayetteville, NC
 Feather River Rehabilitation Center, Paradise
 Felder Physical Therapy, Inc., Santa Ana
 First Healthcare Corporation, Tacoma, WA
- Fit for Life, Riverside
 Fitness Center Health Park East, Brandon, FL
 Flagstaff Medical Center and Northern Arizona Rehab Center, Flagstaff, AZ
 Flanders Physical Therapy Portland, OR
 Florida Hospital Waterman, Tamarac, 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, dba 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
 Goodfellow Occupational Therapy, Fresno
 Graciela Esquivel-Aguilar, MD, Fresno
 Granada Hills Community Hospital, Granada Hills
 Great Lakes Sports Medicine & Orthopaedics, Battle Creek, MI
 Greater Victoria Hospital Society, Victoria, British Columbia, Canada
 Green Hospital of Scripps, La Jolla
 Gresham Sports Care PT, Gresham, OR
 Guam Memorial Hospital, Tamuning, Guam
 Guam SDA Wellness Center, Tamuning, Guam

Guardian Healthcare Group, Modesto
Guardian Rehabilitation Hospital, Modesto

H & W Therapy, Pueblo, CO
H & W Therapy, Soldotna, AK
Hairston and Daley Physical Therapy, Orange
Halifax Medical Center, Daytona Beach, FL
Hamilton Physical Therapy, Hamilton, MT
Hand Rehabilitation Clinic, Beverly Hills
Hands on Hands Rehabilitation Center, Costa Mesa
Hanford Community Hospital, Hanford
Harbor View Medical Center, Seattle, WA
Hardee PT/Rehab Service, Inc., Wauchula, FL
Hawaii State Hospital, Kaneohe, Oahu, HI
Hawaiian Electric Company, Honolulu, HI
Hawaiian Rehabilitation Services, Kailua-Kona, HI
Health Pro Physical Therapy, Walnut Creek
Health Services Agency, Modesto
Health South Corporation, Birmingham, AL
Health South Corporation, Las Vegas, NV
Health South Rehabilitation, Willowbrook, IL
Health South Western Rehabilitation Institute,
Sandy, UT
HealthAlliance Hospital, Leominster, MA
Healthcare Partners Medical Group, Torrance
HealthSouth Community Re-Entry Center of South
Florida, Ft. Lauderdale, FL
HealthSouth Community Re-Entry Center of Texas,
Dallas, TX
HealthSouth Comprehensive Rehabilitation Unit,
Birmingham, AL
HealthSouth Corporation—multiple sites
HealthSouth Dallas Rehabilitation Institute, Dallas, TX
HealthSouth Doctor's Hospital, Coral Gables, FL
HealthSouth Head Injury Rehabilitation Center,
St. Louis, MO
HealthSouth Rehabilitation Center of Tucson,
Tucson, AZ
HealthSouth Rehabilitation Center of Van Nuys,
Van Nuys
HealthSouth Rehabilitation Corporation, dba Sea Pines,
Birmingham, AL
HealthSouth Sub-Acute Hospital of North Houston,
Conroe, TX
HealthSouth Sunrise Rehabilitation Hospital,
Ft. Lauderdale, FL
HealthSouth Treasure Coast Rehabilitation Hospital,
Vero Beach, FL
HealthSouth, Tustin Rehabilitation, Tustin
Healthwin Hospital—St. Clair Darden Health Systems,
South Bend, IN
Heart Institute of the Desert, Rancho Mirage
Hemet Healthcare, Hemet
Hemet Unified School District, Hemet
Hendrick Medical Center, Abilene, TX
Hesperia Physical Therapy, Hesperia
Hi Desert Medical Center, Joshua Tree
High Desert Physical Therapy, Victorville
Highland Physical Therapy, San Bernardino
Hillcrest Baptist Medical Center, Waco, TX
Hillcrest Medical Center, Tulsa, OK
Hillhaven—Alta Vista, Riverside
Hillhaven Fair Oaks, Carmichael
Hoag Memorial Hospital, Newport Beach

Hollywood Medical Center, Hollywood, FL
Hollywood Physical Therapy, Los Angeles
Holmes Regional Nursing Home, Melbourne, FL
Holy Family Hospital, Spokane, WA
Holy Rosary Medical Center, Ontario, OR
Horizon Physical Therapy, Redlands
Hospitale Maternidade de Jundiai, San Paulo, Brazil
Houston Rehabilitation Institution, Houston, TX
Howard Memorial Hospital, Willits
Hudson and Walker PT, Apple Valley
Huguley Memorial Medical Center, Ft. Worth, TX
Huntington Beach Hospital & Medical Center,
Huntington Beach
Huntington Drive Skilled Nursing Center, Arcadia
Huntington East Valley Hospital, Glendora
Huntington Memorial Hospital, Pasadena
Huntsville Pool and Land Therapy, Huntsville, AL
Hurley Medical Center, Flint, MI
Hy-Lond Convalescent, Modesto
Idaho Physical Therapy, Nampa, ID
IHC Health Services/Primary Children's Medical Center,
Salt Lake City, UT
IHC Rehab Services of St. George, St. George, UT
Immanuel Medical Center, Omaha, NE
Imperial Valley Therapy Centers, El Centro
In Balance, A Woman's Health & Wellness, San Juan
Independent PT—Torrance, Torrance
Inglis & Petersen PT, Mesa, AZ
Inland Empire Physical Therapy, Corona
Inland Hand Therapy, Rancho Cucamonga
Inland Mental Health Associates, Inc., Chino
Inland Surgery Center, Redlands
Inland Temporary Homes, Loma Linda
Inland Valley Regional Medical Center, Wildomar
Innovative Health Systems, Inc., Sacramento
Integris Baptist Medical Center, Oklahoma City, OK
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 and Magnolia Rehabilitation and Nursing,
Riverside
JP Therapy Villa Rehab Hospital, Riverside
Jump Start, Colton
June Weinstein and Associates, Villa Park
Jurupa Unified School District, Riverside
Kadlec Medical Center, Richland, WA
Kaiser Foundation Hospital—Baldwin Park, Baldwin Park
Kaiser Foundation Hospital—Bellflower, Bellflower
Kaiser Foundation Hospital—Fontana, Fontana

- Kaiser Foundation Hospital—Los Angeles, Los Angeles
 Kaiser Foundation Hospital—Panorama City
 Kaiser Foundation Hospital—Riverside, Riverside
 Kaiser Foundation Hospital—San Diego, San Diego
 Kaiser Foundation Hospital—Woodland Hills
 Kaiser Foundation Hospitals, Honolulu, HI
 Kaiser Permanente Hospitals and the Permanente Medical Group, Oakland
 Kaiser Permanente, Fresno Medical Center, Fresno
 Kaiser Permanente Medical Group—North
 Kaiser Permanente—Southern California Region, Pasadena
 Kansas Rehabilitation Hospital, Topeka, KS
 Kaweah Delta Healthcare District, Visalia
 Kennebec Valley Medical Center, Augusta, ME
 Kennewick General Hospital, Kennewick, WA
 Kensington Physical Therapy, Inc., Gaithersburg, MD
 Kentfield Rehabilitation Hospital, Kentfield
 Kern Radiology, Bakersfield
 Kern Valley Health District, Mt. Mesa
 Kettering Medical Center, Kettering, OH
 Keystone Vocational Services, San Francisco
 Kimbro Medical Center, Cleburne, TX
 Kindred Hospital, Vencor, Ontario
 Kingman Community Hospital, Kingman, KS
 Kingston Hospital, Kingston, NY
 Kitsap PT and Sports Clinic, Poulsbo, WA
 Knight Physical Therapy, Garden Grove
 Knollwood Psychiatric Center, Riverside
 Knox Community Hospital, Mt. Vernon, OH
 Kodiak Island Hospital and Care Center, Kodiak, AK
 Kona Hospital, Kealahou, HI
 Kootenai Medical Center, Coeur d'Alene, ID
 Kornhill Physiotherapy Centre, Quarry Bay, Hong Kong
 KPMG Peat Marwick, Long Beach
 Kruppa Physical Therapy/Rimrock Villa Convalescent, Barstow
 Kyrene Elementary School District, Tempe, AZ
 L & J Telesmanic & Associate (Horizon Subacute), Fresno
 La Jolla Spine and Sport, La Jolla
 La Palma Intercommunity Hospital, La Palma
 La Pine Physical Therapy, La Pine, OR
 Lake Arrowhead Physical Therapy/Mountains Community Hospital, Lake Arrowhead
 Lake 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 Fire Department, Loma Linda
 Loma Linda University Behavioral Medical Center, Loma Linda
 Loma Linda University Medical Center, Loma Linda
 Long Beach Memorial Medical Center, Long Beach
 Long Beach WIC Program, Long Beach
 Lorien Columbia Nursing & Rehabilitation Center, Columbia, MD
 Los Alamitos Medical Center, Los Alamitos
 Los Angeles (County of) Children's Medical Services, El Monte
 Los Angeles (County of) University of Southern California Medical Center, Los Angeles
 Los Robles Regional Medical Center, Thousand Oaks
 Louis A. Weiss Memorial Hospital, Chicago, IL
 Lourdes Medical Center, Pasco, WA
 Lutheran Community Health Services, dba Lutheran Rehab, Wheat Ridge, CO
 Lutheran Social Services of Southern California, Riverside
 Lynne K. Nishikawa, M.S., Inc., Colton
 Macon Health Care, Macon, MO
 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
 Meadowbrook Rehabilitation Hospital, Tulsa, OK
 Medford Sports Injury & Therapy Center, Medford, OR
 Medical Arts Physical Therapy, Honolulu, HI
 Medical Center of Central Massachusetts, Worcester, MA

- Meeting Street Center, East Providence, RI
 Memorial HealthCare, Worcester, MA
 Memorial Hospital, Chatanooga, TN
 Memorial Hospital, Modesto
 Memorial Hospital of Carbondale, Carbondale, IL
 Menifee Valley Medical Center, Sun City
 Mental Health Association of San Mateo County,
 Redwood City
 Mental Health Association of San Mateo County,
 San Mateo
 Mercy Air Services, Inc., Fontana
 Mercy Cancer Center, Merced
 Mercy Healthcare, Sacramento
 Mercy Hospital and Health Services, Merced
 Mercy Hospital and Medical Center, Des Moines, IO
 Mercy Hospital and Medical Center, San Diego
 Mercy Hospital Catholic Healthcare West, Central
 California, Bakersfield
 Mercy Medical Center, Nampa, ID
 Mercy Medical Center, Redding
 Mercy Medical Center, Roseburg, OR
 Methodist Hospital of Southern California, Arcadia
 Methodist Hospitals of Memphis, Memphis, TN
 Methodist Medical Center, Jacksonville, FL
 Metro Ortho & Sports Therapy, Silver Spring, MD
 Michael DeVitt Physical Therapy, Boise, ID
 Mid Coast Hospital, Brunswick, ME
 Mid-America Rehabilitation, Overland Park, KS
 Middle Tennessee Medical Center, Inc., Murfreesboro, TN
 Middleton Village Nursing and Rehabilitation Center,
 Middleton, WI
 MidMichigan Medical Center, Midland, MI
 MidValley Hospital, Omak, WA
 Midwestern State University, Wichita Falls, TX
 Mills–Peninsula Hospitals (2 sites), Burlingame
 Milpitas Physical Therapy, Milpitas
 Mintz Therapy Services, Los Olivas
 Mission Hospital Regional Medical Center, Mission Viejo
 Mission Orthopedic Physical Therapy, Mission Viejo
 Missouri Rehabilitation Center, Mt. Vernon, MO
 Mobile P.E.T. Systems, Inc., San Diego
 Modesto Back School, Modesto
 Mohave Physical Therapy & Sports Medicine, Victorville
 Monett Physical Therapy, Monett, MO
 Montefiore Hospital, Bronx, NY
 Montrose Memorial Hospital, Montrose, CO
 Moreno Valley Physical Therapy, Moreno Valley
 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 County Health and Human Services, Napa
 Napa State Hospital, Napa
 Napa Valley Physical Therapy Center, Napa
 Nashville Sports Therapy, Hermitage, TN
 National Center for Equine-Facilitated Therapy,
 Woodside
 National Guard Health Affairs, Riyadh, Saudi Arabia
 National Medical Specialty Hospital of Redding, Redding
 Neuro Sports Rehab Associates, Fremont
 New England Rehabilitation Hospital, Inc., Danvers, MA
 New River Wellness, Christiansburg, VA
 Newport Language-Speech Centers, Mission Viejo
 Nordstrom Rehabilitation Services, Palo Alto
 North American Computer College, Glendale
 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
 Nutrition and Lifestyle Medical Clinic, Calimesa
 Nutrition Consultation (Margaret K. Heath), Loma Linda
 O'Conner Hospital-Physical Medicine, San Jose
 Occupational Therapy Training Program, Torrance
 Oceania, Palo Alto
 Odessa Physical Therapy, Odessa, TX
 Ojai Unified School District, Ojai
 Okanogan-Douglas District Hospital, Brewster, WA
 Old Town Physical Therapy Forrest Grove, OR
 Ontario-Montclair School District, Ontario
 Orange County Health Care Agency, Santa Ana
 Orange County Therapy Services, Laguna Hills
 Orange Unified School District, Orange
 Options, San Diego
 Oregon Health Sciences University, Human
 Performance Laboratory, University Hospital,
 Portland, OR
 Ortho Sports Physical Therapy, Mission Viejo
 Orthopaedic and Neurological Rehabilitation, Inc.,
 Sacramento
 Orthopaedic Hospital, Los Angeles
 Orthopaedic Sports, Inc., Stillwater, MN
 Orthopedic & Sports PT, Santa Rosa
 Orthopedic Associates, Silver Spring, MD
 Orthopedic Hospital, Ltd., Houston, TX

- Orthopedic Physical Therapy Institute, Riverside
Orthopedic Surgery and Sports Medicine Physical,
La Habra
Osteopathic Medical Center of Texas, Ft. Worth, TX
OT for Kids, Belmont
Our Lady of Victory Home of Charity–Baker Victory
Services, Buffalo, NV
Outreach Therapy Consultants, Spokane, WA
P.O.S.T. Rehabilitation Clinic, Moreno Valley
PACE Therapy–Christian Heritage, Upland
PACE Therapy–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 Coast Healthcare, Encino
Pacific Gardens, Fresno
Pacific Health Education Center, Bakersfield
Pacific Physical Therapy, Monterey
Pacific Southwest Therapies, Inc., Las Vegas, NV
Pacific Therapies, Inc., Huntington Beach
Pain Management Clinic of Hawaii, Inc., Honolulu, HI
Palm Beach Medical Center, Palm Beach, FL
Palm Beach Medical Center, West Palm Beach, FL
Palm Springs Health Care, Palm Springs
Palm Springs Unified School District, Palm Springs
Palomar Pomerado Health System, San Diego
Paradise Valley Hospital SouthBay Rehab Center,
National City
Park Manor Rehabilitation Center, Walla Walla, WA
Parkridge Centre, Saskatoon, Canada
Parkview Community Hospital (Soderno Marriot),
Riverside
Parkview Episcopal Medical Center, Pueblo, CO
Parkview Memorial Hospital, Brunswick, ME
Partners in Therapy, LLP, Ft. Worth, TX
Pasadena Department of Health WIC Program,
Pasadena
Pasadena Rehabilitation Institute, Pasadena
Pass Physical Therapy, Beaumont
Paul Chang's Rehabilitation Services, Blue Springs, MO
Peace Arch Hospital, White Rock, British Columbia,
Canada
PeaceHealth, Eugene, OR
Peachwood PT Sports and Spine Center, Glendora
Peak Performance, Chino
Pediatric Building Blocks, San Ramon
Pediatric Intervention Inc., San Jose
Pediatric Therapy Associates, Shrewsbury, MA
Pediatric Therapy Association, Plantation, FL
Performance Physical Therapy, Orem, UT
Performax PT, Littleton, CO
Perspective Therapy, Oceanside
Permian Regional Medical Center, Andrews, TX
Phoenix Memorial Hospital and NOVACARE, Phoenix, AZ
PhyCor, Inc., Honolulu, HI
Physical Rehabilitation Center of Orange, Westminster
Physical Therapy & Sports Rehabilitation Services,
Sunnyside, WA
Physical Therapy Associates, Worcester, MA
Physical Therapy Center, Rialto
Physical Therapy Institute, Inc., Poway
Physical Therapy, Northwest, Salem, OR
Physical Therapy Services, Tyler, TX
Physical Therapy Specialists, Lovieville, KY
Physical Therapy Sports Institute, Hemet
Physiotherapy Associates, Madison, TN
Physiotherapy Associates, Glen Burnie, MD
Physiotherapy Associates, Holland, MI
Physiotherapy Associates, Madison, TN
Physiotherapy Associates–Corporate Office, Memphis,
TN
Physiotherapy Associates–Northside, San Diego
Pinecrest Rehabilitation Hospital, (Tenet Health
System), Delray Beach, FL
Pinnacle Rehabilitation, Nashville, TN
Pioneer Valley Hospital, West Valley City, UT
Pioneers Memorial Hospital, Brawley
Pisgah PT & Sports Rehabilitation, Hendersonville, NC
Point West Physical Therapy, Santa Rosa
Pollock Physical Therapy, Upland
Pomona Unified School District, Pomona
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
ProCare Physical Therapy, Redlands
Professional Orthopedic & Sports Care, Fontana
Professional Physical Therapy Association, Whittier
Professional Physical Therapy Services, Anchorage, AK
Professional Therapy Associates, Inc., Strongsville, OH
Professional Therapy Systems, Chattanooga, TN
Progressive Therapy, Columbia, SC
Pro-Health Rehab and Sports Medicine, Lawndale
Providence Alaska Medical Center, Anchorage, AK
Providence Centralia Hospital, Centralia, WA
Providence Health Systems, Everett, WA
Providence Health Systems Southern California
Burbank
Providence Health Systems, Los Angeles
Providence Health Systems Regional Rehabilitation,
Portland, OR
Providence Hospital–Chehalis and Black Hills PT,
Chehalis, WA
Providence Seattle Medical Center, Seattle, WA
Providence Speech & Hearing Center, Orange
Providence St. Peter Hospital, Olympia, WA
Provider Health Services & Good Samaritan, Addison,
TX
Public Health Foundation WIC Program, Irwindale
QuadraMed, Seal Beach
Queen of Angels-Hollywood Presbyterian Medical
Center, Los Angeles

Queen of the Valley Hospital-Napa, Napa
Queen's Medical Center, Honolulu, HI

R. J. Therapy, Long Beach
Radiation Therapy Medical Group, Riverside
Redlands Community Hospital, Redlands
Ralph K. Davies Medical Center, San Francisco
Ramona Physical Therapy, Ramona
Rancho Physical Therapy, Murrietta
Ranier Vista Care Center, Puyallup, WA
Rasco and Associates, Blue Jay
RCI Image Systems, El Segundo
Reading Rehabilitation Hospital, Reading, PA
Rebound Orthopedic & Sports Medicine, Portland, OR
Rebound Physical Therapy, Bend, OR
Reche Canyon Convalescent, Colton
Redding Medical Center, Inc., Redding
Redding Physical Therapy, Redding
Redhawk Physical Therapy, Redding
Redington Fairview General Hospital, Skowhegan, ME
Redlands Community Hospital, Redlands
Redlands Ortho & Sports Clinic, Redlands
Redlands Unified School District, Redlands
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 and Sport Medicine Center, Bradentown,
FL
Rehabilitation Dynamics, Inc., New Florence, MO
Rehabilitation Hospital of Nevada, Las Vegas, NV
Rehabilitation Hospital of Nevada, Reno, NV
Rehabilitation Hospital of the Pacific, Honolulu, HI
Rehabilitation Institute at Santa Barbara (The),
Santa Barbara
Rehabilitation Institute of Chicago, Chicago, IL
Rehabilitation Institute of Orange, Santa Ana
Rehabilitation Institute of Santa Barbara, Santa Barbara
Rehabilitation Network, Salem, OR
Rehabilitation Providers, Monterey
Rehabilitation Services of Columbus, Inc., Columbus,
GA
Rehabilitation Technology Works, San Bernardino
Rehability, Smyrna, TN
Rehability Center, Harlingen, TX
Rehability Corporation, Wharton, TX
Rehabnet, Inc., Tustin
Restorative Care Center, Seattle, WA
Results Rehabilitation, Inc., Coronado
Return to Work Center, North Quincy, MA
Reuben Carlos Castillo, MD, Perris
Reykjavik Hospital, Iceland
Rialto Unified School District, Rialto
Richards HealthCare, Inc., Houston, TX
Ridgecrest Community Hospital, Ridgecrest
Ridgecrest Physical Therapy, Ridgecrest
Riverside Community Hospital, Riverside
Riverside County Department of Public Health,
Riverside

Riverside County Office on Aging, Riverside
Riverside County Regional Medical Center,
Moreno Valley
Riverside Physical Therapy Center, Riverside
Riverside Unified School District, Riverside
Robert F. Kennedy Medical Center, Hawthorne
Robert H. Ballard Rehabilitation Hospital,
San Bernardino
Robert J. Yahne Physical Therapy Corp., Hanford
Robert Packer Hospital, Sayre, PA
Robin Irwin Physical Therapy Services, Decatur, AL
Rockwood Ortho and Sports PT, Portland, OR
Rogue Valley Manor, Medford, OR
Rosemary Johnson and Associates, Monrovia
Rosenberry PT Center for Sports Medicine and Spine,
Solvang
Rusk Rehabilitation Center, Columbia, MO
S.C.O.R.E., Tucson, Arizona
Saddleback Memorial Medical Center, Laguna Hills
Saddleback Unified School District, Moreno Valley
Salt Lake City County Health Department, Salt Lake
City, UT
Samaritan Health Services, Inc., Corvallis, OR
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 (County of) California Children's Services,
San Diego
San Diego Hospital Association, San Diego
San Gabriel Valley Medical Center, San Gabriel
San Geronio Memorial Hospital, Banning
San Joaquin Community Hospital (an Adventist
Hospital), Bakersfield
San Joaquin General Hospital, Stockton
San Joaquin Valley Rehabilitation Hospital, Fresno
San Jose Medical Center, San Jose
San Pedro Peninsula Hospital, San Pedro
Santa Ana Tustin Physical Therapy, Santa Ana
Santa Barbara County California Children's Center,
Santa Barbara
Santa Monica Orthopedic Sports Medical Group,
Santa Monica
Scottish Rite Children's Healthcare, Atlanta, GA
Scripps Clinic Wellness Program, La Jolla
Scripps Health Ornish Program, La Jolla
Scripps Memorial Hospital, Chula Vista
Scripps Memorial Hospital, Encinitas
Scripps Memorial Hospital, La Jolla
Scripps Memorial Hospital, San Diego
Scripps Mercy Hospital, San Diego
Seattle-King County Department of Public Health,
Seattle, WA

- Seattle Medical and Rehabilitation Center, Seattle, WA
 Seattle Physical Therapy, Seattle, WA
 Select Therapy, Inc., & Corona Meadows, Irvine
 Sentara Bayside Hospital, Virginia Beach, VA
 Sequoia Regional Cancer Center, Visalia
 Seton Medical Center, Daly City
 Shady Grove Adventist Hospital, Rockville, MD
 Shady Grove Center for Sports Medicine & Rehabilitation, Rockville, MD
 Sharp Cabrillo Hospital, San Diego
 Sharp Chula Vista Medical Center, San Diego
 Sharp Coronado Hospital & Healthcare Center, San Diego
 Sharp Grossmont Hospital, San Diego
 Sharp Healthcare, Hospital Association, San Diego
 Sharp Home Care, San Diego
 Shawnee Mission Medical Center, Shawnee Mission, KS
 Shea Health Center, San Bernardino
 Shoroye, Adeyinka, MD, Pediatrics, Riverside
 Shrivvers Hospital for Children, Los Angeles
 Shriners Hospital for Crippled Children, Lexington, KY
 Shriners Hospital for Crippled Children, Northern California, Sacramento
 Sierra Ortho & Athletic Rehabilitation, Diamond Springs
 Sierra Pediatric Clinic, Roseville
 Silverlake Youth Services, Yucaipa
 Simi Valley Adventist Hospital, Simi Valley
 Simonean Pediatric Center for Child Development, San Jose
 Siskin Hospital for Physical Rehabilitation, Chattanooga, TN
 Sisters of Providence in California, Burbank
 Sisters of Providence in Washington, Olympia, WA
 Sisters of Saint Joseph of Orange Corp., Mission Viejo
 Sky Life Ambulance, Fresno
 SO CA Center for Sports Medicine, Long Beach
 Sodexo Health Care Services at Desert Regional, Palm Springs
 Sodexo Health Care Services at Good Samaritan, Los Angeles
 Sonoma Valley Hospital, Sonoma
 Sonora Community Hospital, Sonora
 Sonora Physical Therapy Center, Sonora
 South Coast Medical Center, Laguna Beach
 South County Orthopedic Specialists, Laguna Hills
 South Haven Community Hospital, South Haven, MI
 South Pacific Rehab Services, Encino
 South Peninsula Hospital Homer, AK
 South Umpqua Physical Therapy, Roseburg, OR
 South Walton Physical Therapy & Rehabilitation, Santa Rosa Beach, FL
 Southcentral Counseling Center Anchorage, AK
 Southeast Rehabilitation Hospital, Dothan, AL
 Southern Hills Medical Center, Nashville, TN
 Southern Utah Physical Therapy, Cedar City, UT
 Southhill Physical Therapy/Sports Rehabilitation, Spokane, WA
 Southside Regional Medical Center, Petersburg, VA
 Southside Rehab Services, Colonial Heights, VA
 Southwest Palm Control & Sports Therapy, Palm Desert
 Southwest Physical Therapy, Littleton, CO
 Southwest Texas Methodist Hospital, San Antonio, TX
 Speech and Language Development Center, La Mirada
 Special Kids, Murfreesboro, TN
 Specialized PT Center, Orange City, FL
 Specialty Hospital of Southern California, La Mirada
 Spectrum Health East Campus, Grand Rapids, MI
 Spine & Sports Medicine Institute, Concord
 Spooner Physical Therapy, Scottsdale, AZ
 Sport and Spine Physical Therapy, San Bernardino
 Sports & Orthopedic Physical Therapy, Inc., Minneapolis, MN
 Sports & Orthopedic Therapy Services, Silver Spring, MD
 Sports Care of San Francisco Physical Therapy, San Francisco
 Sports Fit P.T., San Ramon
 Sports Medicine and Ortho Rehab Center, Vienna, VA
 Sports Medicine Giant, Columbus, OH
 Sports Medicine Hawaii Ltd., Honolulu, HI
 Sports Medicine Institute, Orange
 Sports Medicine Institute of Sinai Samaritan Medical Center, Mequon, WI
 Sports Performance, Pleasant
 Springdale Village, Mesa, AZ
 Square One Rehabilitation, Kansas City, KS
 SSM Health Care of Oklahoma, OK
 St. Agnes Cancer Center, Fresno
 St. Alexis Hospital and Medical Center, Cleveland, OH
 St. Alphonsus Regional Medical Center, Boise, ID
 St. Anthony Hospital, Oklahoma City, OK
 St. Bernardine Medical Center/Community Hospital, San Bernardino
 St. Charles Hospital, Port Jefferson, NY
 St. Charles Medical Center, Bend, OR
 St. Elizabeth Community Health Center, Lincoln, NE
 St. Francis Healthcare Network, Honolulu, HI
 St. Francis Medical Center, Lynwood
 St. Francis Medical Center–West, Ewa Beach, HI
 St. George Care & Rehab Center, St. George, UT
 St. George Physical Therapy, Charlotte, NC
 St. Helena Hospital and Health Center an Adventist Hospital, Deer Park
 St. John's Health System, Lebanon, MO
 St. John's Hospital & Health Center, Santa Monica
 St. John's Medical Center, Tulsa, OK
 St. John's Mercy Hospital, Washington, MO
 St. John's Regional Medical Center, Oxnard
 St. Joseph Health System, Eureka
 St. Joseph Health Systems, Santa Rosa
 St. Joseph Hospital, Lexington, KY
 St. Joseph Hospital of Orange, Orange
 St. Joseph Medical Center, Burbank
 St. Joseph Regional Medical Center, Lewiston, ID
 St. Joseph's Hospital of Atlanta, Atlanta, GA
 St. Joseph's Medical Center of Stockton, Stockton
 St. Jude Medical Center, Fullerton
 St. Louis Health Care Network, St. Louis, MO
 St. Luke's Hospital, Kansas City, MO
 St. Luke's Hospital, Phoenix, AZ
 St. Luke's Rehabilitation Institute, Spokane, WA
 St. Mary Medical Center, Apple Valley
 St. Mary Medical Center, Catholic Healthcare West, So Cal, Long Beach
 St. Mary Medical Center and Turning Point Rehab, Walla Walla, WA
 St. 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 Corp., Concord
 Sundance Rehabilitation Corporation, Houston, TX
 Sunplus Home Health Services, Upland
 Sunrise Hospital and Medical Center Therapy Management, Las Vegas, NV
 Susan Jane Smyth, Eureka
 Sutter Auburn Faith Community Hospital, Auburn
 Sutter Davis Hospital, Davis
 Sutter Health Central, Sacramento
 Sutter Merced Medical Center, Merced
 Sutter Roseville Medical Center, Roseville
 Swanson Sports Training & PT, Franklin, TN
 Swedish Covenant Hospital, Chicago, IL
 Symphony Rehab Services, Inc., & Christian Heritage, Upland
 Symphony Rehabilitation Services-Willow Care Center, Hannibal, MO
 Symphony Rehabilitation, Inc., & Center Health Care, Colton
 Syncor International Corporation, Woodland Hills

 Tahlequah City Hospital, Tahlequah, OK
 Tarzana Regional Medical Center, Tarzana
 Team Physical Therapy, Alta Loma
 Team Physical Therapy, Auburn
 Telecare Corporation, Santa Maria
 Tenet California Health System, Santa Ana
 Tenet California HealthSystem, Whittier Hospital Medical Center, Whittier
 Tenet Healthcare Corporation, Daniel Freeman Memorial Hospital, Inglewood
 Tenet Healthcare Corporation, Garfield Medical Center, Monterey Park
 Tenet HealthSystem, Alvarado HMC & San Diego, San Diego
 Tenet HealthSystem, Brotman Medical Center, Culver City
 Tenet HealthSystem, Coastal Communities Hospital, Santa Ana
 Tenet HealthSystem Desert, Inc., Desert Regional Medical Center, Palm Springs
 Tenet HealthSystem, Doctors Medical Center of Modesto, Modesto
 Tenet HealthSystem, Elkins Park Hospital, Elkins Park
 Tenet HealthSystem, J. F. Kennedy Memorial Hospital, Indio
 Tenet HealthSystem, Pinecrest Rehabilitation Hospital, Delray Beach
 Tenet HealthSystem Hospitals, Inc., Monterey Park Hospital, Monterey Park
 Tenet HealthSystem Hospitals, Inc., USC University Hospital, Los Angeles
 Tenet HealthSystems, AQ, Inc., Queen of Angels-Hollywood Presbyterian Hospital, Los Angeles
 Tenet Western Division, Centinela Hospital Medical Center, Inglewood
 Tennessee Christian Medical Center, an Adventist Healthcare facility, Madison, TN
 Terrebonne General Hospital, Houma, LA
 The Aspen Club Sports Medicine Institute, Aspen, CO
 The Huntsville Hospital, Huntsville, AL
 The Institute for Rehabilitation and Research, Houston, TX
 The Jewish Hospital of St. Louis, St. Louis, MO
 The Physical Therapy Clinic, Inc, Citrus Heights
 The Therapy Source, P.A., Boise, ID
 Thera TX & Lake Forest Nursing Home, Lake Forest
 Therapy Center (The), Knoxville, TN
 Therapy in Action, Tarzana
 Therapy Source PA, Boise, ID
 Therapy Specialists, San Diego
 Therasport North West, Spokane, WA
 Theratx, San Diego
 Think Physical Therapy, Santa Ana
 Thompson Physical Therapy Associates, Inc., Yuba City
 Three Rivers Area Hospital, Three Rivers, MI
 Tokos Medical Corporation, Santa Ana
 Torrance Memorial Hospital Medical Center, Torrance
 Totally Kids Speciality Healthcare, Loma Linda
 Total Fitness Physical Therapy, Honolulu, HI
 Total Rehab Care, Fullerton
 Total Rehabilitation and Conditioning, Anaheim
 Totally Kids Specialty Healthcare, Loma Linda
 Tri-Cities Physical Therapy, Kennewick, WA
 Tri-City Medical Center, Oceanside
 Tri-City Mental Health, Pomona
 Tripler Army Medical Center, Honolulu, HI
 Tuality Community Hospital, Hillsboro, OR
 Tulare District Hospital, Tulare
 Tuomey Regional Medical Center, Sumter, SC
 Turner, Natalie, Fresno
 Tustin Rehab Hospital, Tustin

 UCSF Stanford Health Services, Stanford
 UMass Memorial Hospital, Leominster, MA
 Unilab, Riverside
 United Cerebral Palsy Association of Central Arizona, Phoenix, AZ
 United Cerebral Palsy, Dallas, TX
 United Therapy Network, Inc., Colton

- Universal Health Systems, Murietta
 Universal Health Systems, Rancho Springs
 Universidad de Montemorelos, Nuevo Leon, Mexico
 University Hospital, Denver, CO
 University Medical Center, Fresno
 University Medical Center of Southern Nevada,
 Las Vegas
 University of California–Davis Medical Center, Davis
 University of California–Irvine, Irvine
 University of California–Los Angeles, Los Angeles
 University of California Medical Center, Los Angeles
 University of California, San Diego Medical Center,
 San Diego
 University of 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 Medical Center, Jerry L. Pettis Memorial,
 Loma Linda
- Victor Valley Community Hospital, Victorville
 Virginia Baptist Hospital, Lynchburg, VA
 Virginia Mason Medical Center, Seattle, WA
 Virginia Rehab, Staunton, VA
 Vista Hospital Systems, Inc., Arroyo Grande
 Vitas Healthcare Corp., San Bernardino
 VNA-Ramona, Sun City
 Volunteer Center, Santa Cruz
- Wahiawa General Hospital, Honolulu, HI
 Walker Physical Therapy, Sun City
 Walters Physical Therapy, Claremont
 Warburton Hospital, Warburton, Victoria, Australia
 Washington Hospital Center, Washington, DC
 Washington Physical Therapy, Pasco, WA
 Waterman Physical Therapy Services, San Bernardino
 Way Station, Inc., Frederick, MD
 Wayne L. Shelton, PT, Spanish Fork, UT
 Weed Army Community Hospital, Ft. Irwin
 Well Tone Aquatics & Physical Therapy Centers,
 Riverside
 Wellton Health Systems, Bristol, TN
 Wesley Woods Geriatric Hospital, Atlanta, GA
 West Allis Memorial Hospital, Peak Performance Clinic,
 West Allis, WI
 West Anaheim Extended Care, Anaheim
 West Coast Spine Restoration Center, Riverside
 West Covina PET Medical Center, West Covina
 West Gate Convalescent Center, San Jose
 West Tennessee Rehabilitation Center, Jackson, TN
 Westlake Physical Therapy, Westlake Village
 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
 West-Star Physical Therapy, City of Industry
 White Memorial Medical Center, (an Adventist Health
 care facility), Los Angeles
 Whittier Hospital Medical Center, Whittier
 Wilcox Memorial Hospital, Lihue, HI
 Wilcox Physical Therapy Center, Anaheim
 William Beaumont Hospital, Troy, MI
 Wimbledon Park Physical Therapy, Victorville
 Winways-Interface Environment, 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 Billings, 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
1987	8	8	16

CLASS	A.S.	B.S.	M.S.	TOTAL
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
2003	0	17	13	30

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
1970	-	12	12

CLASS	CERT.	B.S.	TOTAL
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
2003	6	9	15

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	2003	25	-	1	7	33

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	2003	-	4	16	20
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
2003	-	-	7	25	2	34

PHYSICAL THERAPY

CLASS	CERT.	A.S.	B.S.	Entry-Level M.P.T./D.P.T.	Post-Professional M.P.T./Dr.PT./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	-	40	-	65	18	123
2002	-	24	-	89	29	142
2003	-	26	-	71	40	137

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	2003	50	14	6	70

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		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
		2003	11

ACCREDITATION STATUS

THE UNIVERSITY

Founded as College of Evangelists 1905-06. Chartered as College of Medical Evangelists by the state of California December 13, 1909. Accredited by Northwest Association of Secondary and Higher Schools April 7, 1937. Accredited by WASC (Western Association of Schools and Colleges) (prior to January 1962, Western College Association) February 24, 1960. Became Loma Linda University July 1, 1961. Professional curricula started and approved as indicated.

THE PROFESSIONS

GRADUATE SCHOOL: Started in 1954. Accredited through University accreditation.

SCHOOL OF ALLIED HEALTH PROFESSIONS:

CLINICAL LABORATORY SCIENCE (formerly: Medical Technology): Started in 1937. Approved by the Council on Medical Education of the American Medical Association since August 28, 1937. Currently approved by the Commission on Accreditation of Allied Health Education Programs in collaboration with the National Accrediting Agency for Clinical Laboratory Sciences.

CYTOTECHNOLOGY: Started in 1982. Initial approval by the Commission on Accreditation of Allied Health Education Programs in collaboration with the Cytotechnology Programs Review Committee January 20, 1983.

DIAGNOSTIC MEDICAL SONOGRAPHY: Started in 1976 as diagnostic medical sonography. Approved by the Joint Review Committee on Education in Diagnostic Medical Sonography October 24, 1985.

DIETETIC TECHNOLOGY: Started in 1988. The Dietetic Technology Program is currently granted continuing accreditation by the Commission on Accreditation for Dietetics Education of the American Dietetic Association April 25, 1988.

EMERGENCY MEDICAL CARE: Started in 1993 as a baccalaureate degree program for paramedics, respiratory therapists, and other allied health professionals desiring education, science, or management credentials in emergency medical services.

HEALTH INFORMATION MANAGEMENT: Started as medical record administration in 1963. Approved by the Council on Medical Education of the American Medical Association since December 1, 1963. Currently approved by the Commission on Accreditation of Allied Health Education Programs in collaboration with the American Health Information Management Association.

MEDICAL RADIOGRAPHY: Started in 1941 as radiological technology. Approved by the Council on Medical Education of the American Medical Association November 19, 1944. Currently approved by the Joint Review Committee on Education in Radiologic Technology and the California State Department of Health Services.

NUCLEAR MEDICINE TECHNOLOGY: Started in 1970. Approved by the Council on Medical Education of the American Medical Association June 23, 1973. Currently approved by the Joint Review Committee on Educational Programs in Nuclear Medicine Technology.

NUTRITION AND DIETETICS: Started in 1922 as a certificate program; baccalaureate degree conferred 1932-54; graduate program offered since 1954. Internship program continuously approved by The American Dietetic Association from 1957 through 1974; reestablishment of baccalaureate degree program authorized October 1971. Since 1974 the Coordinated Program in Dietetics has been granted accreditation by the Commission on Accreditation for Dietetics Education of the American Dietetic Association.

OCCUPATIONAL THERAPY: Started in 1959. Initial approval by the Council on Medical Education of the American Medical Association June 10, 1960. Full approval March 30, 1962. Currently approved by the Accreditation Council for Occupational Therapy Education.

OCCUPATIONAL THERAPY ASSISTANT: Started in 1988. Approved by the Commission on Accreditation of Allied Health Education Programs in collaboration with The American Occupational Therapy Association (AOTA) April 13, 1989. Currently accredited by the Accreditation Council for Occupational Therapy Education of the AOTA.

PHLEBOTOMY: Started in 1994. Accredited/approved April 1997 both by the California Department of Health, Laboratory Field Services and by the National Accrediting Agency for Clinical Laboratory Science (NAACLS); with continuing state approval, reaccredited April 2001 by NAACLS.

PHYSICAL THERAPIST ASSISTANT: Started in 1989. Approved by the American Physical Therapy Association April 4, 1990.

PHYSICAL THERAPY: Started in 1941. Initial approval by the Council on Medical Education of the American Medical Association June 6, 1942. Currently approved by the American Physical Therapy Association.

PHYSICIAN ASSISTANT: Started in 2000. Provisional accreditation granted October 20, 2000, by the Commission on Accreditation of Allied Health Education Programs (CAAHEP). Effective January 1, 2001, CAA-HEP was succeeded by the Accreditation Review Commission on Education for the Physician Assistant, Inc. (ARC-PA). Accredited March 2002 by ARC-PA.

RADIATION THERAPY: Approved by the Council on Medical Education of the American Medical Association December 1, 1974. Currently approved by the Joint Review Committee on Education in Radiologic Technology.

RESPIRATORY CARE: Started in 1971. Initial approval by the Council on Medical Education of the American Medical Association September 1972. Full approval June 1973. Currently approved by the Commission on Accreditation of Allied Health Education Programs 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.

SCHOOL OF DENTISTRY: Started in 1953. Approved by the Commission on Dental Accreditation of the American Dental Association since May 23, 1957.

DENTAL HYGIENE: Started in 1959. Approved by the Commission on Dental Accreditation of the American Dental Association since September 7, 1961.

ENDODONTICS: Started in 1967. Approved by the Commission on Dental Accreditation of the American Dental Association since December 1969.

ORAL AND MAXILLOFACIAL SURGERY: Started in 1964. Approved by the Commission on Dental Accreditation of the American Dental Association since 1967.

ORTHODONTICS AND DENTOFACIAL ORTHOPEDICS: Started in 1960. Approved by the Commission on Dental Accreditation of the American Dental Association since May 1965.

PEDIATRIC DENTISTRY: Started in 1993. Approved by the Commission on Dental Accreditation of the American Dental Association since December 1993.

PERIODONTICS: Started in 1961. Approved by the Commission on Dental Accreditation of the American Dental Association since December 1967.

PROSTHODONTICS: Started in 1993. Approved by the Commission on Dental Accreditation of the American Dental Association since February 1995.

SCHOOL OF MEDICINE: Started in 1909. Approved by the Association of American Medical Colleges and the Council on Medical Education of the American Medical Association since November 16, 1922.

SCHOOL OF NURSING: Hospital school started at Loma Linda in 1905. Hospital school added at Los Angeles in 1924. Collegiate program in nursing organized in 1948. Accredited by the National Nursing Accrediting Service December 10, 1951, with approval continuing under the

National League for Nursing until 2001. Initial 1917 approval of the California State Board of Health extended until college program approved July 1, 1952, by the California Board of Registered Nursing. California Board of Registered Nursing approval since 1952. Public health nursing preparation recognized in 1959. School accredited by the Commission on Collegiate Nursing Education (CCNE) since 1999.

SCHOOL OF 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.

ACCREDITING AGENCIES

THE UNIVERSITY

Loma Linda University is accredited by WASC.

Accrediting Commission for Senior Colleges and Universities of the Western Association of Schools and Colleges (WASC)

985 Atlantic Avenue, Suite 100

Alameda, CA 94501

Phone: 510 / 748-9001

FAX: 510 / 748-9797

Web site: www.wascweb.org

Email: 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

Email: 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

Email: coamfte@aamft.org

*All entry-level degrees are accredited by their respective professional accrediting associations.

Psychology

American Psychological Association
750 First Street NE
Washington, DC 20002-4242
Phone: 202 / 336-5500
FAX: 202 / 336-5978
Web site: www.apa.org
Email: 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
Email: 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
Email: 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
Email: 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
Email: mccartyj@mfldclin.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
Email: naaclsinfo@naacls.org

California Department of Health, Laboratory Field
Services
2151 Berkeley Way, Annex 12
Berkeley, CA 94707-1011
Phone: 510 / 873-6449

Clinical Laboratory Science

(formerly Medical Technology)
National Accrediting Agency for Clinical Laboratory
Sciences (NAACLS)
8410 West Bryn Mawr Avenue, Suite 670
Chicago, IL 60631-3415
Phone: 773 / 714-8880
FAX: 773 / 714-8886
Web site: www.naacls.org
Email: naaclsinfo@naacls.org
California Department of Health, Laboratory Field
Services
2151 Berkeley Way, Annex 12
Berkeley, CA 94707-1011
Phone: 510 / 873-6449

Cytotechnology

Commission on Accreditation of Allied Health
Education Programs (CAAHEP)
35 East Wacker Drive, Suite 1970
Chicago, IL 60601-2208
Phone: 312 / 553-9355
FAX: 312 / 553-9616
Web site: www.caahep.org
Email: 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
Email: caahep@caahep.org

Nutrition and Dietetics

Dietetic Technician Program—A.S.

Nutrition and Dietetics Program—B.S.

Commission on Accreditation for
Dietetics Education (CADE) of the
American Dietetic Association
120 South Riverside Plaza, Suite 2000
Chicago, IL 60606-6995
Phone: 312 / 899-0040, ext. 5400 or
800 / 877-1600, ext. 5400
FAX: 312 / 899-4817
Web site: www.eatright.org/cade
Email: 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
Email: 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
Email: see Web site

Radiation Technology**Medical Radiography—A.S.****Radiation Therapy Technology—Certificate**

Joint Review Committee on Education in
Radiologic Technology (JRCERT)
20 North Wacker Drive, Suite 900
Chicago, IL 60606-2901
Phone: 312 / 704-5300
FAX: 312 / 704-5304
Web site: www.jrcert.org

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
Email: 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
Email: 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
Email: 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
Email: 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
Email: accreditation@ada.org

SCHOOL OF MEDICINE

Liaison Committee on Medical Education
Association of American Medical Colleges
2450 N Street NW
Washington, DC 30037
Phone: 202 / 828-0596
FAX: 202 / 828-1125
Web sites: www.lcme.org; www.aamc.org
Email: 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

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

SCHOOL OF PUBLIC HEALTH

Council on Education for Public Health
800 Eye Street NW, Suite 202
Washington, DC 20001-1397
Phone: 202 / 789-1050
FAX: 202 / 789-1895
Web site: www.ceph.org
Email: jconklin@ceph.org

Health Promotion and Education**Certified Health Education Specialist (CHES)**

National Commission for Health Education
Credentialing, Inc.
944 Marcon Boulevard, Suite 310
Allentown, PA 18109
Phone: toll free 888 / 624-3248 or 673-5445
FAX: 800 / 899-4817
Web site: www.nchec.org
Email: 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
or www.dhs.cahwnet.gov
Email: rhook1@dhs.ca.gov

Nutrition

Commission on Accreditation for
Dietetics Education (CADE) of the
American Dietetic Association
120 South Riverside Plaza, Suite 2000
Chicago, IL 60606-6995
Phone: 312 / 899-0040, ext. 5400 or
800 / 877-1600, ext. 5400
FAX: 312 / 899-4817
Web site: www.eatright.org/cade
Email: education@eatright.org

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, including the Jorgensen Learning Resources,
- 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. According to

<<http://www.llu.edu/llu/library/about/libstats2001-2002.htm>> as of June 2002, the library has:

- 31 databases; and
- a total of 335,848 books, bound and current journals/periodicals, and media items, including:
156,041 monographic titles (print); and
6,138 journals (print and electronic).

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; data-

base 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 SIRCULS (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

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 that 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 typewritten 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.

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

LLUMC = Medical Center

LLUMC AS = Ambulatory Services

LLUMC ECSH = East Campus Specialty
Hospital; and Urgent Care

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)
5. Purchasing (University); Campus Engineering
6. University Printing Services and Design Department; Construction; Architectural Services
7. Drayson Center: volleyball/basketball gym, intramurals, tennis, badminton, racquetball, cardio and weight rooms, aerobics studios, tracks, pools, arts and crafts; chaplain's office; Superfield; Student Union; Student Association
8. Speech and Hearing Clinic (AH)
9. Nichol Hall: School of Public Health (PH); School of Allied Health Professions (AH)
9A = Annex—AH and PH : Nutrition and Dietetics
9C = Cottages:
#60 ("Blue")—Marketing and Retention (AH)
#70 ("Brown")—OT field work office (AH)
#80 ("Green")—SIMS (PH)
10. Daniells Residence (men; graduate women)
11. Lindsay Hall (women's residence)
12. Campus Hill SDA Church
13. Linda Hall (Campus Hill SDA Church)
14. Evans Hall—*Upper level*: Adventist Health Studies (AHS); Center for Health Research (CHR);
Lower: Cutler Amphitheater (CA); Student Health Service (SHS); Center for Health Promotion (CHP)
15. 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. Research: orthopaedic, bioengineering, natural sciences
20. Randall Visitors Center: Amphitheater
21. University Library, Del E. Webb Memorial: Main library; Ellen G. White Estate Loma Linda Branch Office; Heritage Room
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
34. Carlson Wagonlit 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 (post-award, University); LLU Foundation Rental Office
- 38B. Research affairs, vice chancellor for
- 38C. Office of Sponsored Research (pre-award)
39. Bank of America
40. U. S. Post Office
41. *Upper level*: Business Center; Accounting; Foundation; *Lower*: 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
42. La Loma Credit Union
43. Campus Cafeteria
44. Risk Management
45. Safety Education Center
46. Campus Store (bookstore, camera shop, Apple computer); Loma Linda Market (Campus Pharmacy, bakery, natural foods); Patio Pantry
47. Alumni Center: Staff Development; Planned Giving; General Conference liaison
48. A.C.T.S. (emergency relief)
49. LLUMC East Campus SPECIALTY HOSPITAL: Orthopaedics, Rehabilitation, Neurosurgery, and Family Medicine; 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
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
59. Wong Kerlee International Conference Center
- 60-61. Emergency Department, LLUMC
62. Mail Service (University, MC)
63. Nelson House
64. West Hall: Schools of Nursing and Pharmacy; Graduate School administration

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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), Benton St. (X Barton Rd.)
 68. Mountain View Plaza (X Barton Rd.): Diabetes Treatment Center (MC); Osteoporosis Research Center; Hospice (MC); LL Medical Supply (MC); Home Care Services (respiratory, family) (MC); Judkins Library (MC)
 69. Loma Linda Health Center ("*Cape Cod*" buildings), Mountain View Ave. (X Barton Rd.):
A -11306 *Providence*: LL Community Medical*
B -11314 *Cambridge*: LLU medical staff administration (BMC, CH, CMC, MC); Compliance Department
C -11320 *Gloucester*: Women's Fitness Center
D -11326 *Worcester*: Special Projects (MC); Physician Referral and Circle of Care
E -11332 *Westerly*: Medical*
F -11354 *Walden*: Medical*
G -11360 *Hartford*: LLU Cancer Institute: Cancer Data Center; Administration; research
H -11346 *Concord*: Marketing (MC); Medical*
 - I -11368 *Springfield*: LLU Cancer Institute: Region 5 Cancer Surveillance Program
 - J -11374 *Dover*: Psychiatry/Behavioral Medicine (SM)
 - K -11382 *Danbury*: Loma Linda Health Pharmacy; Dental*
 - L -11340 *Bridgeport*: LLU Cancer Institute: Cancer information
- 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.): Partial hospitalization (days only); Inpatient
 71. Marriage and Family Therapy Clinic, 164 W. Hospitality Lane., Suite 15, (X Hunt's Lane 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 work-related health/injury—suite 106A; dental*/medical*
 73. SACHS Norton clinic (E. 3rd St. X Tippecanoe)
 74. Geoscience Research Institute [of SDA General Conference] (Ortner Building)
 75. LLUMC East Campus Ambulatory Services: Out-patient physical therapy

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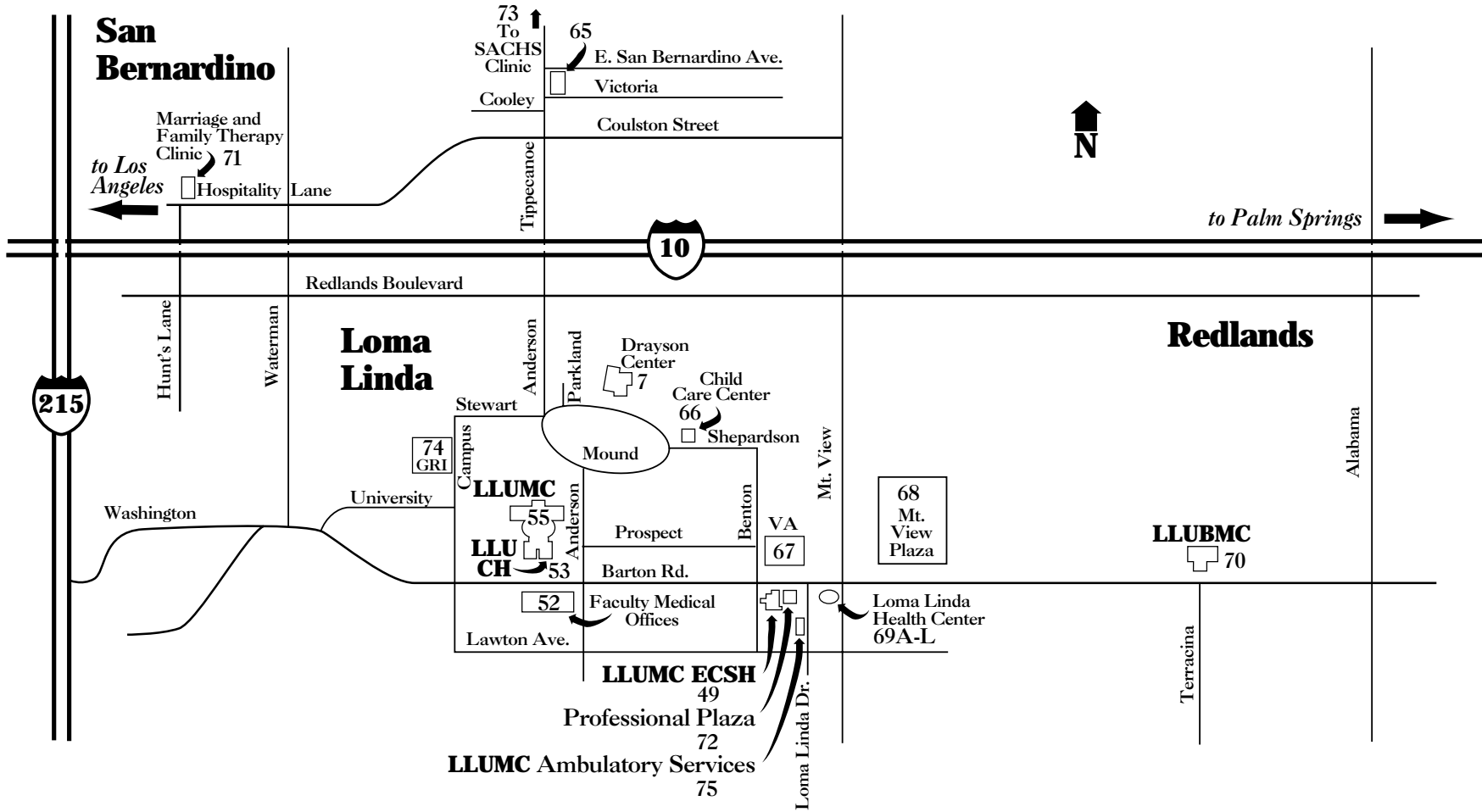
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- 66 - Loma Linda Children's Center
- 67 - Jerry L. Pettis Memorial Veterans Medical Center (VA Hospital)

- 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
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TO COMMUNICATE WITH LLU . . .

MAIL:
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11060 Anderson Street
Loma Linda, CA 92350

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

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For information about LLU 1/800-422-4LLU
dialing from Canada 1/800-548-7114

Area Code: 909/
Switchboard: 558-1000, 558-4300

Off-campus PHONE:	On-campus PHONE:		Off-campus FAX:	On-campus FAX:
558-4540	44540	Chancellor	558-0242	80242
558-4787	44787	Diversity	558-0140	80140
558-4510	44510	Student Affairs	558-4879	44879
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558-4955	44955	International Student Services	558-4879	44879
558-4520	44520	Student Finance	558-4879	44879
558-4509	44509	Student Financial Aid	558-7904	87904
558-4508	44508	University Records	558-4879	44879
558-8770	88770	Student Health Service	558-0433	80433
558-6028	66028	Student Counseling	558-6090	66090
558-6050	66050	Student Assistance Program	558-6051	66051
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558-8348	88348	Campus Chaplain/Campus Ministries	558-0347	80347
558-4570	44570	University Church	558-4186	44186
809-1049	44270	Campus Hill Church	796-1992	
558-9200	39200	LLU Behavioral Medicine Center	558-9243	39243
558-4536	44536	Faculty of Religion	558-4856	44856
558-8434	88434	Dean	558-4856	44856
558-4956	44956	Biomedical and Clinical Ethics	558-0336	80336
558-4956	44956	Center for Christian Bioethics	558-0336	80336
558-8433	88433	Clinical Ministry	558-4856	44856
558-1000	ext. 43983	Center for Spiritual Life and Wholeness	558-0336	80336
558-8433	88433	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	80239-attn. OCTH
558-4948	44948	Occupational Therapy Assistant	558-0239	80239-attn. OCTA
558-4632	44632	Physical Therapy	558-0459	80459-attn. PPTH
558-4634	44634	Physical Therapist Assistant	558-0459	80459-attn. PAST
558-4931	44931	Radiation Technology	558-4291	44291-attn. RTCH
558-4998	44998	Speech-Language Pathology/Audiology	558-4291	44291-attn. SPPA
558-4998	47224	Speech-Language Pathology Assistant	558-4291	44291-attn. SLPA

PHONE:	PHONE:		FAX:	FAX:
558-4222	1616	Dentistry		
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
		Medicine		
558-4462	44462	Admissions	558-4146	44146
558-4467	44467	Dean	558-0359	80359
558-4481	44481		558-4146	44146
		Nursing		
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
		Pharmacy		
558-4529	44529	Admissions	558-4859	44859
558-4528	44528	Dean	558-0441	80441
		Public Health		
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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The Faculty of Religion	http://www.llu.edu/llu/fr/	
Coordinator of M.A. in Bio-medical and Clinical Ethics	http://ethics.llu.edu/	mcarr@rel.llu.edu
Coordinator of M.A. in Clinical Ministry	http://ministry.llu.edu/	ssorajjakool@rel.llu.edu
Coordinator of M.A. in Religion and the Sciences	http://religionandscience.llu.edu	rrice@rel.llu.edu
Center for Christian Bioethics	http://www.llu.edu/llu/bioethics/	hmorrison@ethicscenter.llu.edu
Center for Spiritual Life and Wholeness	http://www.llu.edu/llu/wholeness/	innerweave@som.llu.edu
<i>The Schools:</i>		
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Admissions		admissions@sahp.llu.edu attn. admissions
Cardiopulmonary Sciences		admissions@sahp.llu.edu attn. CPSC
Clinical Laboratory Science		admissions@sahp.llu.edu attn. CLSC
Health Information Management		admissions@sahp.llu.edu attn. HLIN
Nutrition and Dietetics		nutrition@sahp.llu.edu attn. DTCS
Occupational Therapy		admissions@sahp.llu.edu attn. OCTH
Physical Therapy		admissions@sahp.llu.edu attn. PPTH
Radiation Technology		admissions@sahp.llu.edu attn. RTCH
Speech-Language Pathology/Audiology		admissions@sahp.llu.edu attn. SPPA
Dentistry	http://www.llu.edu/llu/dentistry/	DentAO@sd.llu.edu
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Admissions	http://www.llu.edu/llu/grad/	gradschool@univ.llu.edu
Medicine	http://www.llu.edu/llu/medicine/	ledwards@som.llu.edu
Nursing	http://www.llu.edu/llu/nursing/	admissions_sn@sn.llu.edu
Pharmacy	http://www.llu.edu/llu/sps/	pharmacy@univ.llu.edu dcarrington@univ.llu.edu
Public Health	http://www.llu.edu/llu/sph/	
Recruitment and on-line application for admission and information	http://www.llu.edu/llu/sph/	sphinfo@sph.llu.edu