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college of arts & sciences

LOMA LINDA UNIVERSITY 1976-78

LOMA LINDA UNIVERSITY College of Arts and Sciences 1976-78

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

GENERAL OFFICE HOURS

9 to 12 Monday through Friday
1 to 3 Monday through Thursday

CLOSED

Saturday, Sunday
legal holidays

BULLETIN OF

LOMA LINDA UNIVERSITY

Volume 7, Number 6, April 1976

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**arts &
sciences**

**LOMA LINDA UNIVERSITY
1976-78**

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LOMA LINDA UNIVERSITY is a two-campus Seventh-day Adventist coeducational institution located in inland Southern California and is part of the Seventh-day Adventist system of higher education.

On the La Sierra campus, at the west edge of Riverside, curriculums in applied and liberal arts and sciences, and programs in professional education in fulfillment of requirements for teaching credentials are offered by the College of Arts and Sciences and the School of Education. On the Loma Linda campus, in the San Bernardino-Redlands area, professional curriculums are offered by the Schools of Allied Health Professions, Dentistry, Health, Medicine, and Nursing. Graduate programs of the departments of the schools are offered from both campuses through the Graduate School.

Accredited by the Western Association of Schools and Colleges, the University is a member of the American Council on Education, the Association of American Colleges, and the Association of Seventh-day Adventist Colleges and Secondary Schools. The professional curriculums of the University are approved by their respective professional organizations.

Curriculums are offered leading to the Associate in Science, Associate in Arts, Bachelor of Music, Bachelor of Science, Bachelor of Arts, Master of Science in Public Health, Doctor of Dental Surgery, Doctor of Medicine, Master of Public Health, Doctor of Health Science, Master of Science, Master of Arts, Specialist in Education, and Doctor of Philosophy degrees.

The core of the combined faculties consists of approximately 550 full-time teachers. Part-time and voluntary teachers, especially clinicians in the professional curriculums, bring the total past 1,200. Men and women from as many as eighty nations are represented in the annual enrollment of approximately 4,000 students.

Loma Linda University selects its students without discrimination based on race, creed, color, sex, or place of national origin.

1976

CALENDAR

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			

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

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				

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		

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						

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			

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	

SUMMER SESSION 1976

20 Registration
21 Beginning of classes and laboratories for six- and eight-week courses

5 Independence Day recess

30 End of six-week courses

12 End of eight-week courses

Information concerning workshops, institutes, and other special courses appears in the Summer Session BULLETIN

23-SEP 24 Academic Skills Program; Intensive American Language Institute

AUTUMN QUARTER 1976

26-28 Testing, orientation, and registration of freshmen
28 Registration of returning and transfer students
29 Beginning of classes and laboratories

12 Last day to enter a course
18-23 Autumn Week of Devotion

4 Midterm; last day to drop a course with no transcript record

24-28 Thanksgiving recess

13-16 Final examinations
16 End autumn quarter

1977

CALENDAR

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					

3
4
17

WINTER QUARTER 1977
Registration
Beginning of classes and laboratories
Last day to enter a course

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					

8
14

Midterm; last day to drop a course with no transcript record
Washington's Birthday recess

March

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

14-17
17

Final examinations
End of winter quarter

SPRING QUARTER 1977
Registration
Beginning of classes and laboratories

28
29

April

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

11
18-23

Last day to enter a course
Spring Week of Devotion

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				

3
30

Midterm; last day to drop a course with no transcript record

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		

6-9
9
10-12

Final examinations
End of spring quarter
Commencement Events

SUMMER SESSION 1977
Registration
Beginning of classes and laboratories

19
20

1977

CALENDAR

July

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

August

S	M	T	W	T	F	S	
	1	2	3	4	5	6	11 End of eight-week courses
7	8	9	10	11	12	13	
14	15	16	17	18	19	20	
21	22	23	24	25	26	27	Information concerning workshops, institutes, and other special courses appears in the Summer Session BULLETIN
28	29	30	31				

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	25-27 Testing, orientation, and registration of freshmen
18	19	20	21	22	23	24	27 Registration of returning and transfer students
25	26	27	28	29	30		28 Beginning of classes and laboratories

October

S	M	T	W	T	F	S	
						1	
2	3	4	5	6	7	8	
9	10	11	12	13	14	15	11 Last day to enter a course
16	17	18	19	20	21	22	17-22 Autumn Week of Devotion
23	24	25	26	27	28	29	
30	31						

November

S	M	T	W	T	F	S	
		1	2	3	4	5	3 Midterm; last day to drop a course with no transcript record
6	7	8	9	10	11	12	
13	14	15	16	17	18	19	
20	21	22	23	24	25	26	23-27 Thanksgiving recess
27	28	29	30				

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	12-15 Final examinations
18	19	20	21	22	23	24	15 End of autumn quarter
25	26	27	28	29	30	31	

1978

CALENDAR

January									
S	M	T	W	T	F	S			
1	2	3	4	5	6	7		3	Registration
8	9	10	11	12	13	14		4	Beginning of classes and laboratories
15	16	17	18	19	20	21		17	Last day to enter a course
22	23	24	25	26	27	28			
29	30	31							
February									
S	M	T	W	T	F	S			
			1	2	3	4			
5	6	7	8	9	10	11		8	Midterm; last day to drop a course with no transcript record
12	13	14	15	16	17	18			
19	20	21	22	23	24	25			
26	27	28							
March									
S	M	T	W	T	F	S			
			1	2	3	4		13-16	Final examinations
5	6	7	8	9	10	11		16	End of winter quarter
12	13	14	15	16	17	18			SPRING QUARTER 1978
19	20	21	22	23	24	25		27	Registration
26	27	28	29	30	31			28	Beginning of classes and laboratories
April									
S	M	T	W	T	F	S			
						1			
2	3	4	5	6	7	8		10	Last day to enter a course
9	10	11	12	13	14	15		10-15	Spring Week of Devotion
16	17	18	19	20	21	22			
23	24	25	26	27	28	29			
30									
May									
S	M	T	W	T	F	S			
		1	2	3	4	5	6		
7	8	9	10	11	12	13		2	Midterm; last day to drop a course with no transcript record
14	15	16	17	18	19	20			
21	22	23	24	25	26	27			
28	29	30	31					29	Memorial Day recess
June									
S	M	T	W	T	F	S			
				1	2	3		5- 8	Final examinations
4	5	6	7	8	9	10		8	End of spring quarter
11	12	13	14	15	16	17		9-11	Commencement Events
18	19	20	21	22	23	24			SUMMER SESSION 1978
25	26	27	28	29	30			18	Registration
								19	Beginning of classes and laboratories
July									
S	M	T	W	T	F	S			
						1		4	Independence Day recess
2	3	4	5	6	7	8		28	End of six-week courses
9	10	11	12	13	14	15			Eight-week courses end August 10
16	17	18	19	20	21	22			Information concerning workshops, institutes, and other special courses appears in the Summer Session BULLETIN
23	24	25	26	27	28	29			
30	31								



THE CHRISTIAN UNIVERSITY – if it is indeed a university and truly Christian – should be a community composed of members who aim to engage in free inquiry, to find zest and value in interchange of opinions and ideas, and to prize truth . . . who know that law begins with governance of the self . . . who hold respect for a neighbor paramount and promote good for others as attentively as for themselves.

The learner should find the university community an environment conducive to mastery of a chosen discipline, art, or profession, and to the joy of participating in the advancement of knowledge. In the Christian university he should find also circumstances that encourage affirmation of meanings that endure and discovery of perspectives that enhance the view that all truth stems from One Source, so that each branch of knowledge thus seen can be appreciated and respected as part of the whole.

But the learner is not a passive receiver. He himself is a contributor to the environment. His very presence – the unique blend of aptitudes, attributes, and aspirations that impel him – affects its quality. If his will springs from the intention to grow throughout his lifetime, to think autonomously yet work conjointly, to do justly and love mercy, to be whole – his presence enriches the environment.

If the universe speaks to him of the Omniscient God, Initiator of all – knowledge, order, reason, beauty, love, and whatever is of great worth – so that his experience, values, and knowledge are consonant, then the learner can be a witness whose healing, steadying, inspiring influence may help alleviate the anguish of a bewildered and disenchanted world.



I

Admission Information
Academic Policies and Practices
Financial Information
Student Affairs

THE COLLEGE OF ARTS AND SCIENCES of Loma Linda University is the most recent stage of development of a Seventh-day Adventist educational enterprise that began as La Sierra Academy in 1922. The next year, with the addition of coursework in preparation for teaching, it became La Sierra Academy and Normal School. In 1927 it became Southern California Junior College, which became La Sierra College in 1939 and was fully accredited as a four-year liberal arts college in 1946. In 1967 it merged with Loma Linda University to become the University's undergraduate college.

Although its functions are centered on the La Sierra campus of the University, the College also offers an increasing amount of coursework on the Loma Linda campus for students in the professional schools and for College students who live in the Loma Linda area.

Primary objective

The College has as its primary objective the education of Seventh-day Adventist men and women for the fulfillment of the worldwide mission of the church. Many of these men and women will be formally employed by the church – in its professional ministry, its educational system, its medical services, and elsewhere. Many others will participate in the mission of the church by the witness of their lives in personal integrity, generous service, and Christian devotion.

Accordingly, the College provides an explicitly religious context for the encouragement of personal excellence: physical and emotional health, intellectual breadth and depth appropriate to the baccalaureate level, appreciation of the fine arts, responsible social relationships, and unconditional commitment to supreme values. To this end, campus life incorporates study, work, recreation, and worship.

Liberal education

An education that is both liberal and liberating includes, besides a concentrated study in the student's major area of interest and a basic competence in written and oral communication, an encounter with the broad areas of knowledge:

the *humanities*, including intellectual and cultural history, music, art, language, literature, philosophy;

the *natural sciences*, including biology, chemistry, physics;

mathematics, including both traditional mathematics and computer science;

the *social and behavioral sciences*, including psychology, sociology, anthropology, political science; and

religion, including biblical studies, theology, and ethics.

The intention of this kind of education is to enable a student not merely to earn a living, but to live responsibly and creatively in society and under God.

Applied studies

In addition to the traditional disciplines of the liberal arts and sciences, the College offers coursework in many areas of applied studies: accounting and management, agriculture, studio art, consumer related sciences, data processing, industrial studies, applied music, physical education, secretarial administration, and speech therapy.

CURRICULUMS

The College has organized various curriculums of differing lengths and emphases:

Baccalaureate degree

The *Bachelor of Arts* curriculum is four years of coursework that places a major concentration within the context of a comprehensive liberal education. The *Bachelor of Science* or *Bachelor of Music* curriculum is four years of coursework with somewhat greater concentration in a major field and correspondingly less breadth in the liberal arts.

Associate degree

The *Associate in Arts* or *Associate in Science* curriculum is two years of coursework divided approximately equally between general and vocational education.

Certificate

The certificate curriculum is one year (or more) of coursework devoted almost entirely to vocational education.

MAJOR PROGRAMS

The table below lists by departments and curriculums the major programs that are now offered by the College:

	CURRICULUM	PROGRAMS	
Agriculture	Bachelor of Science	general agriculture livestock production	plant production intensive food production
	Associate in Science	agriculture	
Anthropology and Sociology	Bachelor of Arts	sociology	
	Bachelor of Science	sociology anthropology	behavioral science behavioral science and religion
Art	Bachelor of Arts	visual arts	
	Bachelor of Science	painting design printmaking	ceramics sculpture photography
<i>(Behavioral Sciences, Division of: see Departments of Anthropology and Sociology; Psychology; and Social Service.)</i>			
Biology	Bachelor of Arts	biology	
	Bachelor of Science	biology	
Business and Economics	Bachelor of Arts	accounting	management
	Bachelor of Science	same as Bachelor of Arts, plus:	food service management
Chemistry	Bachelor of Arts	chemistry	biochemistry
	Bachelor of Science	same as Bachelor of Arts, plus:	physical science
Communication	Bachelor of Arts	speech communication and media mass media speech pathology and audiology	
	Bachelor of Science	speech pathology and audiology	
Consumer Related Sciences	Bachelor of Science	child development clothing and textiles	home economics urban family and community
	Associate in Science	child and family science	nutrition care service
	Certificate	food service	nursery school care
English	Bachelor of Arts	English	

History	Bachelor of Arts	history history and political science	Western thought
Industrial Studies	Bachelor of Arts	industrial arts	
	Bachelor of Science	industrial arts	industrial studies
	Associate in Science	institutional plant engineering	
Mathematics	Bachelor of Arts	mathematics	
	Bachelor of Science	mathematics	computer science
Modern Languages	Bachelor of Arts	English as a second language French German	Spanish Spanish, bilingual/cross cultural
Music	Bachelor of Arts	music	
	Bachelor of Music	music performance	church music
Physical Education, Health, and Recreation	Bachelor of Arts	physical education health and physical education	recreation
	Bachelor of Science	same as Bachelor of Arts, plus:	health science
	Associate in Science	recreation	
Physics	Bachelor of Arts	physics	
	Bachelor of Science	physics biophysics	engineering physics
	Associate in Science	engineering physics	
Psychology	Bachelor of Arts	psychology administration of justice	behavioral science
	Bachelor of Science	same as Bachelor of Arts, plus:	behavioral science and religion
Religion	Bachelor of Arts	religion	ministerial studies
	Associate in Arts	Bible work and personal ministry	
Secretarial and Business Education	Bachelor of Arts	secretarial administration medical legal educational editorial	business education
	Bachelor of Science	same as Bachelor of Arts	
	Associate in Arts	stenography	medical office assisting
Social Service	Bachelor of Science	social service	social service and religion

PREPROFESSIONAL PROGRAMS

In cooperation with the professional schools of the University, the College offers coursework leading to admission to the following curriculums and programs at various levels:

	PROGRAM	SCHOOL
Certificate	Nuclear medicine technology	Allied Health Professions
	Radiation therapy technology	Allied Health Professions
Associate degree A.S.	Dental assisting	Dentistry
	Medical radiography	Allied Health Professions
	Nuclear medicine technology	Allied Health Professions
	Nursing	Nursing
	Respiratory therapy	Allied Health Professions
Baccalaureate degree B.S.	Dental hygiene	Dentistry
	Dietetics	Allied Health Professions
	Medical radiography	Allied Health Professions
	Medical record administration	Allied Health Professions
	Medical technology	Allied Health Professions
	Nursing	Nursing
	Occupational therapy	Allied Health Professions
	Physical therapy	Allied Health Professions
	Public health science	Allied Health Professions
	Respiratory therapy	Allied Health Professions
Master's degree M.P.H., M.S.P.H.	Biostatistics	Health [Graduate School M.S.]
	Environmental health	Health
	Epidemiology	Health
	Health administration (5 areas)	Health
	Health education (4 areas)	Health
	Nutrition (3 areas)	Health [Graduate School M.S.]
	Parasitology	Health
	Public health nutrition	Health
	Tropical health	Health
Specialist degree ED.S.	Counselor education	Education
	Educational administration	Education
	Educational supervision	Education
Doctoral degree D.D.S., M.D., DR.H.SC.	Dentistry	Dentistry
	Medicine	Medicine
	Health sciences	Health

A student interested in any of these programs should communicate with the school involved and consult its BULLETIN for information concerning specific coursework to be completed in the College before admission to the professional program.

GRADUATE PROGRAMS

Graduate School	Through the Graduate School, departments of the College offer master's degree programs in anthropology; biology; communication disorders; English; history; marriage, family, and child counseling; Middle Eastern studies; and sociology.
School of Education	In cooperation with the School of Education, departments of the College participate in master's degree programs in the teaching of agriculture, art, biology,

business, chemistry, English, French, German, history, home economics, industrial arts, mathematics, music, physical education, physics, psychology, religion, sociology, Spanish, and speech.

ADVENTIST COLLEGES ABROAD

Adventist Colleges Abroad is a consortium of ten colleges and universities in the United States established to provide opportunities for qualified students to study the French, German, Spanish, and Chinese languages overseas at the following institutions:

Séminaire Adventiste du Salève, Collonges-sous-Salève, France
Seminar Schloss Bogenhofen, Braunau, Austria
Seminario Adventista Español, Sagunto, Spain
South China Union College, Hong Kong

Cost The cost of this overseas study, including transportation, is comparable to that at the American colleges. Further information may be obtained from:

Adventist Colleges Abroad
Loma Linda University
Riverside, California 92505

Prerequisites The participant need not be a language major, but must have a minimum of 8 quarter units, and preferably 16 or more units, in the language. He must have a language grade point average of 3.0 (students going to Hong Kong are not expected to have a Chinese language background) and an overall grade point average of 2.5; and he must have a good citizenship record.

ORGANIZATION AND ADMINISTRATION

Dean The dean is the chief administrative officer of the College and is responsible for its academic program. He is assisted by one or more associate deans. The dean and his associates also hold active teaching positions on the College faculty.

Faculty Officers of the faculty are the dean, who serves as its chairman and presides at its general meetings; an associate dean, who serves as vice chairman; and a secretary and parliamentarian elected by the faculty.

Committees The administration of the College is guided by the work of seven faculty policy committees, which are elected by the faculty as a whole and bring to it recommendations regarding specified areas of general faculty concern: academic affairs; teaching and teacher welfare; administration and finance; grants, research and publication; student life; spiritual life; and campus affairs.

The Executive Committee of the College consists of the dean, associate dean(s), and chairmen of the nineteen departments of instruction. Four other administrative committees are appointed by the dean and report to him: admissions, curriculum, academic standards, and student recommendations.

La Sierra campus administrative committees on which the College faculty holds major representation include the committees on awards and scholarships, library, faculty social activities, religious activities, student affairs, and teacher education.

ADMISSION INFORMATION

The admissions committees of the University put forth considerable effort to be assured that an applicant to any of the schools is qualified for his proposed curriculum and seems likely to profit from educational experience in this University. The Admissions Committee of the College of Arts and Sciences examines evidence, derived from the usual sources consulted by colleges and universities, of scholastic competence, moral and ethical standards, and significant qualities of character and personality.

APPLICATION AND ACCEPTANCE

Where to write Inquiry about admission and acceptance should be addressed to :

Admissions Office
Loma Linda University
Riverside, California 92505

- Procedure
1. In anticipation of applying for admission to the College, the prospective student should arrange for (a) transcripts of test results and grades at schools formerly attended to be sent directly to the University, (b) two wallet-size photographs, (c) names of those of whom the University may request personal information about the applicant.
 2. As early as possible, the prospective student should submit a formal application together with all supporting information and the nonrefundable application fee specified in the Schedule of Charges in the *Financial Information* section of this BULLETIN.
 3. The Admissions Committee takes official action, and the Admissions Office notifies the applicant of acceptance or nonacceptance.
 4. The accepted applicant who is planning to live in a University residence hall should submit the required deposit (see *Financial Information*).
 5. As soon as possible, the accepted applicant should also complete the medical history questionnaire (which he receives with his acceptance) and send it with a check for \$5.50 to Medical Datamation, 208 Union Bank Building, Bellevue, Ohio 44811. The report submitted from Medical Datamation to the campus health service must be on file at the time of registration.
- Before coming to the campus, the student should make certain that he has been accepted.
- Deadlines Applications for the fall, winter, spring, and summer terms are due on August 15, December 1, March 1, and May 1, respectively. Late applications must be accompanied by the special late application fee (see *Financial Information*). Those desiring financial aid should have their applications in by May 1. The financial aid application deadline is June 1.

Physical examination In most cases the self-completed medical history mentioned above replaces the physical examination previously required under state law. If any further information is required, the campus health service notifies the student immediately.

ADMISSION OF FRESHMEN

Regular standing Admission to regular standing is ordinarily granted to an applicant who has (a) a diploma or its equivalent from an accredited secondary school, (b) a grade average of at least C+ (2.3), (c) the specified amount of credit in particular subject areas (see below), (d) a percentile ranking of 30 or above on both the verbal and quantitative sections of the Scholastic Aptitude Test or the American College Test, and (e) satisfactory personal recommendations. In unusual cases, the Admissions Committee may, at its own discretion, waive one or more of these requirements.

Provisional standing An applicant who does not fully meet the requirements for admission to regular standing may be admitted to provisional freshman standing, with regular standing conditional upon the fulfillment of alternative requirements. One such requirement may be satisfactory completion of specified courses in the Academic Skills Program. This is especially designed to help an incoming student develop reading, composition, computational, and study skills.

An applicant with a grade average of less than C+ (2.3) and a percentile ranking of less than 25 on the verbal section of the Scholastic Aptitude Test or the American College Test *is required* to register for and successfully complete the Academic Skills Program in order to achieve regular standing.

Whenever any coursework (including the Academic Skills Program) is specified as a requirement for regular standing, it must be completed by the end of the student's third quarter in residence.

Required subjects The following pattern of secondary school credit is the *minimum* acceptable for admission to the College:

English, 30 semester periods.
Mathematics, 10 semester periods.
Natural sciences, 10 semester periods.
Social sciences, 10 semester periods.
Religion, 10 semester periods *per year of attendance at a church-related secondary school.*
Additional coursework in mathematics, natural sciences, and social sciences: 10 semester periods in each of two of these three areas; *or* 10 semester periods in one of the three areas and 20 semester periods in a foreign language.
Electives to complete 160 semester periods (not including physical education).

Recommended subjects In order to ensure adequate preparation for, and maximum flexibility in, his college curriculum, a student should complete the following pattern:

English, 30-40 semester periods.
Foreign language, 20 semester periods.
Mathematics, 20-30 semester periods.
Natural sciences, 30 semester periods (including, if possible, biology, chemistry, and physics).
Social sciences, 20-30 semester periods (including American and world history).

Entrance tests A prospective student should take the Scholastic Aptitude Test (SAT) of the College Entrance Examination Board during his senior year of secondary school and have the results sent to the Admissions Office of the University. Ordinarily this test is taken at the student's school; but if it is not available there, an applicant may make his own arrangements by writing directly to the College Entrance Examination Board (from Colorado westward addressing correspondence to Box 1025, Berkeley, California 94701; and from Nebraska eastward, to Box 592, Princeton, New Jersey 08540).

The SAT and other placement tests must be completed before initial registration in the College. Information concerning testing dates and locations is sent to accepted applicants.

Advanced placement Credit toward graduation may be granted to an entering student who has satisfactorily completed Loma Linda University Extension coursework or proficiency examinations of the Advanced Placement Program (APP), the College Level Examination Program (CLEP), or one or more departments of the College. To obtain credit by examination, a student petitions the Dean; if consent is given, credit is recorded after the student has earned at least 12 units of credit with a grade average of C (2.0).

OTHER ADMISSION PRACTICES

Reentrance A former student who wishes to resume his studies at the University must meet the regular entrance requirements in force at the time of his reentrance.

Transfer students A student applying for admission by transfer from another college or university must file with the Registrar complete records of studies taken at the secondary and college levels. Acceptance of credit for college-level coursework at another institution is subject to the following limitations:

1. The maximum amount of credit accepted from an accredited *junior college* is 105 quarter units (lower division).

2. Credit transferred from a college *outside the United States* or from an *unaccredited college* is evaluated and accepted only after a student has earned 12 units of credit with an average grade of C (2.0) or better at Loma Linda University.

3. Credit for coursework at a *military service school* is granted according to recommendations of the American Council on Education and/or the California Committee for the Study of Education.

4. Credit for coursework in a *professional school* is accepted only if (a) the school is recognized by its regional or national accrediting association, and (b) the coursework is essentially equivalent or substantially relevant to a curriculum at Loma Linda University.

5. The University reserves the right to require satisfactory performance on an examination to validate any transfer credit.

- International students Admission of students from countries other than the United States or Canada is limited to those who (a) meet all regular requirements for admission, (b) furnish suitable recommendations from responsible persons, (c) pass the Test of English as a Foreign Language (TOEFL) or its equivalent, if English is not the student's native language, and (d) give evidence of ability to meet all financial obligations to the University during the proposed course of study.
- The student who does not have a sufficient score on TOEFL, or other evidence of English proficiency, is required to attend an intensive American language institute offered during the month preceding the beginning of the autumn quarter.
- Student visa A person entering the United States on a student visa (F-1) must carry successfully a full study load during each quarter of each academic year (12 units for the undergraduate; 8 units for the graduate student). The applicant must be prepared to provide an advance deposit, as required by the Student Aid and Finance Office, and must give assurance that additional funds will be forthcoming to meet school expenses. Scholarships and assistantships available to international students are scarce, and employment is limited by regulations of the Immigration and Naturalization Service to no more than 20 hours per week.
- Exchange visitor Through the U. S. Department of State, the University has a program for exchange visitors that may be advantageous for international students. A person entering the United States on an exchange visitor visa (J-1) is subject to the same regulations as to study load and work limitations as the F-1 student. Further information may be obtained from the foreign student adviser in the Student Affairs Office.
- Visa forms For either the F-1 or the J-1 status, visa forms are provided by the foreign student adviser in the Student Affairs Office after the applicant's acceptance and after financial arrangements have been made with the Student Aid and Finance Office.
- Veterans A student eligible to receive veteran's benefits under the 1966 enactment should have his records transferred to the Veterans Administration Regional Office, 2022 Camino Del Rio Norte, San Diego, California 92108, and have a certificate of eligibility sent to the Registrar.
- Application for admission should be made well in advance. Further information may be requested of the Registrar.

ACADEMIC POLICIES and PRACTICES

REGISTRATION AND ATTENDANCE

Registration A student must register on the dates designated in the University calendar in this BULLETIN. Registration procedure includes recording information on forms furnished by the Registrar and clearing financial arrangements with the Office of Student Aid and Finance.

Late registration is permissible only in case of a compelling reason; a charge is made if registration is not completed on the designated dates. The student may not attend class without being registered, and in no case may registration take place later than the second week of a term.

Attendance Attendance is required beginning with the first day of each session. Regular attendance at all appointments is expected. Absence in excess of twenty percent of the appointments in a course is sufficient cause for withholding credit.

Program change, withdrawal The student who wishes to add a course, or to withdraw from a course or a program, must complete appropriate forms supplied by the Registrar's Office. He should do this in consultation with his adviser and/or the Dean.

Deadlines A course dropped before midterm is not included on grade reports or transcripts. If a student withdraws after midterm, a notation of NC is recorded. A student may change his registration in any class from credit to audit until the midterm.

A student who wishes to add a course, or to change his registration in any course from audit to credit, must do so within the first two weeks of the quarter.

REGISTRATION CLASSIFICATIONS

Regular A student who has satisfied all prerequisites and is registered for a standard curriculum leading to a degree or certificate is a *regular* student. The regular student is subject to strict application of the academic standards and policies.

Provisional A student who is permitted to remove qualitative or quantitative deficiencies in order to qualify or requalify for regular standing is classified as a *provisional* student during the transition period.

Special A student who enrolls for selected courses (for personal or professional purposes without application toward a degree) is classified as a *special student*. Tuition is paid at the regular rate. 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.

STUDY LOAD

- Unit of credit Credit is indicated in *quarter units*. A quarter unit of credit represents 10-12 class hours, together with requisite study, preparation, and practice, or approximately 30 laboratory hours.
- Repeated courses Units of credit are counted toward graduation only once for any specific course. Credits toward graduation are not counted for a beginning or introductory course which is taken after a more advanced course in the same area, nor for a course which is taken after another course for which it is a prerequisite.
- Normal limit A normal study load in the College is 16-17 units of coursework per quarter, including all coursework for which the student is registered in the schools of the University or elsewhere. A student of exceptional ability may register for additional study with the consent of the Dean.
- Full-time status A student carrying 12 or more units per quarter is considered to be a full-time student.

SPECIAL COURSEWORK

The College allows, and in many cases encourages, nontraditional approaches to learning, including correspondence and extension coursework and independent study projects.

- Correspondence Credit from a recognized correspondence school (such as Home Study Institute, the Adventist correspondence school in Washington, D. C.) may be accepted as lower division credit toward the general requirements for a degree or certificate, up to a maximum of 16 units. With the consent of the department, correspondence coursework (within the maximum of 16 units) may be applicable toward the requirements of a major program.
- Extension Transcripts of correspondence credit to be applied toward degree requirements must be received by the Registrar by the beginning of the quarter prior to graduation.
- Extension A limited amount of coursework offered by Loma Linda University Extension, or by the extension services of other institutions, may be applicable toward general or major requirements, with the consent of the appropriate department and the Dean of the College.
- Independent study Independent study may be undertaken in connection with major programs in most departments of the College, subject to the approval of the department chairman.

CLASS STANDING

- Definitions** Students in the College are accorded class standing on the basis of the amount of coursework completed, as follows:
- Freshman, less than 44 units
 - Sophomore, 44-87 units
 - Junior, 88-135 units
 - Senior, 136 or more units
- Eligibility for coursework** A freshman may take remedial or lower division courses (numbered 001-299) but not upper division courses (numbered 301-499). A sophomore, junior, or senior may take any lower or upper division course for which he has the prerequisite qualifications.
- Graduate courses** A senior who meets the requirements for graduate standing may be permitted to take graduate courses (numbered 501-699) concurrently with courses that complete his bachelor's degree requirements, provided that this does not constitute an overload.

SCHOLASTIC STANDING

- Grading system** Grades and grade points per unit of credit are defined as follows:

A	4.0	Outstanding performance	C	2.0	Satisfactory performance
A-	3.7		C-	1.7	
B+	3.3		D+	1.3	
B	3.0	Very good performance	D	1.0	Minimum acceptable performance for credit
B-	2.7				
C+	2.3				

Coursework in which the grade is less than C (2.0) is not applicable toward the requirements of a major program.

A special grade is given in certain cases to indicate credit but does not have a grade point value and therefore does not affect the grade point average:

- S Satisfactory performance (equivalent to C or better)

Other designations are used to make clear the student's status but not to indicate credit, and do not affect the grade point average:

- AU Audit (for attendance only)
- IP In progress (for coursework requiring more than one term)
- I Incomplete (where course requirements can be completed within the following quarter)
- NC No credit (because of deficiency in the quality or quantity of work, withdrawal after midterm, etc.)

- Optional grades** A student may elect a grade of S in any course taken as a free elective or to fulfill the general requirements in vocational/avocational skills or movement skills, by

submitting a written request to the instructor at any time before the course grades are reported to the Registrar.

A student may elect a grade of NC in any course by submitting a written request to the instructor at any time before the course grades are reported to the Registrar.

When an optional grade has been elected by a student and reported to the Registrar, it is not subject to change.

Scholastic probation

A student whose grade point average for any term falls below 2.0 is automatically on scholastic probation. He is thus subject to restricted registration, and may be counseled to withdraw from the College unless his grades improve during the following quarter.

A student who receives a grade of NC or I in two or more courses, or in half of his attempted coursework in any term, will be referred to the Office of the Dean for counsel concerning his academic program. A student with an excessive number of NC or I grades on his record may be placed on scholastic probation or counseled to withdraw regardless of his grade point average.

Graduation with honors

A student in the College is graduated with honors on the basis of his cumulative grade point average figured at the beginning of the last term before graduation, as follows:

- With honors, 3.50
- With high honors, 3.75
- With highest honors, 3.90

CREDIT BY EXAMINATION

A student may meet an academic requirement, within specified limits, by passing a waiver examination or a proficiency examination at least equal in scope and difficulty to a final examination in the course.

Waiver

Certain course requirements may be waived, if the student successfully passes a waiver examination, but no credit results. To take a waiver examination, the student petitions the Dean for consent to take the examination on the scheduled date. A senior seeking waiver of course requirements must take the waiver examination before the final quarter of registration. A fee is charged, as indicated in the Schedule of Charges.

Proficiency

To seek credit by proficiency examination, the student first gains the consent of the appropriate department chairman and then petitions the Dean. If consent is given, the student should take the examination before enrolling for further study in the field of the examination. If the student is successful in passing the proficiency examination, S is recorded on his permanent record, and his grade point average is not affected. A fee is charged for the examination, as indicated in the Schedule of Charges.

Credit for proficiency examination is recorded only after the student has successfully completed one quarter, or the equivalent, at the University and has earned at least 12 units of credit with a grade average of C (2.0).

Credit by examination is not given for remedial courses (numbered below 100).

TRANSCRIPTS OF CREDIT

Transcripts of credit are ordinarily accepted by the University only when they are sent directly by another institution. Transcripts of credit earned at this University are sent by the Registrar to other institutions on the written request of the student and payment of the required fee (see the Schedule of Charges in the *Financial Information* section), provided financial obligations to the University have been met.

GRADUATION CEREMONIES

A student who completes the requirements for a degree at the end of the spring quarter is expected to be present at the University's annual conferring of degrees and the presentation of diplomas. Permission for the conferral of a degree in absentia is granted on the recommendation of the Dean of the College.

A student who completes the requirements for a degree at the end of the autumn or winter quarter or the summer session is invited but not required to participate in the subsequent conferring of degrees.

The University reserves the right to prohibit participation in graduation ceremonies by a student who has not satisfactorily completed all the requirements for a degree.

FINANCIAL INFORMATION

GENERAL PRACTICES

Plan ahead The student is expected to have arranged for financial resources to cover his expenses before the beginning of each school year. Accounts with other schools or with this University must have been settled. To prevent long waiting lines at registration, the student is urged to make financial plans well in advance, to complete financial arrangements with the Student Aid and Finance Office on or before announced registration dates, and to complete registration if possible in the preregistration period.

Business hours To avoid inconvenience, parents, sponsors, and others who plan to come from a distance to the campus for business purposes should *telephone* for appointment, especially if they are unable to arrive during official business hours.

9:00-12:00 Monday through Friday
1:00- 3:00 Monday through Thursday

All offices are *closed on Saturday, Sunday, and legal holidays*. Appointments may be made by telephone to *area code 714* and the following numbers:

Student Aid and Finance / 785-2251, 785-2175
Student employment / 785-2147

Advance payment Payment must be made in advance as follows: (a) a \$50 *room deposit* (for residence hall students) by September 1, (b) the *flat charge* of \$885 for tuition by or before registration; (c) the guarantee deposit of \$1,250 for *international applicants* before issuance of I-20. For further details, see the Schedule of Charges; Deposits; International Students; Payment Plans; and other subsections in this *Financial Information* section of the BULLETIN.

Cash needs The student should arrange to have cash available for all special charges and miscellaneous expenses. It is advisable to deposit at least \$75-150 each quarter in the Student Bank for books, vehicle registration, supplies, personal expenses, etc.

Student Bank The University operates the Student Bank for the convenience of students. If the parent or sponsor wishes to write only one check to include money for both tuition and other expenses, he should *indicate that the surplus may be deposited* in the Student Bank. Money earned by the student in part-time employment can also be deposited in the Student Bank for withdrawal at the student's discretion. The minimum transaction is \$1.

Checks Checks should be made payable to Loma Linda University and should have noted thereon the *student's name and Social Security number* to ensure that the correct account is credited. A charge may be made by the University when a check is not honored by a bank.

Health insurance Health insurance coverage is automatically provided in the payment of charges to students registered for 7 units or more. A student enrolled for fewer than these units may *request and pay for* health service coverage. Health insurance covers the hospital and medical expenses outlined in the insurance information folder. Items not covered by the terms of the health insurance are payable by the student in all cases, and payment is expected at the time these services are given. Married students may have family coverage by applying for it within 31 days of their initial enrollment date for the year and by paying additional premiums. Information on rates and the appropriate forms are available at the Cashier's Office.

Veterans An accepted student eligible to receive veteran's benefits under the 1966 enactment should (a) transfer records to the Veterans Administration Regional Office, 2022 Camino Del Rio Norte, San Diego, California 92108, and (b) have a certificate of eligibility sent to the Registrar at Loma Linda University. Since veterans can apply in advance for funds, they are expected to pay tuition in full at registration. Information regarding veteran's benefits may be obtained at the Registrar's Office.

Room deposit The accepted residence hall student is required to pay the \$50 deposit before a room is assigned or occupied. Dates by which deposit must be made or notification of cancellation given are September 1, December 1, March 1, and May 1. These relate to the term (fall, winter, spring, summer) for which initial registration is effective. Further details are published in the *Student Handbook*. Loan contracts, grants, scholarships, or other kinds of financial aid are *not accepted in lieu of* this deposit.

Nursing students The financial policies in this BULLETIN apply to School of Nursing students registered for the Associate in Science degree program and for the first-year students in the Bachelor of Science program.

A nursing student receiving the IP designation for a nursing-major course not completed during the quarter is required to reregister and pay tuition again if the course is not completed by the end of the subsequent quarter. A student receiving the NC designation for a nursing-major course listed in the individual course load but not begun during the quarter is required to reregister and pay tuition again. (The student should refer to the School of Nursing BULLETIN for a full explanation of the respective nursing program as the basis for interpreting the foregoing financial practices.)

International students An international applicant (other than Canadian) on a student visa is required to make an advance deposit of \$1,250. All international students must furnish evidence of additional resources to finance the expenses of the education planned. Because international students do not qualify for loans and grants listed under Student Aid, parents or sponsors are responsible for making payments in accordance with the financial practices of the University. A Financial Information Form is available from the Admissions Office. The student must obtain the proper signatures on the form and file it with the Student Aid and Finance Office before clearance can be given for the issuance of an I-20 form.

Under the "bursary plan" of the Seventh-day Adventist church, an international student may apply for financial aid through the treasurer of his division. Undergraduate students accepted under this plan receive funds matching the church division funds up to 50 percent of the cost of tuition. Employment in the United States is subject to the regulations of the Immigration and Naturalization Service.

Flat rate A residence hall student pays the full flat rate regardless of study load (except that a tuition adjustment is permitted if fewer than 12 units are needed during the final quarter before graduation). No reduction of the flat rate is made when a residence hall student reduces his study load during the quarter.

Financial clearance The student is expected to make satisfactory arrangements with the Student Aid and Finance Office for meeting all financial obligations to the University and to keep his financial status clear at all times. He must obtain financial clearance at the beginning of any new term and before taking final examinations prior to graduation.

Transcripts The University reserves the right to withhold all information concerning the record of a student who is in arrears in the payment of accounts, other charges, or student loans. No transcripts are issued until all of the student's financial obligations to the University have been met as set forth in this BULLETIN. This includes being current in repayment of any student loan.

Past due account A service fee of one percent per month is charged on a past due account. This is an annual interest rate of 12 percent.

Statements Under the Privacy Act of 1974, a postsecondary student has full rights of privacy with regard to his account. Statements will be sent only to the person indicated by the student on his registration form.

SCHEDULE OF CHARGES for 1976-77 (subject to change by Trustee action)

Flat charge The flat charge enables the student to know the cost of education in advance and make arrangements to finance the program. For *residence hall* and *offcampus* students *alike*, the following are included in the indicated flat charge per quarter:

- Tuition (for full-time study load, 12 units to 18.5 units).
- Health insurance (routine care and medicine).
- Applied music instruction if required for a major or minor in music.
- Lyceum ticket.
- Diploma, certificate, academic costume.

Included additionally for residence hall students *only*:

- Room charge and membership in residence hall club.

Meals (as much as the student wishes to eat at mealtime) from registration to the close of examinations, *exclusive of Thanksgiving and interquarter recesses*, but *inclusive of*:

- freshman orientation time;
- student teacher assignment time;
- candidate participation in commencement events;
- Snack Shop ticket (\$5 per quarter).

FLAT CHARGE (payment required by or before registration)

[Because of unpredictable costs of food and other items, these rates are subject to change at the beginning of any quarter.]

- \$1325 Residence hall: 12-18.5 units per quarter, with 21 meals per week.
- 1310 Residence hall: 12-18.5 units per quarter, with 17 meals per week.
- 885 Offcampus: 12-18.5 units per quarter.

UNIT CHARGE

- \$ 75 Per unit (or fraction), credit or audit; fewer than 12 units.
- 50 Per unit (or fraction), credit or audit; more than 18.5 units.

DEPOSITS REQUIRED

- \$ 50 Residence hall room reservation for fall, winter, spring, summer terms: Due September 1, December 1, March 1, May 1.
- 1250 International student.

SPECIAL CHARGES (payable in cash)

- \$ 10 Application (nonrefundable).
- 25 Late application for fall, winter, spring, summer terms (nonrefundable): Application after August 15, December 1, March 1, May 1.
- 25 Application (nonrefundable): International students.
- 10 Reapplication after nonresidence 3 quarters (nonrefundable).
- 10 Late registration (beginning first day after published registration date).
- 5 Payment plan change.
- 5 Business Office collection charge for unpaid department charges or check returned for insufficient funds.
- 15 Waiver examination.
- 30 Proficiency examination (up to 4 units credit).
- 3 Change of identification card.
- 2 Transcript of credit, after first one.
- Library fine or loss, parking fine, property or supplies breakage or loss.
- Special physical education activities.
- Vehicle registration (temporary, \$1; A or D sticker, \$7; O sticker, \$3).

MISCELLANEOUS EXPENSES (payable in cash)

Books, supplies, music, etc. (estimated \$50-75 per quarter).
Health charges: Care other than that provided by campus health service or covered by health insurance.
Nonroutine psychological tests.
Campus clubs and organizations.
Meal charges other than those included in flat rate:
 During holiday and interquarter recesses; snack shop or market.
Transportation:
 Fieldwork, practice teaching, intercampus travel, offcampus assignment.
Laundry.
Entertainment (other than lyceum).

APPLIED MUSIC CHARGES (payable in advance)

- \$ 75 Per unit, credit or audit, unless required for major or minor in music.
- 82 Offcampus registration: 1 half-hour period weekly, 9 per quarter.
- 164 Offcampus registration: 2 half-hour periods weekly, 18 per quarter.
- 60 Secondary or elementary school student: 1 half-hour period weekly, 9 per quarter.

REFUNDS

Withdrawal When a student withdraws from all courses and leaves school, these practices are followed:

1. *Date of withdrawal.* The official date of withdrawal and the effective date of the calculation of a refund is the date on which the *completed drop voucher and the student's identification card* are turned in to the Student Aid and Finance office.

2. *Tuition.* A minimum charge of \$50 is made if the student withdraws during the first 5 days after the published registration date; thereafter 3.3 percent of the tuition is charged per school day, up to the full amount. These charges apply to part-time as well as full-time students.

3. *Illness.* Special consideration is given in the case of prolonged illness.

4. *Return home.* If the student does not have funds for return fare home, an emergency assistance may be granted, provided there is sufficient credit in the account.

5. *Room deposit.* Refund will be made when the residence hall dean returns the signed residence hall contract to the Cashier's Office. The University reserves the right to apply the deposit to any unpaid obligations.

6. *Refund.* Ordinarily the balance of the account is refunded approximately one month from the date the completed drop voucher and the ID card are returned to the Student Aid and Finance Office. The refund is made to the student unless other instructions are given. If a student is receiving financial aid, under normal circumstances the surplus is returned to the aid fund account. California state scholarship and B.E.O.G. funds are prorated.

Change in study load When a commuting student drops one or more courses during a quarter, the charge is prorated on the same basis as for withdrawal from all coursework. The student must present the *add-drop voucher* by midterm in order to receive a refund. When a residence hall student reduces his study load, no refund is made.

Residence change A student who chooses, under existing policy, to move out of the residence hall, is not eligible for a refund on room charge for the remainder of the quarter.

Meal plan change A change of meal plan ordinarily may be made only at registration time at the beginning of the quarter. Otherwise the change of plan charge of \$5 applies, as well as does the fee for a new I.D. card.

Overpayment If the account is overpaid, the student should allow time for all records (such as cashier receipts, registration records, etc.) to clear through the normal accounting procedures. A signed request form or letter from the student is necessary to initiate the procedure for this refund.

PAYMENT

Two methods of payment are available to the student and/or parents:

- Direct to the University
- Contract with a loaning agency

The details of these methods are explained in the following sections. Once a payment plan is determined and programed for the quarter, the student may not change to another plan without an additional charge.

Direct payment *Tuition* is to be paid in full at the beginning of each quarter. *Board and room* charges for the full quarter are due and payable one month after the beginning of the quarter.

A 1 percent per month service fee is charged on an account past due thirty days or more. This is an annual percentage rate of 12 percent.

Contract payment with outside agency The student or parents may contract with a loaning agency for the expenses of the quarter, the school year, or the entire curriculum (keeping in mind that processing a loan contract takes approximately 4 or 5 weeks). The contract may be negotiated for one academic year, with 8 to 12 monthly payments; or for periods up to four academic years, with monthly payments extended over 48, 60, or 72 months.

If a contract payment plan is selected, the payment check is made to the loaning agency, not to the University.

The benefits of the plans are: (a) payments are predetermined, so that financial plans can be made in advance; (b) payments are reduced to a minimum by being spread over a period of time; (c) if the account is insured, the contract becomes paid in full on the death or total disability of the person responsible for payments; some contracts also insure the student; (d) no cancellation fee is charged by the loan agency in case of withdrawal from registration.

EMPLOYMENT

Application A student who needs to work part time to assist with expenses must obtain a work permit from the student employment office. The student applying for a scholarship, grant, or loan, or for work is requested to provide evidence of financial need by filing a *Parents' Confidential Statement* or a *Student Financial Statement* with College Scholarship Service. Forms are available from secondary school counselors or the Student Aid and Finance Office. Filing should be completed by April 15 so that the necessary information will be received in the Student Aid and Finance Office by June 1.

Campus work Campus employment opportunities are offered primarily by such services as bakery, cafeteria, dairy, farm, grounds, housekeeping, maintenance, and market. Some additional opportunities are offered in the residence halls, the library, the general administrative offices, and the academic department offices.

- Local businesses A few local businesses adjacent to the campus provide a limited number of employment opportunities at which the student may earn an average of approximately \$800 a year.
- Cash payment Cash payment for part-time employment by the University is made on a bi-weekly basis for the student's use for personal needs, loan payments, etc. The student may elect to have his check applied to his account (except the student on a federal work-study program).
- Tithe Payroll deduction is available to facilitate the payment of tithe on earnings. Arrangements are made at the student's request. A student on a federal work-study program cannot apply for a payroll deduction for tithe.

STUDENT AID

Financial assistance for education is available through federal government sources, state scholarships, private lending agencies, certain University resources, and established awards, grants, scholarships, revolving loan funds, and the like.

- How to apply To apply for aid or enter on a contract payment plan, the student should (a) *be acquainted* with the information in the Schedule of Charges and in Budgeting for Financial Aid, (b) *be aware* that processing an aid application or loan contract takes considerable time, and (c) *begin planning* long enough in advance so that funds are available in time for registration.
- Required forms Financial aid to students is granted on the basis of need. So that need can be evaluated in a consistent way, students seeking aid are required to submit a *Confidential Statement* to College Scholarship Service (CSS) by April 15.
- In addition to filing the *Confidential Statement* form by April 15, the student (new or returning) seeking aid should file a *University Aid Application* form by June 1. Those who apply later than this date receive aid only if funds are available after the needs are met for those who file complete applications by June 1.
- The *Confidential Statement* form, together with information about the CSS need-analysis system, may be obtained from the high school guidance counselor by the new applicant for admission to the University. A student currently enrolled at this University can obtain the *Confidential Statement* form from the Student Aid and Finance Office.
- Code 4380 The student should use CSS code number 4380 to identify this University in line item two of the form.

FEDERAL PROGRAMS

- Eligibility Financial aid programs sponsored by the United States Department of Health, Education and Welfare require the provision of information used for evaluation by College Scholarship Service in establishing the student's eligibility for aid. The student classified as a tax-deductible *dependent* submits the *Confidential Statement* form that furnishes evidence of the income of parents. The *independent* student submits the *Student Financial Statement* form.

Citizenship

To qualify for federal financial aid, a student must be a United States citizen or a person in the United States for other than temporary purposes and intending to become a permanent resident. International students are not eligible to receive federal aid.

The following five programs of student assistance are supported by the U. S. Office of Education and are available to Loma Linda University students who meet the federal eligibility requirements:

- Basic Educational Opportunity Grant (special application necessary)
- Supplemental Educational Opportunity Grant
- National Direct Student Loan
- Federally Insured Student Loan
- College Work-Study Program

Determination of what aids are applicable in given cases is made in the Student Aid and Finance Office (with the exception of the Basic Educational Opportunity Grant and part of the Federally Insured Student Loan).

Regulations

The student should acquaint himself with the Department of Health, Education and Welfare regulations which govern each federal program.

National Direct Student Loan

Up to \$1,500 per year is available for needy students. Nine months after ceasing to be in at least half-time attendance, the recipient repays the loan with 3 percent interest. No payments are required for up to three years during services in the armed forces, Peace Corps, or VISTA.

Basic Educational Opportunity Grant

The Basic Educational Opportunity Grant (BEOG) program makes funds available to eligible students who are enrolled on at least a half-time basis. To apply for a BEOG, a student must complete the *Application for Determination of Basic Grant Eligibility* available from high school counselors or from the Student Aid and Finance Office.

Supplemental Educational Opportunity Grant

The Supplemental Educational Opportunity Grant (SEOG) program is for undergraduate students whose financial need is such that without the grant the student would be unable to continue his education. The minimum grant is \$200, and this must be matched with a loan, a scholarship, another grant, or labor earnings.

College Work-Study Program

A student who has financial need is offered work during the school year to assist in meeting educational expenses. Certain offcampus jobs at recreation or camping centers are available during both the summer and the academic year.

Federally Insured Student Loan

Maximum loans of \$2,500 an academic year insured by the federal government may be available from participating lending institutions in many states. The government pays the interest while the student is in school, if there is a need after the family's contribution and financial aid granted has been considered. If the student does not qualify for federal interest benefits, he may still borrow; but he must pay his own interest from the time he takes out the loan until it is repaid. The loan repayment may extend up to ten years at 7 percent interest, with a minimum payment of \$360 per year on smaller loans. (Some participating banks require a family depositor relationship for at least six months before they consider accepting an application from a student.) The borrower must submit an affidavit that the loan will be used only for educational purposes; the affidavit must be signed before a notary

public or other person authorized to administer oaths. Application forms may be obtained from the lender or from the Student Aid and Finance Office. A Parent's Confidential Statement form is required of an applicant if the adjusted family income is more than \$15,000.

United Student
Aid Fund
Law Enforcement
Educational Program

Certain banks handle United Student Aid Fund loans instead of FISL. The regulations and policies for USAF loans are the same as for the FISL program.

The Law Enforcement Assistance Administration supports current law enforcement personnel who are working toward a degree or certificate. Such persons may obtain grants and loans to help defray direct educational expenses. Cancellation of 25 percent of total loans per year of employment in a federal, state, or local law enforcement program is available under certain conditions. Because regulations change often, the prospective student should contact the Student Aid and Finance Office for current information.

OTHER PROGRAMS

Grant-in-aid

A limited fund is available through the University for special grants to assist students with special financial need and to supplement other aids. Needy students who may not be eligible for assistance under government-sponsored programs or who, because of special circumstances, cannot receive parental support, may be assisted with a grant-in-aid. These range from \$50 to \$600 per year and depend on individual circumstances. Application is made each year with an aid application after proving financial need to the financial aid officer.

California State
Scholarship

Scholarships are available to California residents who show satisfactory results on the Scholastic Aptitude Test of the College Entrance Examination Board and who have a satisfactory grade point average. Residents may apply for such scholarships if they meet requirements and establish need. These scholarships provide tuition grants up to \$2,700 at the college of the student's choice. (Secondary school counselors can provide full information and application forms for senior students.)

The state of California also offers the College Opportunity Grant and the Vocational Training Grant. Applications are available from all secondary school counselors and for students currently enrolled in the University, from the Student Aid and Finance Office.

Monthly contract
loan plans

The student not eligible for low-interest federally sponsored loans may elect a contract plan (some plans with interest; two prepayment plans with a service charge but no interest). Under such plans a student may contract for one year (with 8 to 12 monthly payments) or up to four years (with monthly payments extended up to 60 months). Contracts are signed with and payments made directly to the agency.

Revolving loan funds

A number of low-interest revolving loan funds, from which limited loans are granted to qualifying students, have been set up as named:

Robert E. Cleveland Loan Fund
Erwin E. Cossentine Loan Fund
Dartley Revolving Student Loan Fund
William B. Greene Loan Fund
Milton and Ethel Griese Loan Fund
Richard Guy Memorial Fund

Robert A. Hanson Loan Fund
Miracle Loan Fund
F. Oliphant Memorial Fund
Fadelma Ragon Sargeant Loan Fund
Ellen Rickard Memorial Fund

Colporteur The student may earn a colporteur scholarship by selling Seventh-day Adventist publications. The church conference, the publishers, and the University join in arrangements for this provision.

Special scholarships and awards Each year students enrolled on the La Sierra campus are considered for different scholarships and awards granted on the basis of one or more of the following criteria: academic excellence, citizenship, contribution to campus life, financial need. Information about the following scholarships and awards is available from the Office of the Dean:

Alumni Federation Award
K. F. Ambs Leadership Award
California Congress of Parents and Teachers
Scholarship
Farmers Insurance Group Scholarship
James Irvine Foundation Award
Edmund C. Jaeger Award (biology)
Judson Memorial Award

Eliza L. Landeen Scholarship
for Elementary Teachers
Layne Foundation Scholarship
George H. Mayr Foundation Scholarship
Lavina A. Northrop Award (preseminary)
I. G. Ortner Scholarship
Riverside Foundation Heseman Scholarship
Harry Schrillo (La Sierra Alumni
Association) Scholarship
President's Award

BUDGETING FOR FINANCIAL AID

Budgeting for financial aid necessitates consideration of more than flat rates for tuition, board, and room. Books, supplies, travel, laundry, personal expense, commuting costs, and other miscellaneous expenses are included in the financial aid budget to establish need. Simply defined, *need* is the sum of the costs less the student's *and* the family's contribution toward the cost of education. The following annual cost budgets are used *for financial aid purposes only*.

Residence hall student, \$4,800

Offcampus student, \$4,300

Application for financial aid for each academic year (with required supporting documents) should be received at the Student Aid and Finance Office by June 1. Aid commitments are made for the year, one-third of the amount committed being applicable to each quarter.

Some funds may be available for students planning to enter the second or third quarters. Applications should be submitted two months in advance.

STUDENT AFFAIRS

STUDENT RESPONSIBILITY

Application to and enrollment in the University constitute the student's commitment to honor and abide by the practices and regulations stated in the 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.

The University was established to provide education in a distinctive Christian environment. No religious test is applied, but students are expected to respect the Sabbath and to honor the church standards and the ideals of the University. The prospective student has freedom to choose or reject these. But he must make that choice before he enrolls and then must abide by the decision while he is a student.

FROM UNIVERSITY TO STUDENT

The University regards the student from a cosmopolitan and comprehensive point of view – (a) cosmopolitan in that historically the University global mission has promoted bonds and opportunities in education and service without regard to sex, national or racial origin, or geographical line, and (b) comprehensive in that the University concern for the welfare of the student has been traditionally an integrated concern for assisting the student in balanced development of his intellectual, emotional, physical, religious, and societal potentialities.

GENERAL INFORMATION

Identification number The student's Social Security number becomes his permanent identification number on his University record. The applicant who does not already have a Social Security number should consult his local post office about securing one well in advance of enrollment. An identification card is issued at the initial enrollment and is renewed as necessary. The student should present his card when applying for library service, health service, or other service that requires identification. Also, the identification (Social Security) number should be noted (together with the student's name) on checks payable to the University to ensure immediate and proper crediting to the student's account. When the student withdraws from the University, the card is returned to the Student Aid and Finance Office.

Counseling service The official counseling agency for the University provides a service to students who desire help from professional counselors. This service, which is free and is on a voluntary basis, is designed to deal with a wide range of educational, vocational, premarital, marital, or other personal problems. No referral is necessary. The goal is to assist individuals to make maximum use of their intellectual and personal re-

sources. Counseling is done in the strictest confidence, and no information is released except by the written request of the person counseled.

Physical fitness Physical fitness is promoted by various recreational interests and by courses in gymnastics, field exercises, swimming, body building, lifesaving, and health instruction. An effort is made to interest each student in some recreational and health-building activity that he may carry over to enhance his future life.

Health Living so as to maintain optimum health in the midst of the pressures of pursuing an education is an important part of student growth. The Health Service maintains a campus center where students may go for advice, prescription, and care.

Insurance coverage The student's health insurance policy covers hospitalization for illness or accidents, including those that occur offcampus. The student should keep and refer to the insurance information folder provided him at registration. This informs him about what benefits the insurance provides and what services must be paid for. (See also the *Financial Information* section.)

Worship Chapel services, residence hall religious appointments, and church worship services provide opportunities for personal enrichment. Choosing to come to this University implies the student's willingness to attend these appointments as part of the educational climate.

Transportation The student is responsible for transportation arrangements and costs to off-campus assignments. The student who has a car must arrange for campus vehicle registration and parking permit. The law requires that adequate public liability insurance be carried by car owners, and the driver must have a valid California driver's license.

Property protection Because the responsible adult has regard for the property of institutions and individuals, the mature student does his part to protect and safeguard University property, facilities, equipment, and supplies. The student is expected to assume responsibility for the safekeeping of personal belongings, using lockers where these are available and otherwise exercising appropriate attentiveness to the protection of his own property and that of others.

CAMPUS ORGANIZATIONS

Many campus organizations offer opportunities for extracurricular activity, experience, and growth. The following list suggests the range of groups that regularly function on the campus, governing themselves under bylaws approved by the Student Affairs Committee:

African Club
Agriculture Club
Associated Students of Loma Linda University
Backpacking Club
Bicycle Club
Black Student Association
Business Club
Campus Ministries
Chinese Club
Climbing Club
Collegiate Christian League
Consumer Related Sciences Club
Deutscher Verein
Equestrian Club
Fencing Club
Film Society
Guild Student Group (American Guild of Organists)
Hawaiian Club
Heperec Club (health, physical education, recreation, youth services)
Hiking Club
Ice Skating Club
Industrial Studies Club
International Students Club
Jurisprudence Club
Le Cercle Francais
Martial Arts Club
Organizacion Latinoamericana Estudantil (O. L. E.)
Professional Education Association
Sailing Club
Ski Club
Student Missionary Club
Student Nurses' Association of California
Student Physics Society
Water Skiing Club

STUDENT HANDBOOK

Explanations of many aspects of student life and detailed information concerning the University's expectations of its students are published in the *Student Handbook*, which is sent to every student admitted to the College.





II

General Requirements Departments of Instruction

GENERAL REQUIREMENTS

On the recommendation of the faculty of the College, the University awards degrees and certificates to students who have satisfactorily completed the prescribed curriculums with a grade average of C (2.0), received no grade less than C in any course counted in the major program, and have met their financial obligations to the University.

A student who is continuously enrolled in the College for successive years may choose to meet the requirements for graduation listed in the BULLETIN of the year of his entrance or any subsequent year. If a student discontinues his enrollment for one calendar year, he must meet the requirements listed in the BULLETIN of the year of his reenrance or any subsequent year.

BACHELOR OF ARTS

A candidate for the Bachelor of Arts degree completes 190 units of coursework (60 upper division), of which 36 of the last 44 units, 16 units in the major program and 8 units in a minor program (if any), are completed in residence at Loma Linda University.

The curriculum for this degree consists of an appropriate major program and the following pattern of general studies:

Skills In basic intellectual and physical skills, 11 to 27 units of coursework, including:

Communication skills, 8-12 units (ENGL 101 and 102; or 124 with a grade B or better; to be completed ordinarily within the first 48 units of coursework at the college level; otherwise one course per quarter until the requirement is fully met; SPCH 104);

Computation skills, 0-4 units (aptitude or waiver examination, or MATH 005);

Movement skills, 3 units (6 quarters of physical education activities); and

Vocational / avocational skills, 0-8 units (coursework, waiver examination, or other satisfactory demonstration of skill); 4 units, or the equivalent, outside the major.

Life in society In the traditional academic disciplines, 56 to 64 units of coursework, including:

American history, 4-8 units (HIST 156 and 157; or 165; or 256 and 257; determined by placement examination);

Humanities, 32 units distributed in four of six areas (with no more than 8 units of the major program applicable in any one area): history of civilization (4 units required if a student has not satisfactorily completed one full year of world history at the secondary level), literature, music, art, philosophy, ancient or modern language (8 units in one language required if a student has not satisfactorily completed two full years of one language at the secondary level);

Natural sciences, mathematics, health, 12-16 units (16 units required if a student has satisfactorily completed less than one full year of biology, chemistry, and physics at the secondary level in two of five areas: biology, chemistry, physics, mathematics, health; biology or health required if a student has not satisfactorily completed at least 1/2 unit of health at the secondary level, but not more than 4 units may be in health); and

Personal/social relationships, 8 units (including at least one introductory course in behavioral science).

Life under God In religious studies, 20 units of coursework (8 upper division), of which 8 units are completed during the first year in residence and 4 units each succeeding year, including:

In the Division of Religion, 16 units (including any RELB or RELT courses, up to 4 units of RELH courses; but *not* including RELL or RELP courses);

In the major department, 4 units (course 489).

Recommended courses A list of courses recommended to meet the general requirements is available from the Office of the Dean of the College.

BACHELOR OF SCIENCE, BACHELOR OF MUSIC

A candidate for the Bachelor of Science or Bachelor of Music degree completes 190 units of coursework (60 upper division), of which at least 36 of the last 44 units,

16 units in the major program and 8 units in a minor program (if any), are completed in residence at Loma Linda University.

The curriculum for either of these degrees consists of an appropriate major program and the following pattern of general studies:

Skills In basic intellectual and physical skills, 11-27 units of coursework as defined for the Bachelor of Arts degree.

Life in society In the traditional academic disciplines, 24-32 units of coursework, including:

American history, 4-8 units (HIST 156 and 157; or 165; or 256 and 257; determined by placement examination);

Humanities, 12 units;

Natural sciences, mathematics, health OR *Personal/social relationships* (whichever is *not* included in the major program), 8 units; if neither area is included in the major program, a student completes a total of 12 units in the two areas, including at least 4 units in each.

Life under God In religious studies, 20 units of coursework (8 upper division) as defined above for the Bachelor of Arts degree.

SPECIAL PROGRAMS

Interdisciplinary studies Students who complete the 48-unit program in interdisciplinary studies (see Interdepartmental Courses) are regarded as having met the following portions of the general requirements for a baccalaureate degree:

Communication skills, 8-12 units (depending on the student's performance);

Humanities, 32 units (but not including foreign language);

Natural sciences, mathematics, health, 8 units;

Personal/social relationships, 8 units;

Religion, 12 units.

Western thought A student who completes the major program in Western thought (see Department of History and Political Science) is regarded as having met the general requirement in the humanities.

ASSOCIATE IN ARTS

A candidate for the Associate in Arts degree completes 96 units of coursework, of which at least 24 of the last 32 units are completed in residence at Loma Linda University.

The curriculum for this degree consists of an appropriate vocational program and the following pattern of general studies:

Skills In basic intellectual and physical skills, 10-18 units of coursework, including:

Communication skills, 8-12 units (ENGL 101 and 102 or 124 with a grade of B or better, to be completed ordinarily within the first 48 units of coursework at the college level; otherwise one course per quarter until the requirement is met; SPCH 104);

Computation skills, 0-4 units (aptitude or waiver examination, or MATH 005); and

Movement skills, 2 units (4 quarters of physical education activities).

Life in society In the traditional academic disciplines, 16 units of coursework, including:

American history, 4 units;

Humanities, 4 units;

Natural sciences, mathematics, health, 4 units; and

Personal/social relationships, 4 units.

Life under God In religious studies, 12 units selected from biblical studies, theological studies, and any one course in historical studies, all in the Department of Religion.

ASSOCIATE IN SCIENCE

A candidate for the Associate in Science degree completes 96 units of coursework, of which at least 24 of the last 32 units are completed in residence at Loma Linda University.

The curriculum for this degree consists of an appropriate vocational program and the following pattern of general studies:

Skills In basic intellectual and physical skills, 10-18 units of coursework as defined for the Associate in Arts degree.

Life in society In the traditional academic disciplines, 12 units of coursework, including:

American history, 4 units;

Humanities, 4 units;

Natural sciences, mathematics, health OR *Personal/social relationships* (whichever is not included in the vocational program), 4 units.

Life under God In religious studies, 12 units of coursework as defined above for the Associate in Arts degree.

CERTIFICATE

A student in a certificate program completes at least 48 units of coursework, of which at least 12 of the last 16 units are completed in residence at Loma Linda University.

The curriculum for a certificate consists of the specific requirements of the particular program; religion, 4 units; eligibility for ENGL 101 (remedial coursework, if indicated by placement examination).

DEPARTMENTS OF INSTRUCTION

For convenience of reference, the departments of instruction are listed alphabetically.

CLASSIFICATION OF COURSES

Prefix The four-letter prefix to each course number indicates the department or subject area as follows:

	SUBJECT	DEPARTMENT
ACCT	Accounting	Business and Economics
ADJS	Administration of Justice	Division of Behavioral Sciences
AGRI	Agriculture	Agriculture
ANTH	Anthropology	Division of Behavioral Sciences
ART	Art	Art
AUTO	Automotive Technology	Industrial Studies
AVIA	Aviation	Industrial Studies
BIOL	Biology	Biology
BUAD	Management	Business and Economics
BUED	Business Education	Secretarial and Business Education
CHEM	Chemistry	Chemistry
CFSC	Child/Family Education	Consumer Related Sciences
COMM	Communication	Communication
CMME	Communication Media	Communication
CNST	Construction	Industrial Studies
DAPR	Data Processing	Business and Economics
DRFT	Drafting	Industrial Studies
ECON	Economics	Business and Economics
ENGL	English	English
ENGR	Engineering	Physics
ENSL	English as a Second Language	Modern Languages
ESCI	Earth Science	Interdepartmental Courses
FDNT	Foods and Nutrition	Consumer Related Sciences
FREN	French	Modern Languages
GRMN	German	Modern Languages
HIST	History	History and Political Science
INDS	Industrial Studies	Industrial Studies
INTD	Interdisciplinary Studies	Interdepartmental Courses
INTR	Interior Design	Consumer Related Sciences
LIBR	Library Science	Interdepartmental Courses
LING	Linguistics	Modern Languages
MATH	Mathematics	Mathematics
MDLG	Modern Language	Modern Languages

MUCT	Music Composition and Theory	Music
MUED	Music Education	Music
MUHL	Music History and Literature	Music
MUPF	Music Performance	Music
MURE	Sacred Music	Music
PEAC	Physical Education Activity	Physical Education
PETH	Physical Education Theory	Physical Education
PHIL	Philosophy	History, Interdepartmental Courses
PHYS	Physics	Physics
PLSC	Political Science	History and Political Science
PSYC	Psychology	Division of Behavioral Sciences
RDNG	Reading Improvement	English
RELB	Religion, Biblical Studies	Division of Religion
RELH	Religion, Historical Studies	Division of Religion
RELL	Religion, Biblical Language	Division of Religion
RELP	Religion, Professional Studies	Division of Religion
RELT	Religion, Theological Studies	Division of Religion
SCNC	Science	Interdepartmental Courses
SECR	Secretarial Science	Secretarial and Business Education
SOCI	Sociology	Division of Behavioral Sciences
SOSR	Social Service	Division of Behavioral Sciences
SPAN	Spanish	Modern Languages
SPCH	Speech	Communication
SPPA	Speech Pathology and Audiology	Communication
TXTL	Textiles and clothing	Consumer Related Sciences

Number The course number indicates the comparative level of difficulty, and the class standing of the students for which the course is offered:

- 001-099 Remedial
- 101-299 Lower division (freshman/sophomore)
- 301-499 Upper division (junior/senior)
- 501-699 Graduate

DEPARTMENT OF AGRICULTURE

- Chairman JOHN E. CARR, Associate Professor of Agriculture
M.S. Michigan State University
- Faculty C. ARNOLD BORAM, Associate Professor of Agriculture
M.ED. University of Missouri
- RICHARD R. HARWOOD, Associate Professor of Agriculture
PH.D. Michigan State University
- W. FRED RILEY, Associate Professor of Agriculture
PH.D. University of Arizona
- DALE L. ANDERSON, Assistant Professor of Agriculture
M.S. Oklahoma State University
- GEORGE R. BURGDORFF, Assistant Professor of Agriculture
M.A. Andrews University
- MARLIN E. ELKINS, Instructor in Agriculture
B.S. Pacific Union College
- HARRY M. GRUBBS, Instructor in Agriculture
B.S. Andrews University
- RICHARD L. PETERSEN, Instructor in Agriculture
B.S. Loma Linda University
- Collaborating faculty CLYDE L. WEBSTER, Assistant Professor of Chemistry
PH.D. Colorado State University, Fort Collins

Objectives The continuous operation of full-scale agricultural, poultry, and dairy businesses on the 400-acre farm on the La Sierra campus of the University offers opportunities for the student who wishes to prepare for vocations in these areas or to pursue further studies in agriculture.

The general student may also gain an understanding of these pursuits and their significance to society, as well as some limited skill in farming.

Because the farm is managed by the faculty of the Department of Agriculture, a student has an opportunity to combine practical experience with theoretical understanding in each phase of farm operation.

Preparation for teaching A student preparing to teach agriculture at the secondary level should plan to qualify for teaching credentials and during his freshman or sophomore year should consult the credentials adviser in the School of Education for specific information.

A graduate program leading to the Master of Arts in the teaching of agriculture is described in the BULLETIN of the School of Education. This program includes AGRI 514, 515, 517, an additional 33 units of postbaccalaureate study; and fulfillment of the requirements for a secondary teaching credential. A student who has included the appropriate coursework in professional education (including directed teaching) in his undergraduate curriculum may be able to complete the requirements for the master's degree in an additional year of study.

BACCALAUREATE MAJOR PROGRAMS

A student majoring in a program in agriculture is required to work as an employee of the department (in addition to his coursework) for a period of time determined by the faculty on the basis of his previous farm experience.

General agriculture

A student majoring in general agriculture follows the curriculum for the Bachelor of Science degree (see *General Requirements*) and 64 units of coursework in agriculture, including AGRI 104, 105, 114, 204, 205, 214, 216, 224, 234, 235, 324, 334, 354, 436, 454, 484. Cognate requirements are AUTO 234 or 334; BIOL 101, 102, 103; CHEM 101, 102.

Livestock production

A student majoring in livestock production follows the curriculum for the Bachelor of Science degree (see *General Requirements*) and 64 units of coursework in agriculture, including AGRI 105, 114, 204, 205, 234, 235, 324, 334, 335, 336, 354, 434, 436, 454, 484. Cognate requirements are AUTO 234 or 334; BIOL 101, 102, 103; CHEM 101, 102.

Plant production

A student majoring in plant production follows the curriculum for the Bachelor of Science degree (see *General Requirements*) and 66 units of coursework in agriculture, including AGRI 104, 105, 204, 205, 214, 215, 216, 224, 235, 304, 324, 338, 345, 354, 436, 454, 484. Cognate requirements are AUTO 234 or 334; BIOL 101, 102, 103; CHEM 101, 102.

Intensive food production

A student majoring in intensive food production follows the curriculum for the Bachelor of Science degree (see *General Requirements*) and 80 units of coursework in agriculture and biology, including AGRI 104, 105, 114, 204, 224, 234, 235, 341, 342, 343, 354; BIOL 101, 102, 103, 185, 314, 387, 475, 478, 485. Cognate requirements are CHEM 101, 102, 103; 4 units from AUTO 234, 334 or INDS 171, 172; MATH 124. Recommended electives are AGRI 205, 304; BIOL 447; FDNT 426; PSYC 104 or 105, 307.

MINOR SEQUENCE

A minor in agriculture is 30 units of coursework (8 upper division) selected in consultation with the departmental adviser.

ASSOCIATE DEGREE PROGRAM

Agriculture

A student in the associate degree program in agriculture follows the curriculum for the Associate in Science degree (see *General Requirements*) and 56 units of coursework in agriculture, including AGRI 104, 105, 114, 204, 224, 234, 235, 299 (4 units in each of four areas), 324, 334, 354, 484. A cognate requirement is INDS 234.

COURSES

Lower division	AGRI 104 Vegetable Gardening	4 units
	First quarter: cool season crops, propagation, culture methods, marketing. Third quarter: warm season crops, plant production, propagation, culture, producing, marketing. Three class hours, one laboratory. May be repeated once for additional credit.	
	AGRI 105 Basic Soils Science	4 units
	Genesis, physical and chemical properties, and classification of soils. Three class hours, one laboratory.	
	AGRI 108 Agriculture Skills for Country Living	4 units
	Practical aspects of gardening, greenhouse culture, plant propagation, and gardening equipment; Seventh-day Adventist philosophy of agriculture. Fall and spring.	
	AGRI 109 Agriculture Skills for Country Living	4 units
	Animal science, poultry science, and landscape design and floriculture. Winter.	
	AGRI 114 Poultry Husbandry	4 units
	Avian anatomy and physiology as it affects production, breeds, breeding, strain selection, incubation of poultry, nutrition, feeds and microingredient additives in poultry feeding. Sanitation; prevention, control, and treatment of diseases. Offered alternate years.	
	AGRI 204 Field Crops	4 units
	Distribution, cultural methods, and economic importance of field crops. Field trips. Offered alternate years.	
	AGRI 205 Forage Crops	4 units
	Economical use of land for other than fields crops. Providing year-around pasture. Field trips as needed. Offered alternate years.	
	AGRI 214 Horticulture I	4 units
	The plant; plant requirements; culture, growth, and propagation. Three class hours, one laboratory.	
	AGRI 215 Horticulture II	4 units
	Small and large fruit culture; individual fruits.	
	AGRI 216 Greenhouse Culture	4 units
	Scheduling, planning, and propagation of horticulture plants. Experience in growing and management of plants under glass. Preparation and handling of potting and propagation mixes.	
	AGRI 224 Farm Machinery	4 units
	Selection, operation, and use of modern farm machinery and implements. Two class hours, two laboratories. Offered alternate years.	
	AGRI 234 Animal Husbandry I	4 units
	History, breeds, characteristics, adaptability, and products of farm animals.	
	AGRI 235 Farm Analysis and Accounting	4 units
	Fundamental principles of accounting as applied to agricultural practices. Analysis of farm data for management use.	
	AGRI 299 Directed Study	1-4 units
	Practical experience: farm, creamery, livestock, poultry. May be repeated in a different area for additional credit.	

Upper division	AGRI 304 Soil Management and Fertility	4 units
	Essential principles of maintaining and testing soil fertility. Management principles applied to physical improvement. Two class hours, two laboratories. Offered alternate years. Prerequisite: AGRI 105.	
	AGRI 314 Poultry Production	4 units
	Principles and practices: ranch layout, housing system, brooding, production programs, record keeping. Field trips. Offered alternate years. Prerequisite: AGRI 114.	
	AGRI 324 Irrigation	4 units
	Methods of application; crop requirements and water supply in the Southwest and other arid regions. Three class hours, one laboratory. Offered alternate years.	
	AGRI 334 Animal Husbandry II	4 units
	Care and management of farm animals, including judging, marketing, sanitation, and diseases.	
	AGRI 335 Dairy Cattle Management	4 units
	Economic aspects, selection, breeding, feeding, sanitation, diseases, and management of dairy cattle. Offered alternate years.	
	AGRI 336 Dairy Industry	4 units
	Common practices of processing and testing milk products. Three class hours, one laboratory. Offered alternate years.	
	AGRI 337 Floriculture	4 units
	Identification, propagation, and use of potted and outdoor flowers in the household and in landscape design. Especially for flower lovers and homeowners. Laboratory.	
	AGRI 338 Landscape Design and Practice	4 units
	Recognition, selection, and adaptation of landscape materials to fit into the environment.	
	AGRI 341, 342, 343 Intensive Food Production	4, 4, 4 units
	Efficient methods of food production; innovative and productive procedures utilized under various soil and climatic conditions. Three quarters required in sequence.	
	AGRI 344 Introduction to World Crops	4 units
	Relationship between man and plant; plants environment, crop production, plant industry, the marketplace. Offered alternate years.	
	AGRI 345 Plant Propagation	4 units
	Methods of propagating useful and ornamental plants. Two class periods, two laboratory periods per week.	
	AGRI 354 Farm Management I	4 units
	The modern farm in relation to management concepts, cost analysis, government involvement, and general farm practices in ecology and environment. Offered alternate years.	
	AGRI 355 Tropical Agriculture	4 units
	Agricultural practices of the small farmer in tropical areas. Methods of increasing yield and quality of crops in tropical climates.	
	AGRI 356 Agricultural Biometrics	4 units
	Application of statistical analysis to agricultural experiments. Standard error, statistical significance, sampling, coefficient of variation and regression as applied to agricultural situations.	
	AGRI 414 Soil Analysis	4 units
	Methods of soil analysis as carried out in the laboratory and field. Emphasis on macronutrients: nitrogen, phosphorus, potassium, calcium, magnesium, and sulfur. Interpretation of soil analysis in terms of crop needs and determination of fertilizer needs for profitable production.	

	AGRI 424 Plant Breeding	4 units
	Methods of improving various crops through application of the science of genetics. Application to the major world food crops.	
	AGRI 434 Animal Nutrition	4 units
	Principles of nutrition of farm animals; application to feeding practice. Offered alternate years.	
	AGRI 435 Poultry Management	4 units
	Experience with poultry and facilities. Laboratory only. Prerequisite: AGRI 114.	
	AGRI 436 Agriculture Economics and Marketing	4 units
	Current economic and marketing practices in relation to the economy. Field trips. Offered alternate years. Prerequisite: AGRI 235.	
	AGRI 454 Farm Management II	4 units
	Actual supervision of farm operations. A full-time responsibility requiring appropriate allowances in the student's schedule. Laboratory only. Prerequisite: AGRI 354.	
	AGRI 484 Seminar in Agriculture	2 units
	Two years required for credit.	
	AGRI 489 Adventist Philosophy of Agriculture	4 units
	Agriculture viewed from the perspective of biblical and religious teachings; concepts of moral worth; the balanced person. Does not apply toward a major or minor. Offered alternate years.	
	AGRI 499 Directed Study	1-4 units
	AGRI 509 Plant Analysis	4 units
	Determination of nutrients in plants and comparison of results with current norms. Utilization of analysis results to recommend optimum fertility treatment.	
Graduate	AGRI 514 Soil Chemistry	4 units
	Methods of soil analysis; diagnosis of soil problems. Prerequisite: CHEM 111, 112, 113.	
	AGRI 515 Nutrition of Horticultural Plants	4 units
	Nutrient elements; their absorption and utilization. Detection and correction of plant deficiencies.	
	AGRI 516 Soil Microbiology	4 units
	Culture of soil microorganisms and their effect on plant production. Prerequisite: BIOL 101, 102, 103.	
	AGRI 517 Crop Fertilization and Protection	4 units
	Composition and use of organic and chemical fertilizers, herbicides, and pesticides. Hazards and precautions.	

DEPARTMENT OF ART

Chairman	ROGER A. CHURCHES, Associate Professor of Art M.F.A. Rochester Institute of Technology
Faculty	AGNES R. EROH, Professor of Elementary Education, School of Education ED.D. Boston University
	CLARENCE L. GRAY, Assistant Professor of Art (on leave) M.A. California State University, Long Beach
	WILLIAM J. HAVLICEK, Instructor in Art M.A., M.F.A. University of Iowa
	ROBERT H. SEYLE, Instructor in Art M.F.A. Otis Art Institute
Lecturers	ROBERT J. BURMAN, Lecturer in Architecture and Design B.ARCH. University of Washington
	LAWRENCE J. READ, Lecturer in Painting and Crafts M.A. University of Southern California

The study of art combines an academic comprehension of art as a historical expression of human ideas and ideals with the development of skills for contemporary visual communication and expression.

Objectives The objectives of the department are to prepare artists for a wide variety of professions related to the visual arts and to introduce general students to the experience of visual art.

The department believes that the Christian artist should intuitively reflect the visual order of the created universe, not by a rote copying of nature, but by a close observation and analysis of natural forms.

Preparation for teaching A student preparing to teach art at the elementary or secondary level completes the visual arts program outlined below. In addition, he should plan to qualify for teaching credentials, and during his freshman or sophomore year he should consult the credentials adviser in the School of Education for specific information concerning requirements.

A program leading to the Master of Arts in the teaching of art is described in the BULLETIN of the School of Education.

BACCALAUREATE MAJOR PROGRAMS

Visual arts A student majoring in art completes the general requirements for the Bachelor of Arts degree (see *General Requirements*) and 50 units (28 upper division) of coursework in art, including ART 111, 112, 305, 306, 307; drawing, 6 units; painting, graphic design, and printmaking, 8 units; crafts, ceramics, and sculpture, 8 units.

Specialization

A student interested in specializing in a studio area completes the general requirements for the Bachelor of Science degree and one of the following programs:

Program A offers an emphasis in painting, design, printmaking, ceramics, or sculpture, with 60 units (30 upper division) of coursework in art, including ART 111, 112, 305, 306, 307, 495 (8 units); drawing, 8 units; area of specialization, 12 units.

Program B offers an emphasis in photography, with 54 units (32 upper division) of coursework in art, including ART 111, 112, 305, 306, 307, 495; drawing, 4 units; PHTO 224, 324, 325, 326, 424, 425.

MINOR SEQUENCE

A minor in art is 30 units (12 upper division) of coursework including ART 205, selected in consultation with the department chairman.

COURSES

Lower division	ART 111, 112 Design	4, 4 units
	Elements and principles of design.	
	ART 113 Three-Dimensional Design	4 units
	Design problems; analysis and evaluation.	
	ART 204 Introduction to Studio Art	2 units
	Art materials, processes, and concepts. Does not apply toward a major in art.	
	ART 205 Introduction to Art	4 units
	Art and its role in society.	
	ART 224 Drawing	2 units
	Object drawing, including the human figure, in various media. May be repeated for additional credit to a maximum of 6 units.	
	ART 234 Painting	2 units
	Varied content from quarter to quarter, with specific areas listed in the class schedule (water color, acrylics, oil, tempera, casein, gouache, etc.). May be repeated for additional credit to a maximum of 6 units.	
	ART 244 Graphic Design	2 units
	Concepts and techniques of visual imagery; preparation of materials for printing, posters, transparencies for projection, etc. May be repeated for additional credit to a maximum of 6 units.	
	ART 254 Printmaking	2 units
	Varied content from quarter to quarter, with specific areas listed in the class schedule (serigraphy, relief, intaglio, lithography, etc.). May be repeated for additional credit to a maximum of 6 units.	
	ART 264 Crafts	2 units
	Varied content from quarter to quarter, with specific areas listed in the class schedule (fibers, weaving, textile printing and dyeing, mosaics, plastic casting and fabrication, wood carving, etc.). May be repeated with new content for additional credit.	

	ART 274 Ceramics	2 units
	Hand and wheel construction of various pottery forms; mixing and application of glazes. May be repeated for additional credit to a maximum of 6 units.	
	ART 281, 282 Sculpture	2, 2 units
	First quarter: clay modeling; second quarter: clay, stone, plaster, and other materials. May be repeated for additional credit to a maximum of 6 units.	
	ART 299 Directed Study	1-4 units
	Independent project in studio or art history.	
	Prerequisite: Consent of the department chairman.	
Upper division	ART 304 Development of Aesthetic Awareness	2 units
	Aesthetic development in relation to mental, social, and physical growth from the scribbling child to maturity; the meaning of art at various stages of growth; the importance of aesthetics in the development of values.	
	Prerequisite: ART 204 or equivalent.	
	ART 305, 306, 307 Art and Ideas	4, 4, 4 units
	Comparison of cultures: art forms and symbols. First quarter: ancient to Renaissance; second quarter: Renaissance through 18th century; third quarter: 19th and 20th centuries.	
	ART 314 Advanced Three-Dimensional Design	2 units
	May be repeated for additional credit to a maximum of 6 units.	
	Prerequisite: ART 113 or consent of the department chairman.	
	ART 324 Advanced Drawing	2 units
	May be repeated for additional credit.	
	Prerequisite: ART 224 or consent of the department chairman.	
	ART 334 Advanced Painting	2 units
	May be repeated for additional credit.	
	Prerequisite: ART 234 or consent of the department chairman.	
	ART 344 Advanced Graphic Design	2 units
	Conceptual problem solving in contemporary visual communication. May be repeated for additional credit.	
	Prerequisite: ART 244 or consent of the department chairman.	
	ART 354 Advanced Printmaking	2 units
	May be repeated for additional credit.	
	Prerequisite: ART 254 or consent of the department chairman.	
	ART 364 Advanced Crafts	2 units
	May be repeated for additional credit.	
	Prerequisite: ART 264 or consent of the department chairman.	
	ART 374 Advanced Ceramics	2 units
	May be repeated for additional credit.	
	Prerequisite: ART 274 or consent of the department chairman.	
	ART 384 Advanced Sculpture	2 units
	May be repeated for additional credit.	
	Prerequisite: ART 281 or consent of the department chairman.	
	ART 489 The Artist and Christian Symbolism	4 units
	Art and its relationship to Christian belief and experience. Does not apply toward a major or minor.	

	ART 495 Senior Project	4 units
	Relating to the student's area of specialization. May be carried over two quarters for a maximum of 8 units. Written report required.	
	ART 499 Directed Study	1-4 units
	Independent project in studio or art history. Prerequisite: Consent of the department chairman.	
Graduate	ART 504 Problem(s) in Studio Art	1-4 units
	For graduate art students; may be repeated for additional credit to a maximum of 12 units.	

DIVISION OF
BEHAVIORAL SCIENCES

Director ANEES A. HADDAD, Associate Professor of Sociology
PH.D. University of Southern California

PROGRAM IN ADMINISTRATION OF JUSTICE

Coordinator VERN R. ANDRESS, Associate Professor of Psychology
PH.D. United States International University

Lecturers CARL F. JORDON, Lecturer in Administration of Justice
J.D. Cleveland-Marshall School of Law
JOSEPH S. PRESHA, Lecturer in Administration of Justice
M.P.A. University of Southern California

DEPARTMENT OF ANTHROPOLOGY AND SOCIOLOGY

Chairman JOHN W. ELICK, Professor of Anthropology
PH.D. University of California, Los Angeles

Faculty ANEES A. HADDAD, Professor of Sociology
PH.D. University of Southern California

JAMES H. STIRLING, Professor of Anthropology (on leave)
PH.D. University of California, Los Angeles

THEADORE J. CHAMBERLAIN, Associate Professor of Religion and Sociology
D.MIN. School of Theology at Claremont

MONTE R. ANDRESS, Assistant Professor of Anthropology
M.A. California State University, San Diego

CHARLES W. TEEL, JR., Assistant Professor of Religion and Sociology
PH.D. Boston University

Collaborating faculty KENNETH L. VINE, Professor of Biblical Studies and Archaeology
PH.D. University of Michigan

M. IRENE WAKEHAM, Professor of English and Linguistics
PH.D. Stanford University

Lecturers MATILDA N. BARKER, Lecturer in Sociology
M.A. Loma Linda University

WILLARD R. CENTERWALL, Lecturer in Physical Anthropology
M.D. Yale University

MOLIEURUS COUPERUS, Lecturer in Physical Anthropology
M.D. Loma Linda University

JUDITH R. DIMMIG, Lecturer in Sociology
M.A. Loma Linda University

ROBERT E. FORD, Lecturer in Anthropology and Geography
M.A., M.P.H., Loma Linda University

JUDY G. STOMSVIK, Lecturer in Anthropology
M.A. Loma Linda University

DEPARTMENT OF MARRIAGE, FAMILY, AND CHILD COUNSELING

- Chairman FRED H. OSBOURN, Professor of Religion and Family Studies
PH.D. School of Theology at Claremont
- Faculty ANEES A. HADDAD, Professor of Sociology
PH.D. University of Southern California
- CLIFFORD D. ACHORD, Assistant Professor of Marriage and Family Counseling
PH.D. University of Northern Colorado
- THADDEUS C. ACHORD, Assistant Professor of Psychiatry
PH.D. University of Northern Colorado
- S. ALBERTA MAZAT, Assistant Professor of Marriage and Family Counseling, and Social
Service
M.S.W. University of Denver
- Collaborating faculty HARRISON S. EVANS, Professor of Psychiatry
M.D. Loma Linda University
- CHARLES W. TEEL, Professor of Religion and Pastoral Counseling
B.D. California Baptist Theological Seminary
- R. RICHARD BANKS, Associate Professor of Psychology
PH.D. University of Notre Dame
- EDWARD T. HIMENO, Associate Professor of Psychiatry
M.D. Loma Linda University
- NORMA G. NORRIS, Associate Clinical Professor of Psychiatry
PH.D. Temple University
- PETER G. STRUTZ, Associate Professor of Psychology
PH.D. University of Alberta
- M. JERRY DAVIS, Assistant Professor of Religion and Pastoral Counseling
REL.D. School of Theology at Claremont
- J. MICHAEL NELSON, Assistant Professor of Psychiatry
M.D. Loma Linda University
- JEROME W. H. NISWONGER, Assistant Professor of Gynecology and Obstetrics
M.D. Loma Linda University

PROGRAM IN MIDDLE EASTERN STUDIES

- Coordinator ANEES A. HADDAD, Professor of Sociology
PH.D. University of Southern California
- Collaborating faculty ROBERT C. DARNELL, Professor of Islamics
PH.D. University of Michigan
- JOHN W. ELICK, Professor of Anthropology
PH.D. University of California, Los Angeles
- A. GRAHAM MAXWELL, Professor of New Testament
PH.D. University of Chicago
- JACK W. PROVONSHA, Professor of Philosophy of Religion and Christian Ethics
M.D. Loma Linda University
PH.D. Claremont Graduate School
- KENNETH L. VINE, Professor of Biblical Studies and Archaeology
PH.D. University of Michigan
- Lecturers BEN D. ARSHAT, Lecturer in History and Arabic
M.A. Andrews University
- SALIM MAJEED ELIAS, Lecturer in Arabic
B.A. Middle East College

DEPARTMENT OF PSYCHOLOGY

- Chairman PETER G. STRUTZ, Associate Professor of Psychology
PH.D. University of Alberta
- Faculty VERN R. ANDRESS, Associate Professor of Psychology
PH.D. United States International University
- R. RICHARD BANKS, Associate Professor of Psychology
PH.D. University of Notre Dame
- JERRY W. LEE, Assistant Professor of Psychology
PH.D. University of North Carolina
- CAROLYN R. HOWARD, Instructor in Psychology
M.A. West Virginia University
- HAROLD I. SHARNACK, Instructor in Psychology
M.A. Wyoming University
- THEODORE J. TOMS, Instructor in Psychology
B.A. Columbia Union College
- ADENY S. WOODS, Instructor in Psychology
M.A. Catholic University of America
- Collaborating faculty SHIROU KUNIHIRA, Associate Professor of Psychology, School of Dentistry
PH.D. Stanford University
- JOHN M. REEVES, Associate Professor of Preventive and Community Dentistry,
School of Dentistry
PH.D. University of Southern California
- S. ALBERTA MAZAT, Assistant Professor of Marriage and Family Counseling, and Social
Service
M.S.W. University of Denver

DEPARTMENT OF SOCIAL SERVICE

- Chairman JUNE L. HORSLEY, Assistant Professor of Social Service
M.S.W. University of Denver
- Faculty S. ALBERTA MAZAT, Assistant Professor of Marriage and Family Counseling, and Social
Service
M.S.W. University of Denver
- MAMIE M. OZAKI, Assistant Professor of Social Service
M.S.W. University of Southern California
- Lecturers LOTTIE A. HOLT, Lecturer in Social Service
M.S.W. San Diego State University
- RONALD G. HUSTON, Lecturer in Social Service
M.S.W. Fresno State University
- EVALINE E. WEST, Lecturer in Social Service
M.S.W. San Diego State University
- Field Personnel RICHARD M. ANDERSON
M.A. Chapman College
Riverside County Probation Department
- RICHARD E. ANDRUS
M.S.W. University of Washington
Patton State Hospital
- NORMAN M. BUCHANAN
M.S.W. Howard University
Department of Public Social Services Adoptions Services, Riverside
- DOUGLAS L. DeVENNEY
M.S.W. University of Hawaii
Riverside General Hospital Medical Center, Child Psychiatry Department

- JACQUELINE R. DREXLER
M.S.W. Columbia University
Riverside County Department of Health, Children's Mental Health Services
- SATOMI F. EDELHOFER
M.S.W. University of California, Berkeley
San Bernardino County Mental Health Department
- AMY E. ERRION
M.S.W. University of Washington
Loma Linda University Medical Center, Social Service Department
- GEORGE FOX
PH.D. George Peabody University
Child Study Center, Riverside
- FRED H. LEER
M.S.W. University of California, Berkeley
Cook Psychiatric Medical Group, Riverside
- FESTUS O. WEBLEY
M.S.W. University of Southern California
Riverside County Department of Public Social Services
- CURTIS F. YENGLIN
M.S.W. University of Southern California
Riverside General Hospital Medical Center, Medical Social Service
- JOAN W. YOUNGBLOOD
M.S.S.A. Case Western-Reserve University
Young Women's Christian Association, Riverside

Objectives The Division of Behavioral Sciences aims to promote personal growth in effective Christian living, broader understanding of the organization and function of society, and development of perspective from the comparison of different cultures. An understanding of the factors that promote personal adjustment and the processes which result in cultural stability or change, a knowledge of the effects of contact between peoples and cultures, an awareness of current social movements, a sensitivity to human worth and dignity, and an acquaintance with the background of social and cultural theory and practice are essential for a liberal education.

The student interested in the behavioral sciences may prepare for a career or further study in psychology, teaching, special education, corrections (administration of justice), probation, juvenile problems, social service, speech therapy, theology, personnel administration, residence hall deanship, or marriage, family, and child counseling.

Studies in behavioral sciences contribute to an increased understanding of the human factors involved in such professions as dentistry, medicine, nursing, occupational therapy, the ministry, education, public health, public affairs, business, and many other areas.

A baccalaureate degree in the behavioral sciences prepares the student for graduate study in such areas as marriage and family counseling, psychiatric and other social work, administration of justice, psychology, sociology, anthropology, social work, and other specialized areas in the behavioral sciences. Many vocations now require at least one year of graduate work.

In addition to the courses offered by the Division of Behavioral Sciences, certain courses offered by other departments in the University may be applied to the major, in consultation with the appropriate department chairman or program coordinator.

Graduate programs Graduate programs leading to the Master of Arts degree in sociology, anthropology, Middle Eastern studies, and to the Master of Science degree in marriage, family, and child counseling are described in the BULLETIN of the Graduate School.

BACCALAUREATE MAJOR PROGRAMS

Administration of justice The program in administration of justice is designed for students planning to go into fields such as corrections, probation, and parole; for persons already employed in these fields; and for students preparing for graduate study. Collaborating agencies include the California Institution for Women and the Riverside County Probation Department.

Financial aid may be available for those students who meet the requirements of the Law Enforcement Education Program (LEEP). Applications for such aid must be presented to the Student Aid and Finance Office at the beginning of the school year after the student has worked out his program of studies with the LEEP adviser.

A student majoring in administration of justice completes either of the following programs:

Program A consists of the general requirements for the Bachelor of Arts degree (see *General Requirements*) and the 48 units of coursework, including ADJS 377, 378, 379, 435 (three quarters); ANTH 104 or 315; PSYC 104 or 105, 344, 475; SOCI 104, 375, 376. Cognate requirements are MATH 251, 252; PSYC 304, 356 are recommended.

Program B consists of the general requirements for the Bachelor of Science degree (see *General Requirements*) and 80 units of coursework selected in consultation with the program adviser, including ADJS 377, 378, 379, 435 (three quarters); ANTH 104 or 315; PSYC 104 or 105, 304, 344, 356, 475; SOCI 104, 307, 375, 376.

Anthropology A student majoring in anthropology completes either of the following programs:

Program A consists of the general requirements for the Bachelor of Arts degree (see *General Requirements*) and 48 units of coursework in anthropology, including ANTH 104 or 315, 304, 306, 316, 494. Cognate requirements are SOCI 104, 404; PSYC 104 or 105; MATH 251, 252, or equivalent.

Program B consists of the general requirements for the Bachelor of Science degree (see *General Requirements*) and 60 units of coursework in anthropology, including ANTH 104 or 315, 304, 306, 316, 494. Cognate requirements are SOCI 104, 404; PSYC 104 or 105; MATH 251, 252, or equivalent. A bioanthropology emphasis includes BIOL 101, 102, 103; and 8 units from BIOL 111, 112, 185, 427, 444.

Behavioral science A student majoring in behavioral science completes either of the following programs:

Program A consists of the general requirements for the Bachelor of Arts degree (see *General Requirements*) and 56 units (32 upper division) of coursework, including ANTH 104, 304 or 306; PSYC 104 or 105, 224 or 324, 344; SOCI 104, 304 or 306, electives in one of the areas of the behavioral sciences selected in consultation with the program adviser. Cognate requirements are MATH 251, 252.

Program B consists of the general requirements for the Bachelor of Science degree (see *General Requirements*) and 64 units (40 upper division) of coursework, including ANTH 104, 306 or 314; PSYC 104 or 105, 224 or 324, 344; SOCI 104, 304, 306 or 414; electives in two of the areas of the behavioral sciences selected in consultation with the program adviser.

Behavioral science
and religion

A student majoring in behavioral science and religion completes the general requirements for the Bachelor of Science degree (see *General Requirements*) and 124 units of coursework in the behavioral sciences and religion, including ANTH 104; PSYC 104, 205, 224, 225, 307, 344, 414, 475; RELB 104, 206, 207, 244, 404, 424; RELP 264, 265; RELT 205, 245, 254, 354; SOCI 104, 275, 304, 307, 376, 414, 417, 488, 489; SOSR 104. Cognate requirements are BIOL 131, 132; EDFO 307 in the School of Education.

Counseling and
education

A student majoring in psychology who is interested in credentials in elementary or secondary education, school psychometry, pupil personnel work, or counseling and guidance should consult his department chairman and the credentials adviser in the School of Education during his freshman or sophomore year for detailed information concerning requirements.

Psychology

A student majoring in psychology completes either of the following programs:
Program A consists of the general requirements for the Bachelor of Arts degree (see *General Requirements*) and 48 units (32 upper division) of coursework in psychology, including PSYC 104 or 105, 206, 224, 225, 304, 344 and 485 or 435 and 444, 354, 406, 451, 478, 488. Cognate requirements are ANTH 104; MATH 251, 252; SOCI 104.

Program B consists of the general requirements for the Bachelor of Science degree (see *General Requirements*) and 56 units (40 upper division) of coursework in psychology, including PSYC 104 or 105, 206, 224, 225, 304, 344, 354, 406, 435, 444 or 485, 451, 478, 488. Cognate requirements are ANTH 104; MATH 251, 252; SOCI 104.

Social service

The program in social service offers courses leading to the Bachelor of Science degree and prepares the student for beginning practice in such settings as the church, schools, hospitals, public welfare, probation and parole, youth and family service centers, and other agencies that offer direct service to client groups. Students have excellent opportunities for field experience in a wide range of cooperating agencies dealing with many kinds of social problems. The program emphasizes an understanding of the historical development of social services, an awareness of social issues and change, a sensitivity to human value, and the professional skills with which to provide appropriate service. The program's scope and depth build a foundation for study in social work at the graduate level.

A student majoring in social service completes the general requirements for the Bachelor of Science degree (see *General Requirements*) and 88 units (40 upper division) of coursework, including SOSR 104, 214, 217, 218, 314, 317, 318, 319, 417, 488, 489, 494, 498; ANTH 104; SOCI 104, 307, 376, 414; PSYC 104 or 105, 304, 324. A cognate requirement is MATH 251, 252.

Social service
and religion

A student majoring in social service and religion completes the general requirements for the Bachelor of Science degree (see *General Requirements*) and 120 units of coursework in the behavioral sciences and religion, including ANTH 104; PSYC 104, 304, 324; RELB 104, 206, 207, 244, 404, 424; RELP 264, 265; RELT 205, 254, 354; SOCI 104, 275, 307, 414; SOSR 104, 214, 217, 314, 417, 489, 493, 494, 498; 8 units from SOSR 317, 318, 319. Cognate requirements are BIOL 131, 132; MATH 251, 252. A recommended course is MATH 104.

Sociology

A student majoring in sociology completes the general requirements for the Bachelor of Arts degree (see *General Requirements*) and 48 units of coursework in sociology, including SOCI 104, 304, 404, 414, 494. Cognate requirements are ANTH 104 or 315; MATH 251, 252, or equivalent; PSYC 104 or 105.

MINOR SEQUENCES

The following minors are available:

Anthropology, 28 units (16 upper division) in anthropology selected in consultation with the program adviser.

Behavioral science, 28 units (16 upper division) selected in consultation with the program adviser, including ANTH 104; PSYC 104; SOCI 104.

Psychology, 28 units (16 upper division), including PSYC 104 or 105, 205 or 224, 344.

Sociology, 28 units (16 upper division) in sociology selected in consultation with the program adviser.

Social service, 28 units (16 upper division) selected in consultation with the program adviser.

ADMINISTRATION OF JUSTICE

Upper division	ADJS 345 Group Counseling in the Prison Setting 4 units
	Dynamics of group formation, behavior; techniques of group counseling in the correctional institution setting. Emphasis on role of leader within framework of both directive and non-directive techniques. Limited supervised experience as a group participant.
	ADJS 377 Crime and Law 4 units
	Legal aspects of delinquent and criminal behavior.
	ADJS 378 Probation and Parole 4 units
	Role of the probation officer in the social rehabilitation of juvenile and adult offenders. Theory of probation and parole in relation to actual case histories. Taught by a parole officer.
	ADJS 379 Correctional Institutions 4 units
	Theory of corrections; various types of correctional institutions.

- ADJS 435 Field Instruction** **1-4 units**
 Experience and instruction under a professional worker in a public or private correctional agency. Credit earned at the rate of 1 unit per four clock hours per week. May be repeated for additional credit to a total of 4 units.
 Prerequisite or concurrent: ADJS 378 or 379; consent of both the instructor and the agency.
- ADJS 488 Seminar in Administration of Justice** **1-4 units**
 Selected topics. May be repeated with new content for additional credit.
 Prerequisite: Consent of the instructor.
- ADJS 499 Directed Study** **1-4 units**

ANTHROPOLOGY

- Lower division
- ANTH 104 Introduction to Anthropology** **4 units**
 The nature of culture, with special reference to such features as technology, economic activities, community organization, kinship and marriage, social control, magic and religion, the arts, and other forms of cultural behavior. Wide array of examples from societies around the world.
- ANTH 275 Missions Orientation** **2 units**
 Interdisciplinary approach to provide basic insights for those planning to live overseas. Orientation in cultural, linguistic, health, and religious aspects of life in selected overseas areas. Two class hours and one laboratory hour per week. Does not apply toward a major in anthropology.
- Upper division
- Unless it is otherwise indicated, ANTH 104 or consent of the instructor is prerequisite to all upper division courses.
- ANTH 304 Biological Anthropology** **4 units**
 Processes influencing human variation, past and present; distribution of human types; medical aspects of anthropology.
- ANTH 305 The Anthropology of Race** **4 units**
 Social and biological bases of race. Historical and biological role of race and racism as a catalyst for social change in modern and primitive societies.
- LING 305 Structural Linguistics** **4 units**
- ANTH 306 Language and Culture** **4 units**
 Relation of linguistic phenomena to habitual thought and behavior.
- ANTH 307 Popular Culture** **4 units**
 Dynamics and structure of modern complex societies, with emphasis on the United States. Mass communication as a catalyst for culture change.
- ANTH 308 Geography of Man** **5 units**
 Survey of the physical and cultural elements of landscape and their areal associations; interpretation and differentiation; distributions of cultural traits. Four class periods, one four-hour laboratory per week.
- ANTH 309 Cultural Ecology** **4 units**
 Relationship between culture and the natural environment. Comparative cultural values and the econiche of man.
- ANTH 315 Cultural Anthropology** **4 units**
 Advanced course in ethnology and social organization.
- ANTH 316 Archaeology** **4 units**
 Survey of research in the reconstruction of early culture sequences and the rise of ancient civilizations; dating techniques in archaeology; principles of biblical chronology and genealogy; theories of long-term culture change; the role of invention and diffusion in the growth of early civilizations.

ANTH 334 Peoples of Latin America	4 units
Historical and comparative study. Aboriginal and contemporary culture patterns; problems of culture change; current social movements.	
ANTH 335 Peoples of Africa	4 units
Prehistory and early kingdoms; cultural diversity; European contact and the slave trade; modern social movements; emerging nationalism.	
ANTH 336 Peoples of the Middle East	4 units
Major societies and culture types of the eastern Mediterranean and North Africa.	
ANTH 337 Peoples of Asia	4 units
Principal societies and religions and peasant cultures of South and East Asia.	
ANTH 338 Indians of North America	4 units
Historical and comparative study of the native populations of North America; aboriginal and contemporary culture patterns. Acculturation problems.	
ANTH 425 Sociocultural Change	4 units
Theories of cultural evolution, diffusion, acculturation, innovation.	
ANTH 444 Comparative Religion	4 units
Beliefs and practices directed toward manipulation or control of supernatural forces; animatism, animism, magic, witchcraft, ritual, concepts of the afterlife, shamanism; the role of religion as an integrative factor of culture.	
ANTH 445 Culture and Personality	4 units
Psychological approach: national character; societal influences on childrearing; modal personality; culture and mental illness.	
RELB 445 Biblical Archaeology	2-4 units
ANTH 446 Folklore	4 units
Oral and written tradition as an index to cultural systems; various genres such as folktale, riddle, and proverb; folk medicine, origin myths, and legends.	
ANTH 447 Applied Anthropology	4 units
Analysis of directed culture-change programs, with case studies from missions, public health, education, inner city, and other contexts.	
ANTH 448 Medical Anthropology	4 units
Sickness and health as universal factors in the human condition. World view as an explanatory system for behavior; ethnographic examples of curing systems and coping mechanisms; cross-cultural communication of health principles and practices.	
ANTH 465 Field Course: Archaeology, Ethnography	4-8 units
Participation in an archaeological or ethnographic project under the supervision of a faculty member. May be repeated for additional credit.	
ANTH 488 Proseminar	2 units
ANTH 489 Religion and the Behavioral Scientist	4 units
Does not apply toward a major or minor. Identical to SOSR 489 and SOCI 489.	
ANTH 494 Methods of Field Research	4 units
Field research design; analysis of approaches used by field workers in gathering and evaluating data; writing the research paper.	
ANTH 498 Laboratory Projects	1-6 units
ANTH 499 Directed Study	1-6 units
Limited to students with senior standing and majoring in anthropology.	

Graduate	ANTH 604	Seminar: Cultural Anthropology	4 units
	ANTH 605	Seminar: Middle Eastern Cultural History	4 units
	ANTH 614	Seminar: Physical Anthropology	4 units
	ANTH 615	Seminar: The Middle East in the Twentieth Century	4 units
	ANTH 616	Seminar: Prehistory	4 units
	ANTH 625	Seminar: Sociocultural Change	4 units
	ANTH 626	Seminar: Anthropological Linguistics	4 units
	ANTH 634	Seminar: Social Theory	4 units
	ANTH 644	Seminar: Comparative Religion	4 units
	ANTH 648	Seminar: Medical Anthropology	4 units
	ANTH 665	Fieldwork in Ethnography	arranged
	ANTH 667	Fieldwork in Archaeology	arranged
	ANTH 694	Directed Reading in Anthropology	arranged
	ANTH 695	Research and Thesis in Anthropology	10 units

MARRIAGE, FAMILY, AND CHILD COUNSELING

Graduate	MFAM 464	Relationship Enrichment	2 units
	MFAM 504	Research Tools and Methodology in MFAM Counseling	4 units
	MFAM 514	Family Law and Ethics	2 units
	MFAM 515	Crisis Intervention Counseling	2-4 units
	MFAM 524	Field Experience	0 units
	MFAM 534	Clinical Internship	0 units
	MFAM 535	Case Presentation Seminar	0-2 units
	MFAM 544	Advanced Clinical Internship	0 units
	MFAM 551	Marriage and Family Counseling Theory	4 units
	MFAM 552	Marriage and Family Counseling Techniques and Practice	4 units
	MFAM 554	Conjoint Family Therapy	4 units
	MFAM 556	Diagnostic Procedures in Clinical Pathology	4 units
	MFAM 561	Program Development in Relationship Enrichment	2 units
	MFAM 562	Practicum in Relationship Enrichment	2 units
	MFAM 565	Dissolution Counseling	2 units
	MFAM 567	Human Sexual Behavior	4 units
	MFAM 574	Assertive Training for MFAM Counselors	2 units

MFAM 604	Premarital Counseling	2 units
MFAM 654	Treating the Troubled Child	2 units
MFAM 655	Counseling the Adolescent	2 units
MFAM 657	Setting up a Private Practice in MFAM	2 units
MFAM 665	Seminar: Marriage Enrichment	2 units
MFAM 674	Professional Seminar	0 units
MFAM 675	Clinical Problems in Marriage and Family Counseling	2 units
MFAM 694	Directed Study: Marriage and Family	2 units
MFAM 695	Research Problems: Marriage and Family	2-6 units

MIDDLE EASTERN STUDIES

Graduate	MEST 351, 352	Introductory Arabic	8 units
	MEST 425	Peoples of the Middle East	4 units
	MEST 445	Religions of the Middle East and the Western World	4 units
	MEST 505	Social Research Methods and Methodology	4 units
	MEST 605	Seminar: Middle Eastern Cultural History	4 units
	MEST 615	Seminar: The Middle East in the Twentieth Century	4 units
	MEST 694	Directed Reading	arranged
	MEST 695	Research and Thesis	10 units

PSYCHOLOGY

PSYC 104 or 105 is prerequisite to all other courses in psychology except PSYC 005.

Remedial	PSYC 005	Personal Psychology	4 units
		Pregeneral studies course emphasizing the motivation to study and applied techniques of study skills. Does not apply toward a major or minor in psychology or behavioral science or toward the general requirement in personal/social relationships.	
Lower division	PSYC 104	General Psychology I	4 units
		Human behavior; its causes and consequences. Controls that can be exercised upon oneself and others. Not open to students who take PSYC 105.	
	PSYC 105	Introduction to Psychology	4 units
		Scientific study of human behavior; motivation, conflict, emotions, learning, intelligence, and personality. Recommended for psychology, sociology, and behavioral science majors for the Bachelor of Arts. Not open to students who take PSYC 104.	
	PSYC 205	Personal and Social Adjustment	4 units
		Practical use of psychological principles in dealing with problems and circumstances related to personality development and social adjustment. Three lectures and a two and one-half hour participation in human dynamics laboratory per week.	
	PSYC 206	General Psychology II	4 units
		Selected areas of psychology studied in depth. Special emphasis on the scientific methods of studying physiological factors, adaptive behavior, perception, cognition, and motivation.	

- PSYC 224 Developmental Psychology I** 3-4 units
Physical, mental, emotional, and social development of the individual from conception through the first twelve years of life. Observations and/or laboratory experience.
- PSYC 225 Developmental Psychology II** 3-4 units
Individual physical, mental, and social development from adolescence through adulthood and old age. Particular emphasis on normal adaptation to change. Observations and/or laboratory experience.
Prerequisite: PSYC 224 or consent of the instructor.
- Upper division **PSYC 304 Social Psychology** 4 units
Behavior of the individual as a member of the group and behavior patterns within groups. Social interaction, group organization and leadership; social influences on perception, cognitive processes, attitude formation and change. Identical to SOCI 304.
- PSYC 305 Psychological Aspects of Stress** 2-4 units
Factors leading to and results of psychological stress and anxiety. Ways to handle such life situations with emphasis on inner and divine strengths and other resources.
- PSYC 307 Educational Psychology** 4 units
Fundamental psychological problems encountered in education. Measurement and significance of individual differences; learning; motivation; transfer of learning; and educational implications of theories of intelligence. Does not apply toward a major in psychology.
- PSYC 324 Psychology of Human Growth and Development** 2 or 4 units
Principles of growth related to all phases of development. Emphasis on interrelationships in human behavior. Laboratory.
- PSYC 334 Field Observation** 1 unit
In schools, dormitories, and other related social agencies, including case discussions. Approximately 30 clock hours. May be repeated for additional credit to a maximum of 3 units.
- PSYC 344 Introduction to Personality** 4 units
Development, dynamics, and assessment of personality by the use of various theoretical points of view and latest research findings to give a broad conceptual basis.
- PSYC 354 Experimental Psychology** 4 units
Problems related to learning, growth, and development. Lecture and laboratory.
Prerequisite: PSYC 204; MATH 251, 252; junior standing.
- PSYC 355 Psychology of Small Groups** 4 units
Aspects of small group behavior as interrelated processes of social interaction.
- PSYC 356 Psychological Tests and Measurements** 4 units
Purposes and use of psychological testing procedures in evaluation and diagnosis of human behavior. Limited supervised experience in techniques of administration and scoring of tests and the preparation and presentation of data in professional written reports.
Prerequisite: MATH 251 or consent of the instructor.
- PSYC 404 Experimental Social Psychology** 4 units
Survey of experimental literature; assigned and original laboratory projects in social psychology; attitude change, sampling techniques, survey methods.
Prerequisite: PSYC 304, 354; MATH 251, 252.
- PSYC 405 Psychology of Human Relations** 4 units
Human motivation and its constructive application to oneself and others, with emphasis on dealing with others in an employment situation. Human factor in business, psychological aspects of personal human relations, employee relations, customer relations, community relations, and public relations.
- PSYC 406 Methods of Research** 4 units
Techniques and principles.
Prerequisite: MATH 251, 252; senior standing.
- PSYC 414 Interviewing and Counseling** 4 units
Principles and practices studied against a background of behavioral sciences.
Prerequisite: PSYC 344 or consent of the instructor.

- PSYC 417 Psychology and Religious Issues** 4 units
Psychological implications in some contemporary psychoreligious issues. Does not apply toward a major or minor.
- PSYC 425 Psychology of Physical Disability** 3 units
Psychological reactions to organic illness. Methods of dealing with these reactions considered with reference to clinical situations. Identical to AHCJ 421 (School of Allied Health Professions).
- PSYC 434 Field Instruction** 1 unit
Supervised experience in specified areas of counseling; a modified practicum. May be repeated for additional credit to a maximum of 3 units.
- PSYC 435 Psychology of Learning** 4 units
Review and analysis of major phenomena and theories of human and animal learning. Introduction to the fields of problem-solving, thinking, and reasoning behavior.
Prerequisite: PSYC 206.
- PSYC 437 Principles of Human Behavior** 4 units
Current theories and principles in psychology related to learning and teaching, personality development and change, and interpersonal process and dynamics.
- PSYC 444 Theories of Personality** 4 units
Representative points of view and research relevant to major problems.
Prerequisite: PSYC 344 or consent of the instructor.
- PSYC 451 Physiological Psychology I** 4 units
Physiological basis of behavior, with emphasis on functional neuroanatomy. Demonstration and/or laboratory.
Prerequisite: BIOL 131 or consent of the instructor.
- PSYC 452 Physiological Psychology II** 4 units
Neurophysiological mechanisms of motivation, emotion, consciousness, and attention.
Prerequisite: PSYC 451.
- PSYC 454 Advanced Counseling** 4 units
Theory and techniques.
Prerequisite: PSYC 414, senior standing.
- PSCH 455 Group Therapy** 4 units
Principles and techniques; role of the leader, problems of member selection, and evaluation of progress. Limited supervised experience as a group participant. Laboratory.
Prerequisite: Consent of the instructor.
- PSYC 464 The Exceptional Child** 3 units
Determinants, characteristics, problems, and adjustments of children who deviate markedly from the norm in mental, physical, emotional, and social aptitudes, traits, and tendencies. Educational methods for deviant children.
- PSYC 465 The Gifted Child** 3 units
Developmental study of the peculiar qualities that make up intellectual giftedness, special capacities, and special aptitudes. Psychological, philosophical, social, educational, and personal issues. Identical to EDCE 465 in the School of Education.
- PSYC 466 Mental Deficiency** 3 units
Etiology of mental retardation; diagnosis, characteristics, and classification of mental defectives. Degrees of impairment and resultant personality, school, family, and institutional problems.
- PSYC 474 Industrial Psychology** 4 units
Application of psychology to industrial and personnel problems, including human relations, selection, training, employee motivation, and morale.
- PSYC 475 Abnormal Psychology** 4 units
Psychology of behavioral disorders, with emphasis on etiology, symptoms, and treatment.
Prerequisite: PSYC 344.

- PSYC 477 Psycholinguistics** 4 units
General nature of speech and language and their role in human behavior; acquisition, breakdown, significant differences and effects of speech and language.
- PSYC 478 History and Systems of Psychology** 4 units
Philosophical and historical background; consideration of contemporary schools and systems of psychology.
- PSYC 485 Theories of Learning** 4 units
Systematic survey, including Hull, Skinner, Tolman, and Spence, with emphasis on modern behavioral concepts.
Prerequisite: PSYC 334, 435, or consent of the instructor.
- PSYC 486 Thanatology** 4 units
Psychological and social implications of death and dying as experienced by the terminally ill patient and significant others. Introduction to investigative techniques in homicide and suicide; analysis of equivocal deaths; the psychological autopsy.
Prerequisite: Consent of the instructor.
- PSYC 487 Seminar in Human Behavior** 1-4 units
Variable content to meet special needs of students not majoring in psychology. Topics include applied human relations.
Prerequisite: Consent of the instructor.
- PSYC 488 Seminar in Psychology** 1-4 units
Variable content to meet special needs of students majoring in psychology.
Prerequisite: Consent of the instructor.
- PSYC 489 Religion and the Behavioral Scientist** 4 units
Does not apply toward a major or minor.
- PSYC 499 Directed Study** 1-4 units
Limited to department majors with senior standing.
- Graduate **PSYC 505 Psychology of Interpersonal Relationships** 3 units
Motivations of behavior, with applications to interactions between individuals and to functioning of groups.
Arranged.
- PSYC 521, 522 Understanding and Counseling the Adolescent** 3, 3 units
Physiological, emotional, and social development. Representative theoretical viewpoints and research. Principles and techniques of counseling.
Prerequisite: Consent of the instructor.
- PSYC 544 Principles of Human Behavior** 3 units
Current theories and principles in psychology related to learning and teaching, personality development and change, and interpersonal process and dynamics.
- PSYC 554 Counseling Theories and Techniques** 4 units
Interviewing; social casework; parent counseling; case study methods. Directive, nondirective, and other methods.
Prerequisite: PSYC 414, 454.
- PSYC 555 Group Process Theory and Procedures** 3-4 units
Group guidance; theories of group-individual interaction; communication processes; development and structure of organized groups.
Prerequisite: PSYC 414, 455.
- PSYC 556 Advanced Techniques in Psychological Assessment and Diagnosis** 2-4 units
The application of psychological testing methods in the diagnostic assessment of individual and group behavioral dynamics as encountered in marriage, family, and child counseling; social services; psychotherapy. Observations and/or laboratory experience.
Prerequisite: PSYC 356, 414, 454.

SOCIAL SERVICE

- Lower division**
- SOSR 104 Introduction to Social Service** 5 units
A survey of the historical development of the social welfare system as a response to social problems and needs; current fields of practice in social work. Principles, methods, values, and philosophy of social work. Social problems of selected target groups analyzed. Weekly field observation laboratory at local agency. Prerequisite to all other SOSR courses.
- SOSR 214 Social Institutions and Social Policy** 4 units
Analysis of historical development of the social welfare system within the context of the economic, political, and social climate of the period; implications for social welfare policy and social issues. The relationship of changing economic and social values and systems to social work policy development.
Prerequisite: Consent of the instructor.
- SOSR 217 Social Work Theory and Practice I** 4 units
Theory and principles of social work with individuals and families. Basic interviewing methods; problem identification and analysis. Professional values, purpose, and ethics underlying social casework practice. Simulated practice activities and weekly laboratory.
Prerequisite: Consent of the instructor.
- SOSR 218 Social Work Theory and Practice II** 4 units
Refinement of interviewing skills and problem-solving processes. Emphasis on brief intervention techniques applicable to generic social work modalities; implications for use with a variety of ethnic, racial, and cultural groups. Weekly laboratory assignments in local agencies.
- Upper division**
- Admission to the social service program requires the successful completion of SOSR 104, 214, and 217; a written application; and a personal interview.
- SOSR 314 Human Behavior and Social Environment** 4 units
Physical, psychological, social, cultural, and spiritual foundations of personality development; their interrelationship for normal and abnormal behavior from infancy through old age; their implications for the social worker and the social functioning of the individual in his physical, emotional, and social environment. Dynamics of psychosocial pathology.
Prerequisite: SOSR 217; PSYC 324.
- SOSR 317 Social Work Methods: Casework** 4 units
Analysis of human behavior and social systems theories as related to the practice of social casework. Application of several models and methods of social work intervention explored in depth. Basic diagnostic and problem-solving skills needed in helping individuals and families achieve their potential in psychosocial functioning. Laboratory assignments.
Prerequisite: SOSR 217; PSYC 324.
- SOSR 318 Social Work Methods: Group Work** 4 units
Survey and evaluation of historical background, theory, and group work methods employed by social workers. Application of concepts and principles of group dynamics and diagnostic methods in prevention and rehabilitation.
Prerequisite: SOSR 217, 317.
- SOSR 319 Social Work Methods: Community Organization** 4 units
Survey and evaluation of historical and theoretical developments in community organization. Role of the social worker in identification, analysis, and evaluation of and intervention in community problems. Understanding of social policy, social change, and the community as a social system. Laboratory assignments.
Prerequisite: Consent of the instructor.
- SOSR 324 Child Welfare** 4 units
Survey of historical development of services for children. Emphasis on social policy and services affecting children in juvenile courts, foster care, day care centers, adoptions, protective services, institutional care, and special needs services. Exploration of funding patterns, laws, and new resources for children's services.
Prerequisite: SOSR 217; SOCI 376; or consent of the instructor.

- SOSR 325 Services for the Disturbed Child** 4 units
 Effect of the environment on the child, and of the child on the home and school. Methods of dealing with the emotionally and physically disabled child and his family; rehabilitation.
 Prerequisite: SOSR 324 and consent of the instructor.
- SOSR 326 Medical Social Services** 4 units
 Survey and analysis of historical background of medical social work; professional methods of intervention. Medical terminology and discussion of psychosocial effects of major illnesses on the individual, families, and other groups. Micro-level health care delivery systems.
 Prerequisite: SOSR 217 and consent of the instructor.
- SOSR 335 Social Work with Families** 4 units
 Social work approaches to problem-solving with families. Emphasis on strengthening of interpersonal, social, and spiritual components of family life. Simulated family situations with use of video tape for analysis of role playing.
- SOSR 336 Social Work with the Aged** 4 units
 Exploration and assessment of the nature, scope, and presumed causes of problems for the aged. Aspects of adjustment to the aging process. Modes of working with the aged individual in group and community settings. Analysis of microsystems and macrosystems of service delivery.
- SOSR 417 Advanced Social Work Practice** 4 units
 Advanced methods of interviewing and counseling employed by the social worker. Application of contemporary social work techniques used with special target groups. Emphasis on the family; rehabilitative and ethnic factors of counseling in community mental health centers. Weekly laboratory activities in a social agency.
 Prerequisite: SOSR 217, 314, 317, 318; SOCI 307.
- SOSR 489 Religion and the Behavioral Scientist** 4 units
 Does not apply toward a major or minor. Identical to SOCI 489, ANTH 489, and PSYC 489.
- SOSR 493 Field Seminar** 2 units
 Role of the professional social work practitioner; responsibility to the client, the agency, and the profession. Concepts of sanctions, authority, power, and ethical codes. Required each quarter of the senior year. Concurrent registration in SOSR 498 required.
 Prerequisite: SOSR 217, 317, 318, 417, and consent of the instructor.
- SOSR 494 Methods of Research** 4 units
 Research project related to social work practice, including administration of justice, health, family and children, drugs and alcoholism. Identical to SOCI 494.
 Prerequisite: MATH 251, 252.
- SOSR 498 Field Practicum** 4 units
 Externship program involving the application of social work methods to social work problems in service agencies. Required each quarter of the senior year.
 Prerequisite: SOSR 217, 317, 417, and consent of the field practicum coordinator.
- SOSR 499 Directed Study** 1-4 units

SOCIOLOGY

- Lower division **SOCI 104 Introduction to Sociology** 4 units
 The science of society: social norms, social processes, social change, and social structure.
- SOCI 275 Sociology of Love and Marriage** 4 units
 Love, maturity, compatibility, conflict, religious factors, and specific areas of adjustment in marriage.
- Upper division Unless it is otherwise indicated, SOCI 104 or consent of the instructor is prerequisite to all upper division courses.

soci 304 Social Psychology	4 units
Behavior of the individual as a member of the group, and behavior patterns within groups. Social interaction, group organization, and leadership; social influences on perception, cognitive processes, attitude formation and change. Identical to PSYC 304.	
soci 306 Social Issues	4 units
Current issues agitating society; underlying social factors. Resolution of issues evaluated in the light of social theory.	
soci 307 Ethnic Relations	4 units
Prejudice and discrimination in the interrelationships of society and its ethnic components.	
EDFO 307 Social Foundations of Education	4 units
Relationships between schools and other social institutions, between schools and their communities, and within the subculture of the school. Emphasis in the first and third quarters on philosophic concerns and historical backgrounds; emphasis in the second quarter on sociological and anthropological considerations. Fieldwork required.	
soci 374 Social Disorganization	4 units
Current theory and research in selected areas of disorganization such as crime, urban poverty, war, and deviant behavior.	
soci 375 Criminology	4 units
Crime as a social phenomenon. Psychological and sociocultural factors in the development of the criminal.	
soci 376 Juvenile Delinquency	4 units
Historical background; analysis of present forms of delinquency; evaluation of remedial measures now in common use.	
soci 404 Foundations of Social Thought	4 units
Historical background of behavioral sciences, particularly philosophy of the Enlightenment. Development of current social and anthropological theory.	
soci 414 The Family	4 units
Structure and function; changing patterns; future in urban society. Relationships between changes in society and widespread family problems.	
soci 415 Urban Sociology	4 units
The urban community: its history, social structure, and problems of interaction; processes of urbanization.	
soci 416 Collective Behavior	4 units
The crowd, the public, and the mass; social movements.	
soci 417 Sociology of Religion	4 units
Religion as a social institution; its relation to other social institutions; its organizational forms.	
soci 455 Socialization	4 units
Major theories of socialization throughout the life cycle, with emphasis on childhood and home. All life stages and pertinent agencies of socialization.	
soci 488 Proseminar	2 units
soci 489 Religion and the Behavioral Scientist	4 units
Does not apply toward a major or minor. Identical to ANTH 489, PSYC 489, and SOSR 489.	
soci 494 Methods of Research	4 units
Research design; sampling; application of research principles and writing. Prerequisite: MATH 251, 252.	
soci 499 Directed Study	1-4 units
Limited to students with upper division standing and majoring in sociology.	

Graduate	SOCI 505	Social Research Methods and Methodology	2-4 units
	SOCI 525	Population	4 units
	SOCI 604	Seminar: Social Psychology	4 units
	SOCI 605	Seminar: Middle Eastern Cultural History	4 units
	SOCI 607	Seminar: Ethnic Relations	4 units
	SOCI 614	Seminar: The Family	4 units
	SOCI 615	Seminar: The Middle East in the Twentieth Century	4 units
	SOCI 616	Seminar: Collective Behavior	4 units
	SOCI 618	Seminar: Population	4 units
	SOCI 625	Seminar: The Community	4 units
	SOCI 634	Seminar: Social Theory	4 units
	SOCI 674	Seminar: Medical Sociology	4 units
	SOCI 694	Directed Reading in Sociology	arranged
	SOCI 695	Research and Thesis in Sociology	arranged

DEPARTMENT OF
BIOLOGY

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B.A. Loma Linda University

Objectives The objectives of the Department of Biology are to help the student better understand himself and the living things around him, to develop a scholarly approach to the study of scientific information, and to prepare for careers in biology.

Graduate programs Programs leading to the Master of Arts and Doctor of Philosophy degrees are described in the BULLETIN of the Graduate School.

BACCALAUREATE MAJOR PROGRAMS

Preparation for teaching A student preparing to teach biology at the secondary level may complete, instead of one of the patterns listed above, BIOL 315, 364, 374, 406, 469, 485. In addition, he should plan to qualify for teaching credentials, and during his freshman or sophomore year should consult the credentials adviser in the School of Education for detailed information concerning requirements.

A program leading to the Master of Arts in the teaching of biology is described in the BULLETIN of the School of Education.

Biology A student majoring in biology completes either of the following programs:

Program A consists of the general requirements for the Bachelor of Arts degree (see *General Requirements*) and 41 units of coursework in biology, including BIOL 101, 102, 103, 404, 405, 447, 464. Cognate requirements in other departments are CHEM 111, 112, 113, 371, 372; MATH 124 or 130. Recommended coursework includes PHYS 211, 8 units from PHYS 212-215, and one of the following patterns in biology (which will be identified on the official transcript):

Botany: BIOL 314, 374, 377, 387 or 478, 484, 485; two courses at a field station, with at least one course in botany.

Ecology and Field Biology: BIOL 314, 469, 485; two courses selected from BIOL 324, 416, 458, 465; BIOL 370 or 406 or 475; one course at a field station.

Zoology: BIOL 364, 406, 469; two courses selected from BIOL 370, 458, 472; two courses at a field station.

Program B consists of the general requirements for the Bachelor of Science degree and 56 units of coursework in biology, including BIOL 101, 102, 103, 404, 405, 447, 464. A student may also choose one of the patterns listed above in Program A. Cognate requirements are CHEM 111, 112, 113, 371, 372, 384; MATH 124 or 130; PHYS 211, 8 units from PHYS 212-215.

Biophysics A program in biophysics is offered through the Department of Physics.

Health science A program in health science is offered through the Department of Physical Education.

Intensive food production A program in intensive food production is offered through the Department of Agriculture.

Combined major If a combined major is desired, a Bachelor of Science degree is individually constructed, with coursework in biology and a related department, as determined by advisers from the two departments.

MINOR SEQUENCE

A minor in biology is 29 units of coursework including BIOL 101, 102, 103, 489; additional courses selected from those applicable toward a major.

RESEARCH CURRICULUM IN BIOLOGY

A research curriculum is open to qualified students who are interested in gaining experience in biological research. Inasmuch as the research curriculum requires a minimum of two years in the program, interested students should apply early, preferably at the beginning of the first quarter in the freshman year.

Requirements include BIOL 101, 102, 103, 188, 296; CHEM 111, 112, 113; BIOL 109 (the first quarter the student is in the program); additional courses the student selects with the advice of a committee of three faculty members of the department; one or more oral examinations over the principal field of interest.

The student will conduct research under the guidance of his adviser, beginning as early as his second quarter in the research curriculum.

COURSES

Lower division	BIOL 101, 102, 103 General Biology	4, 4, 4 units
	Primarily for students majoring in science. Emphasis on current developments. Three class hours, one three-hour laboratory per week.	
	Prerequisite: A course in chemistry at the secondary or college level.	
	BIOL 107 Physiology of Man	4 units
	Man as an integrated organism; systems of the body; the basis of healthful living. Not open to students majoring in biology. Four class hours per week.	
	BIOL 109 Research Seminar	1/2 unit per quarter
	Analysis of current research in biology. Registration at the beginning of the first quarter; credit granted on the completion of three quarters. May be repeated for additional credit.	
	Prerequisite: Honors standing.	
	BIOL 111 Human Anatomy	4 units
	Two class hours, two three-hour laboratories per week. Combines with BIOL 112 for students in preprofessional allied health programs. Does not apply toward a major in biology.	
	BIOL 112 Human Physiology	5 units
	Combines with BIOL 111 for students in preprofessional allied health programs. Four class hours, one three-hour laboratory per week. Does not apply toward a major in biology.	
	BIOL 131, 132 Human Physiology and Anatomy	4, 4 units
	Primarily for students in associate or baccalaureate degree programs in nursing. Three class hours, one three-hour laboratory per week. Does not apply toward a major in biology.	

- BIOL 185 Introductory Microbiology** **4 units**
Applications to medical microbiology. Three class hours, one three-hour laboratory per week. For preprofessional students in nursing, dental hygiene, etc. Does not apply toward a major in biology.
- BIOL 188 Introduction to Research** **2 units**
Prerequisite: Enrollment in research curriculum or BIOL 101, 102; minimum grade point average of 2.5 overall and 3.0 in biology; consent of the instructor.
- BIOL 296 Undergraduate Research** **1-4 units**
Original investigation pursued under the direction of a staff member. May be repeated for additional credit.
Prerequisite: BIOL 188.
- Upper division **BIOL 314 General Ecology** **4 units**
Interrelations of plants and animals; ecological principles related to the composition of typical North American communities. Three class hours per week; one-day field trip alternate weeks, or the equivalent.
Prerequisite: BIOL 101, 102, 103.
- BIOL 315 Biological Techniques** **3 units**
Common research methods and instruments. One class hour, two three-hour laboratories per week.
Prerequisite: BIOL 101, 102, 103; CHEM 373; PHYS 213.
- BIOL 324 Wilderness Ecology** **3 units**
Comparative study of biotic communities in a selected wilderness area. An intensive two-week field course.
Prerequisite: BIOL 101, 102, 103; consent of the instructor.
- BIOL 325 Limnology** **4 units**
Physical, biological, and spiritual aspects of fresh water and their human implications. Four class hours per week; Sunday field trips.
Prerequisite: BIOL 101, 102, 103.
- BIOL 326 Natural History** **4 units**
Identification, distribution, and life habits of plants and animals of California. Does not apply toward a major in biology. Three class hours per week; Sunday field trips.
- BIOL 334 Histology** **4 units**
Descriptive analysis of normal vertebrate tissue and organs.
Prerequisite: BIOL 101, 102.
- BIOL 359 Histological Microtechniques** **2 units**
Applied laboratory production of permanent microscope slides.
Prerequisite: BIOL 101, 102, 103.
- BIOL 364 Vertebrate Physiology** **4 units**
Mechanisms of animal function. Three class hours, one three-hour laboratory per week.
Prerequisite: BIOL 101, 102, 103; consent of the instructor.
- BIOL 367 Herpetology** **4 units**
Identification, classification, distribution, and life habits of amphibians and reptiles. Three class hours per week; Sunday field trips.
Prerequisite: BIOL 101, 102, 103.
- BIOL 370 Protozoology** **4 units**
Morphology, taxonomy, and life history of free-living and parasitic protozoa. Three class hours, one three-hour laboratory per week.
Prerequisite: BIOL 101, 102, 103.

- BIOL 374 Microbiology** **5 units**
 Bacteria, yeasts, molds, protozoa, and related organisms contributing to decay, fermentation, disease, and the biological balance in nature. Four class hours, one three-hour laboratory per week.
 Prerequisite: BIOL 101, 102, 103.
- BIOL 377 Plant Morphology** **4 units**
 Thallophytes, bryophytes, and tracheophytes; classification, structure, and life cycles. Three class hours, one three-hour laboratory per week.
 Prerequisite: BIOL 101, 102, 103.
- BIOL 385 Plant Anatomy** **4 units**
 Microscopic anatomy of plant tissues, emphasizing origin and development. Three class hours, one three-hour laboratory per week.
 Prerequisite: BIOL 101, 102, 103.
- BIOL 387 Plant Pathology** **4 units**
 Cause, effect, and control of economically important diseases. Taxonomy and morphology of fungi. Enrollment limited to 15 students. Three class hours, one three-hour laboratory per week.
 Prerequisite: BIOL 101, 102, 103.
- BIOL 388 Introduction to Research** **2 units**
 Prerequisite: Enrollment in research curriculum or BIOL 101, 102; minimum grade point average of 2.5 overall and 3.0 in biology; consent of the instructor.
- BIOL 389 Biostatistics** **4 units**
 Statistical analysis of biological systems, including computer applications. Three class hours, one laboratory per week.
 Prerequisite: MATH 124 or consent of the instructor.
- BIOL 404 Cellular and Molecular Biology** **4 units**
 The living cell, its organoids, and their functions. Three class hours, one three-hour laboratory per week.
 Prerequisite: BIOL 101, 102, 103; CHEM 371.
- BIOL 405 Undergraduate Seminar** **½ unit per quarter**
 Recent developments in selected areas of biology. Registration at the beginning of the first quarter; credit granted on the completion of three quarters. May be repeated once for additional credit.
 Prerequisite: Junior standing in biology.
- BIOL 406 Introduction to Marine Biology** **4 units**
 Marine organisms, their adaptations and ecological relationships. Impact of man on the marine environment. Three class hours per week; laboratory or field trip on alternate weeks.
 Prerequisite: BIOL 101, 102, 103.
- BIOL 409 Invertebrate Biology** **4 units**
 Behavior, physiology, ecology, morphology, and systematics of invertebrates. Emphasis on morphology and systematics. Three class hours, one three-hour laboratory per week.
 Prerequisite: BIOL 101, 102, 103; or equivalent.
- BIOL 416 Tropical Plant Ecology** **4 units**
 Emphasis on environmental factors, structure, and life forms of plants in rain, monsoon, and savanna forests. Lectures, laboratory, fieldwork in a tropical area.
 Prerequisite: BIOL 377 or coursework in one or more plant taxa.
- BIOL 427 Human Ecology** **2 units**
 Human populations in relation to the environment.
- BIOL 444 Human Genetics** **3 units**
 Application of the principles of genetics to human biology. Loma Linda campus.
- BIOL 447 Genetics** **4 units**
 Heredity and variation as demonstrated by higher and lower organisms.
 Prerequisite: BIOL 404.

- BIOL 449 Population Biology** 4 units
Interactions within and between populations. Emphasis on factors producing spatial and temporal changes in populations. Four class hours per week.
Prerequisite: BIOL 101, 102, 103; recommended BIOL 389, 447; MATH 130.
- BIOL 458 Vertebrate Biology** 4 units
Systematics, behavior, ecology. Three class hours, one three-hour laboratory per week.
Prerequisite: BIOL 101, 102, 103.
- BIOL 464 Principles of Development** 4 units
Gametogenesis, fertilization, morphogenesis, differentiation, and regeneration illustrated in the sea urchin, amphibian, chick, and human. Three class hours, one three-hour laboratory per week.
Prerequisite: BIOL 447.
- BIOL 465 Ornithology** 4 units
Birds of North America: field identification, distribution, life histories, behavior, and ecology. Field study.
Prerequisite: BIOL 101, 102, 103.
- BIOL 469 Animal Behavior** 4 units
Behavioral mechanisms of animals and their role in survival. Lectures and projects.
Prerequisite: BIOL 101, 102, 103.
- BIOL 475 General Entomology** 4 units
Insect biology. Three class hours, one three-hour laboratory per week.
- BIOL 478 Plant Physiology** 4 units
Water relations, mineral nutrition, metabolism, photosynthesis, growth and flowering, and hormonal control. Three class hours, one three-hour laboratory per week.
Prerequisite: BIOL 101, 102, 103.
- BIOL 484 Mycology** 4 units
Morphology and physiology of fungi. Three class hours, one three-hour laboratory per week.
Prerequisite: BIOL 101, 102, 103.
- BIOL 485 Systematic Botany** 4 units
Classification of flowering plants. Three class hours, one three-hour laboratory per week.
Prerequisite: BIOL 101, 102, 103.
- BIOL 488 Paleobiology** 4 units
Principles of paleontology and study of the various groups of fossil organisms. Three class hours per week; Sunday field trips.
Prerequisite: BIOL 101, 102, 103.
- BIOL 489 Philosophy of Science** 4 units
The nature of scientific research and philosophies; evidence regarding the origins of living things. Does not apply toward a major or minor.
Prerequisite: BIOL 101, 102, 103.
- BIOL 495 Undergraduate Research** 1-4 units
Original investigation pursued under the direction of a staff member. May be repeated for additional credit.
Prerequisite: BIOL 188 or 388.
- BIOL 499 Directed Study** 1-4 units
Experimental or library study of a problem of restricted scope. Limited to biology majors and to students with special preparation and a minimum overall grade point average of 2.5.
Prerequisite: Consent of the chairman.

Graduate Consult Graduate School BULLETIN for details.

ANAT 544 Human Embryology 3 units

ANAT 549	Molecular Cytology and Topographical Chemistry	3 units
BIOL 515	Biogeography	4 units
BIOL 516	Readings in Biogeography	2 units
BIOL 518	Readings in Ecology	2 units
BIOL 519	Advanced General Ecology	4 units
BIOL 524	Advanced Invertebrate Biology	3 units
BIOL 536	Seminar in Animal Behavior	2 units
BIOL 538	Mammalogy	4 units
BIOL 544	Biosystematics and Speciation	5 units
BIOL 546	Advanced Studies in Genetics	2 units
BIOL 554	Philosophy of Creation	2 units
BIOL 555	Problems in Paleontology	4 units
BIOL 556	Paleobotany	2 units
BIOL 558	History and Philosophy of Biology	3 units
BIOM 581, 582, 583	Biophysical Systems Analysis	3, 3, 3 units
BIOL 584	Physiology and Development of Plants	4 units
BIOL 585	Advanced Studies in Plant Hormones	2 units
BIOL 604	College Biology Teaching	3-4 units
BIOL 605	Seminar in Biology	1 unit
BIOL 606	Special Problems in _____	1-4 units
BIOL 615	Research Techniques in Biology	1 unit
BIOL 694	Research	arranged
BIOL 695	Thesis	arranged
BIOL 696	Dissertation	arranged
ENVH 565	Introduction to Air Hygiene and Resources	3 units
ENVH 568	Water and Waterborne Wastes	3 units
ENVH 569	Environmental Health Laboratory	4 units
MICR 534	Microbial Physiology	4 units
MICR 535	Molecular Biology of Microorganisms	4 units
MICR 554	Bacteriophage Genetics	3 units
MICR 555	Microbial Genetics	3 units
MICR 556	Microbial Genetics Laboratory	2 units
MICR 564	Bacterial Virology	3 units
MICR 565	Animal Virology	4 units

MICR 566	Cell Culture	3 units
MICR 574	Arthropod Vectors of Infectious Agents	5 units
MICR 575	Arthropod Vectors Laboratory	1-2 units
MICR 576	Field Medical Entomology	3 units
MICR 585	Helminthology	4 units
PHSL 535	Comparative Physiology	5 units
PHSL 541, 542	Cell and Molecular Biology	4, 4 units
PHSL 596	Readings in Comparative Physiology	1 unit
PHSL 597	Readings in Circadian Rhythms	1-2 units
STAT 521	Biostatistics I	4 units
STAT 522	Biostatistics II	4 units
STAT 568	Data Analysis	2 units

DEPARTMENT OF
BUSINESS AND ECONOMICS

- Chairman WILFRED M. HILLOCK, Associate Professor of Business and Economics
M.B.A. Indiana University
- Faculty RALPH L. KOORENNY, Professor of Economics and Management (on leave)
PH.D. University of Colorado
- E. LEE BECKER, Associate Professor of Business and Economics
B.ACCT. Rider College
Certified Public Accountant, California
- ANTOINE JABBOUR, Associate Professor of Business and Economics
PH.D. Catholic University of America
- WILLIAM J. KEY, Associate Professor of Business and Economics
M.B.A. Washington State University
- DONALD J. BYRD, Assistant Professor of Business and Economics
M.A. University of Southern California
- ROBERT M. FORD, JR., Assistant Professor of Business and Economics
M.B.A. Andrews University
- Lecturers W. DAVID GURNEY, Lecturer in Business Law
J.D. Willamette University
- CALVIN J. HANSON, Lecturer in Insurance
B.S. Loma Linda University
- REUEL A. MINTON, Lecturer in Real Estate
A.A. Ventura City College

A major program in accounting, management, or food service management prepares a student for a career in church or government service, or in private business.

BACCALAUREATE MAJOR PROGRAMS

- Accounting A student majoring in accounting completes either of the following programs:
- Program A consists of the general requirements for the Bachelor of Arts degree (see *General Requirements*) and coursework in business and economics, including ACCT 201, 202, 203, 301, 302; DAPR 204; ECON 254, 255, 314 or 414, 324 or 424; BUAD 304 (3 units), 341, 355, 381, 382, 405, 454; 12 upper division units in accounting or DAPR 306. A cognate requirement is MATH 265.
- Program B consists of the general requirements for the Bachelor of Science degree (see *General Requirements*) and coursework in business and economics, including ACCT 201, 202, 203, 301, 302; DAPR 204; ECON 254, 255, 314 or 414, 324 or 424; BUAD 304 (3 units), 341, 342, 355, 381, 382, 405, 454; 20 upper division units in accounting or DAPR 306. Cognate requirements are MATH 265 and evidence of basic typewriting skills (high school or college coursework or waiver examination).

Management A student majoring in management completes either of the following programs:
 Program A consists of the general requirements for the Bachelor of Arts degree (see *General Requirements*) and coursework in business and economics, including ACCT 201, 202, 203; 314 or 301, 302; DAPR 204; ECON 254, 255, 314 or 414, 324 or 424; BUAD 304 (3 units), 341, 355, 356, 381, 382, 405, 414, 454; 8 upper division units from ACCT 354; DAPR 304 or 305, 306; BUAD 342, 365, 366, 374, 455, 456, 464, 499; SECR 324. A cognate requirement is MATH 265.

Program B consists of the general requirements for the Bachelor of Science degree (see *General Requirements*) and coursework in business and economics, including ACCT 201, 202, 203; 314 or 301, 302; DAPR 204; ECON 254, 255, 314, or 414, 324 or 424; BUAD 304 (3 units), 341, 342, 355, 356, 365, 366, 381, 382, 405, 414, 454; PSYC 488; 12 upper division units from ACCT 354; DAPR 304 or 305, 306; BUAD 342, 456, 464, 499; SECR 324. Cognate requirements are MATH 265 and evidence of basic typewriting skills (high school or college coursework or waiver examination).

Food service management A student majoring in food service management completes the general requirements for the Bachelor of Science degree and 59 units of coursework in accounting, economics, and management, including ACCT 201, 202, 203; BUAD 304; ECON 254, 255, 314 or 414, 324 or 424; and 36 units in foods and nutrition science, including FDNT 225, 314, 324, 416, 435, 479, 499. Cognate requirements are DAPR 204; MATH 265; PSYC 104.

Business education A program in business education is offered through the Department of Secretarial and Business Education.

MINOR SEQUENCES

The following minors in business are available with the consent of the department chairman:

Accounting, 28 units, including ACCT 201, 202, 203.

Management, 28 units, including ACCT 201, 202, 203; BUAD 355.

Economics, 28 units, including ECON 254, 255, 314, 324, 414, 424; BUAD 341.

Data Processing, 28 units, including DAPR 204, 304, 305, 306.

ACCOUNTING

Lower division ACCT 201, 202, 203 Principles of Accounting 4, 4, 4 units
 Modern accounting and analysis. Accounting for proprietorships, partnerships, and corporations. Business transactions and accounting analysis.
 Prerequisite: Fulfillment of the general studies requirements in computational skills.

Upper division	<p>ACCT 301, 302 Intermediate Accounting 4, 4 units Problems of valuation as related to assets, liabilities, and proprietorships. Accounting implications of corporate organizations; preparation and analysis of financial statements and reports. Prerequisite: ACCT 201, 202, 203.</p> <p>ACCT 314 Managerial Accounting 4 units Application of basic accounting knowledge to problems of financial administration. Statement analysis, cost control, cash and fund flows, long-range planning. Prerequisite: ACCT 201, 202, 203.</p> <p>ACCT 354 Federal Income Tax Accounting 4 units Provisions of federal income tax laws and regulations affecting the determination of net taxable income, with emphasis on preparation of individual returns. Prerequisite: ACCT 201, 202.</p> <p>ACCT 367 Cost Accounting 4 units Process and job-order cost accounting; further emphasis on standard costs, distribution costs, and flexible budgets. Prerequisite: ACCT 201, 202, 203.</p> <p>ACCT 404 Auditing Theory and Practice 4 units Procedures of the public accountant in verification of accounts and financial statements; preparation of audit working papers and audit opinions; analysis of auditing principles as applied in practice. Prerequisite: ACCT 301, 302.</p> <p>ACCT 414 Current Accounting Theory 4 units Concepts and standards found in current accounting literature; implementation of theory in practical applications. Prerequisite: ACCT 301.</p> <p>ACCT 464 Advanced Accounting 4 units Partnerships, consignments; branch and agency accounting and consolidations. Offered alternate years. Prerequisite: ACCT 301, 302.</p> <p>ACCT 465 Fund Accounting 4 units Theory and practice of the fund accounting concept as applied to government and not-for-profit organizations, including hospitals, colleges, and universities. Special emphasis on fund accounting applications in denominational institutions and conference-related organizations. Offered alternate years. Prerequisite: ACCT 301, 302.</p> <p>ACCT 474 CPA Review 4 units Preparation for the CPA examinations. Prerequisite: ACCT 301, 302, 404.</p> <p>ACCT 499 Directed Study 1-4 units Self-directed research for varying credit. Limited to students majoring in the department. Prerequisite: Consent of the department chairman.</p>
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MANAGEMENT

Upper division	<p>BUAD 304 Business Seminar 1/2 unit per quarter Enrichment program for students interested in business: lectures and symposiums related to business and its role in society. May be repeated for additional credit.</p> <p>BUAD 341 Descriptive Business Statistics 4 units Data collection, presentation, and analysis; measure of central tendency, dispersion, skewness and kurtosis, simple linear regression and correlation, analysis of time series; emphasis on the integration of results. Prerequisite: MATH 265.</p>
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- BUAD 342 Quantitative Analysis for Business Decisions** 4 units
 Fundamentals of analytic geometry and calculus; differential calculus, integral calculus, and selected applications of calculus; functions and managerial planning, and their use in economics and business as applicable.
 Prerequisite: MATH 265; BUAD 341.
- BUAD 355 Principles of Management** 4 units
 The process approach used to decide between alternatives. Analysis and evaluation of cases conducive to development of a personal philosophy of management, in preparation for effective performance as a manager or a subordinate.
- BUAD 356 Personnel Management** 4 units
 Theory and practice of the management of people at work; organizational behavior concepts and points of view. Preparation both for managing people and staffing a personnel office.
- BUAD 365 Production Management** 4 units
 Production management in manufacturing, service, and distributive firms. Operations: processes, analyses, and decisions. Coordination of inventories, operations, and quality control.
 Prerequisite: BUAD 341.
- BUAD 366 Purchasing and Inventory Control** 4 units
 Buying practices of institutional and industrial operations. Interrelationships of purchasing, quality control, receiving, and inventory control. Emphasis on quality, service, and price. Legal aspects of purchasing. Management patterns relating to proper maintenance of inventory records; materials handling and storage.
- BUAD 374 Principles and Practices of Insurance** 4 units
 Risk and insurance; applications to business management and personal affairs; concepts and methods of handling risk; insurance carriers, contracts, underwriting; loss prevention and settlement; government insurance programs; economic functions of insurance.
- BUAD 381, 382 Business Law** 4, 4 units
 Meaning and administration of law; torts, contracts, and governmental regulation. Case studies in law of sales, negotiable instruments, and agency; based on the Uniform Commercial Code.
- BUAD 405 Principles of Marketing** 4 units
 Institutions, functions, policies, and economics of the distribution of goods from producers to consumers.
- BUAD 414 Human Relations in Business** 4 units
 Concepts of human behavior as they affect the individual on the job. Employer and supervisory relations pertaining to leadership, employee morale, motivation, and communications. Skills emphasized include expression, listening, participation, self-awareness, and group dynamics.
 Prerequisite: BUAD 355.
- BUAD 424 Business Internship** 12 units
 A twelve-week structured and supervised work experience. Taken concurrently with MGNT 499 (4 units) or ACCT 499 (4 units). Limited to juniors and seniors majoring in management or accounting.
- BUAD 454 Financial Management** 4 units
 Financial problems of business organization; sources of capital; principles of borrowing; relationship of finance to the business cycle; distribution of earnings; reorganization.
 Prerequisite: ACCT 201, 202, 203.
- BUAD 455 Real Estate Principles** 4 units
 Real estate fundamentals, including ownership, appraisal law, practices, financing, values, transfers, trends, regulations, and economic effects. Principles useful to consumer or investor.

BUAD 456 Investment Management **4 units**
Stock and bond markets from the viewpoint of investor or investment manager. Emphasis on security analysis, selection, timing, and management of investment portfolios.

BUAD 464 Safety Management **4 units**
Accident prevention and safety programs as they relate to the Occupational Safety and Health Association (OSHA) and insurance company recommendations. Emphasis on safety as it relates to the area of institutional and industrial environments. Special emphasis on the role of California OSHA. Offered alternate years.

BUAD 489 Business Policy and Ethics **4 units**
Analysis of comprehensive case problems dealing with building and maintaining meaningful organizational policies in the context of religious, social, and ethical considerations. Does not apply toward a major or minor.
Prerequisite: BUAD 355 or consent of the instructor.

BUAD 499 Directed Study **1-4 units**
Self-directed research for varying credit. Limited to students majoring in the department.
Prerequisite: Consent of the department chairman.

ECONOMICS

Lower division **ECON 254 Principles of Macroeconomics** **4 units**
The economy; determinants of the general price level, national output, and employment.
Prerequisite: Fulfillment of the general studies requirement in computational skills.

ECON 255 Principles of Microeconomics **4 units**
Interrelationships of individual business firms, industries, consumers, laborers, and other factors of production in modern economy.
Prerequisite: Fulfillment of the general studies requirement in computational skills.

Upper division **ECON 314 Intermediate Macroeconomic Analysis** **4 units**
Problems of unemployment, economic instability, inflation, economic growth, and economic policies; national income determination, theories of interest and money, business cycles, and national economic growth. Emphasis on the impact of fiscal and monetary policies on income and employment, prices, investments, and economic growth. Offered alternate years.
Prerequisite: ECON 254, 255; MATH 265; BUAD 341.

ECON 324 Intermediate Microeconomic Analysis **4 units**
Theories of the firm, including production, pricing, and resource allocation. Development of demand theory through the theory of utility and modern theories of economic behaviors. Imperfections in the market mechanism and their effects on the market system. Offered alternate years.
Prerequisite: ECON 254, 255; MATH 265; BUAD 341.

ECON 414 Money, Banking, and Credit **4 units**
The banking system of the United States and its functions. The relationship of banking, money, and credit to the economy. Offered alternate years.
Prerequisite: ECON 254, 255; MATH 265; BUAD 341.

ECON 424 Government and Business **4 units**
Industrial organization: structure and behavior of industries; causes of concentration and its effect on competition and prices. Public policy in regard to structure and behavior, especially antitrust policy. Offered alternate years.
Prerequisite: ECON 254, 255; MATH 265; BUAD 341.

DATA PROCESSING

Lower division	DAPR 204 Computer Concepts and Applications Conceptual basis of computer operations; logic; applications to business problems; related and peripheral equipment. Prerequisite: Fulfillment of the general studies requirement in computational skills.	4 units
Upper division	DAPR 304 PL/1 Programing Review of basic computer concepts; introduction to programing the IBM 370 computer using PL/1. Hands-on technique in laboratory sessions with an IBM 2741 terminal. Offered alternate years. Prerequisite: DAPR 204 or equivalent.	4 units
	DAPR 305 Introduction to Cobol Programing the IBM 370 computer using Cobol. Offered alternate years. Prerequisite: DAPR 204 or equivalent.	4 units
	DAPR 306 Systems Analysis and Design Approaches to the analysis and solution of business problems through the use and development of computer information systems. Prerequisite: MATH 265, DAPR 304 or 305.	4 units

BUSINESS

Courses in this section are not open to students majoring in accounting or management.

Lower division	BUAD 325 Money Management for Young Moderns Comprehensive financial problems and opportunities in society today. Realistic case problems, with direct applicability to personal financial planning.	4 units
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DEPARTMENT OF
CHEMISTRY

Chairman	WILLIAM M. ALLEN, Associate Professor of Chemistry PH.D. University of Maryland
Faculty	LAURENCE W. BOTIMER, Professor of Chemistry PH.D. University of Maryland
	IVAN G. HOLMES, Professor of Chemistry PH.D. Oregon State University
	H. RAYMOND SHELDEN, Emeritus Professor of Chemistry M.S. University of Colorado
	LELAND Y. WILSON, Professor of Chemistry PH.D. University of Nebraska
	H. RAYMOND SHELDEN II, Associate Professor of Chemistry PH.D. University of California, Irvine
	WAYNE E. ZAUGG, Associate Professor of Chemistry PH.D. University of Washington
	RONALD A. GALAWAY, Assistant Professor of Chemistry PH.D. University of California, Riverside
	CLYDE L. WEBSTER, Assistant Professor of Chemistry PH.D. Colorado State University, Fort Collins
	Collaborating faculty
	GEORGE M. LESSARD, Assistant Professor of Biochemistry, School of Medicine PH.D. University of California, Riverside
	E. CLIFFORD HERRMANN, Assistant Professor of Biochemistry, School of Medicine PH.D. Virginia Polytechnic Institute and State University

The Department of Chemistry offers majors in chemistry, biochemistry, and physical science to prepare students for careers in these areas as well as the health sciences and teaching.

Graduate programs Programs in biochemistry leading to the Master of Science and Doctor of Philosophy degrees are described in the BULLETIN of the Graduate School.

Preparation for teaching A student preparing to teach chemistry at the secondary level should plan to qualify for teaching credentials, and during his freshman or sophomore year he should consult the credentials adviser in the School of Education for detailed information concerning requirements. A special program leading to these credentials is outlined below.

 A program leading to the master's degree in the teaching of chemistry is described in the BULLETIN of the School of Education.

BACCALAUREATE MAJOR PROGRAMS

Core curriculum All students majoring in chemistry start with a common *core curriculum* which is as follows: CHEM 111, 112, 113, 224, 351, 352, 371, 372. Cognate requirements are MATH 130 (or 131, 132) and PHYS 211, 212.

- Chemistry A student majoring in chemistry completes either of the following programs:
 Program A consists of the general requirements for the Bachelor of Arts degree (see *General Requirements*) and 59 units of coursework in chemistry, including the *core curriculum* and CHEM 353, 373, 421, 422. A cognate requirement is PHYS 213 or 214 or 215.
 Program B, designed especially for students preparing for graduate studies, consists of the general requirements for the Bachelor of Science degree (see *General Requirements*) and 67 units of coursework in chemistry, including the *core curriculum* and CHEM 353, 373, 421, 422, and 499. Cognate requirements are PHYS 213 or 214 or 215 and MATH 133.
- Biochemistry A student majoring in biochemistry completes either of the following programs:
 Program A consists of the general requirements for the Bachelor of Arts degree (see *General Requirements*) and 53 units of coursework in chemistry, including the *core curriculum* and CHEM 481, 482, 483. Cognate requirements are BIOL 101, 102, 103.
 Program B consists of the general requirements for the Bachelor of Science degree (see *General Requirements*) and 61 units of coursework in chemistry, including the *core curriculum* and CHEM 421, 481, 482, 483. Cognate requirements are BIOL 101, 102, 103.
- Physical science The physical science program is designed to meet the state requirements for teaching credentials in the physical sciences with emphasis in chemistry. A student majoring in physical science completes the general requirements for a Bachelor of Science degree (see *General Requirements*) and 67 units of coursework in chemistry and physics, including the *core curriculum* and CHEM 384, 411 or 421; ESCI 205; PHYS 214, 215, 304. Cognate requirements are BIOL 101, 102, 103; CHEM 204; SCNC 404. For the teaching credential, the following education courses are also required: EDCI 204, 414, 430, 457; EDFO 305.

MINOR SEQUENCES

The following minors are available:

Chemistry, 31 units, including CHEM 111, 112, 113, 371, 372.

Biochemistry, 33 units, including CHEM 111, 112, 113, 371, 372, 481, 482, 483.

CHEMISTRY

- Lower division **CHEM 005 Pre-General Chemistry** **4 units**
 A specially structured course to meet the needs of students who have not fulfilled the prerequisites for general chemistry.
 CHEM 101, 102, and 103 are designed for liberal arts students and those preparing to enter nursing and other allied health programs. Credit does not apply toward a major program in chemistry or biochemistry or toward preprofessional require-

ments for dentistry, medicine, or medical technology. Three class periods, one three-hour laboratory per week (each).

CHEM 101 Introductory Inorganic Chemistry 4 units

CHEM 102 Introductory Organic Chemistry 4 units
Prerequisite: CHEM 101 or equivalent.

CHEM 103 Introductory Biochemistry 4 units
Prerequisite: CHEM 102 or equivalent.

CHEM 111, 112, 113 General Chemistry 5, 5, 5 units
Structure and behavior of inorganic matter and a mathematical treatment of chemical systems. Laboratory work for two quarters in the principles and techniques of quantitative analysis; qualitative analysis the third quarter. Four class periods, one three-hour laboratory per week.
Prerequisite: High school chemistry or physics or CHEM 005; general requirement in computation skills (see *General Requirements*).

CHEM 204 Laboratory Glassblowing 2 units
Construction of laboratory apparatus. Advanced projects for students who, on the recommendation of the instructor, take a second quarter for additional credit. Does not apply toward a major in the department.

CHEM 224 Analytical Chemistry 4 units
Certain chemical systems emphasized for their application to analytical practices. Laboratory inclusive of a limited amount of instrumentation in addition to basic quantitative techniques. Two class periods, two three-hour laboratories per week.
Prerequisite: CHEM 111, 112, 113.

Upper division CHEM 351, 352, 353 Physical Chemistry 4, 4, 4 units
Quantitative relationships involving the behavior and structure of matter. Three class periods, one three-hour laboratory per week.
Prerequisite: CHEM 111, 112, 113; MATH 130; PHYS 211, 212.

CHEM 371, 372 Organic Chemistry 4, 4 units
Aliphatic and aromatic compounds integrated in a study of the chemical and physical properties of organic compounds. Three class periods, one three-hour laboratory per week.
Prerequisite: CHEM 111, 112, 113.

CHEM 373 Organic Chemistry 4 units
Survey of broad mechanistic concepts as a continuation of and complement to CHEM 345, 346. Laboratory combines qualitative and structural analysis and the use of both solution and instrumental methods. Two class periods, two three-hour laboratories per week.
Prerequisite: CHEM 371, 372.

CHEM 384 Bio-organic Chemistry 4 units
Chemical components of biological systems. Does not apply toward a major in biochemistry.
Prerequisite: CHEM 371, 372; BIOL 101, 102, 103.

CHEM 404 Chemistry Seminar 1/2 unit per quarter
May be repeated for up to 2 units of credit.

CHEM 411, 412 Inorganic Chemistry 4, 4 units
Chemical families; modern bonding and reaction mechanism theory.
Prerequisite: Consent of the instructor.

CHEM 421 Instrumental Methods I 4 units
Basic theory, instrument design and applications in spectrophotometry, microscopy, and chromatography. Two class periods, two three-hour laboratories per week.
Prerequisite: CHEM 224 or equivalent.

	CHEM 422 Instrumental Methods II	4 units
	Electronics, electrochemical and radiochemical methods. Two class periods, two three-hour laboratories per week. Prerequisite: CHEM 421.	
	CHEM 471, 472 Advanced Organic Chemistry	4, 4 units
	Topics may include molecular orbital theory, mechanisms, organic synthesis, stereochemistry, applied spectroscopy, or natural products. Prerequisite: CHEM 371, 372.	
	CHEM 481 Biochemistry	4 units
	Components of biological systems: proteins, enzymes, carbohydrates, nucleic acids. Prerequisite: CHEM 371, 372.	
	CHEM 482 Biochemistry	4 units
	Metabolism of carbohydrates, lipids, proteins, and nucleic acids. Prerequisite: CHEM 481.	
	CHEM 483 Biochemistry	2 units
	Research techniques. One open-ended laboratory per week. Prerequisite: CHEM 481.	
	CHEM 489 Science and the Christian Faith	4 units
	Does not apply toward a major or minor.	
	CHEM 498 Directed Research	1-4 units
	CHEM 499 Directed Study	1-4 units
Graduate	CHEM 511, 512 Advanced Inorganic Chemistry	4, 4 units
	Prerequisite: CHEM 351, 352, 353, and consent of the instructor.	
	CHEM 571, 572 Advanced Topics in Organic Chemistry	4, 4 units
	Prerequisite: CHEM 373 and consent of the instructor.	
	CHEM 581, 582 Advanced Topics in Biochemistry	4, 4 units
	Prerequisite: CHEM 371, 372, and consent of the instructor.	
	CHEM 699 Directed Research	1-4 units
 EARTH SCIENCE		
	ESCI 334 Earth Science Fieldwork	1-4 units
	ESCI 431, 432 Geochemistry	4, 4 units
	ESCI 531, 532 Advanced Topics in Geochemistry	4, 4 units

DEPARTMENT OF
COMMUNICATION

- Chairman ROBERTA J. MOORE, Professor of Journalism and Public Relations
PH.D. Syracuse University
- Faculty BRIAN J. JACQUES, Professor of Speech
PH.D. University of Michigan
- W. FLETCHER TARR, Professor of Speech and Speech Pathology
PH.D. University of Denver
- E. EVELYN BRITT, Associate Professor of Speech Pathology and Audiology
SC.D. Johns Hopkins University
- JANICE D. DUNN, Assistant Professor of Speech Pathology
M.A. University of Houston
- JACK L. HARTLEY, Assistant Professor of Speech and Speech Pathology
M.A. University of Southern California
- JEAN B. LOWRY, Assistant Professor of Speech Pathology
PH.D. Kent State University
- ROBERT S. STREETER, Assistant Professor of Speech Pathology
M.A. California State College, Stanislaus
- STEPHEN M. BOTTROFF, Instructor in Speech and Drama
B.A. Walla Walla College
- Lecturers MARGARET J. BRAILSFORD, Lecturer in Speech
Licentiate Trinity College (London)
- Clinical staff MELVIN S. COHEN
PH.D. University of Utah
- RODNEY R. ROWLEY
PH.D. University of Oklahoma

Objectives The Department of Communication teachers recognize that intercommunication, both on the personal level and through the mass media, is the foundation of a democratic society. At the center of that society is the individual, with his own understanding of his world and his interaction with and molding of his environment.

The Department of Communication emphasizes the importance of a liberal arts education with a firmly grounded knowledge of the communication process.

Graduate programs Programs leading to the Master of Science with a major in speech pathology or audiology are described in the BULLETIN of the Graduate School.

Preparation for teaching A student preparing to teach communication at the secondary level should plan to qualify for teaching credentials, and during his freshman or sophomore year should consult the credentials adviser in the School of Education for detailed information concerning requirements.

Internships Internships in journalism, public relations, and radio and television are available to qualified students.

BACCALAUREATE MAJOR PROGRAMS

- Speech communication A student majoring in speech communication completes the general requirements for the Bachelor of Arts degree (see *General Requirements*) and 52 units of coursework in communication selected in consultation with the department adviser, including CMME 226; SPCH 216, 326, 328, 424 or 488. Cognate requirements are 8 units selected from ART 111, 112, 244; PHTO 224; PSYC 344, 474, 544; SOCI 307.
- Mass media A student majoring in mass media completes the general requirements for the Bachelor of Arts degree (see *General Requirements*) and 52 units of coursework in communication selected in consultation with the department adviser, including CMME 226. Cognate requirements are 12 units from ART 111, 112, 224; PHTO 224, 324; MATH 251, 252; SOCI 304; or other courses approved by the department adviser. No later than the beginning of the junior year the student must demonstrate proficiency in typing.
- Speech pathology and audiology A student majoring in speech pathology and audiology completes either of the following programs:
- Program A consists of the general requirements for the Bachelor of Arts degree (see *General Requirements*) and 52 units of coursework in communication, including SPPA 277, 284, 324, 334, 354, 376; SPCH 315; remaining units selected in consultation with the department adviser from SPCH 216, 326, 417; SPPA 424, 434, 435, 444, 454, 457, 464, 477, 485, 486, 487, 488. Cognate requirements are BIOL 111, PSYC 356, or EDCE 404 in the School of Education.
- Program B consists of the general requirements for the Bachelor of Science degree (see *General Requirements*) and 52 units of coursework in communication, including SPPA 277, 284, 324, 334, 354, 376; SPCH 315; remaining units selected in consultation with the department adviser from SPCH 216, 326, 417; SPPA 424, 434, 435, 444, 454, 457, 464, 477, 485, 486, 487, 488. Cognate requirements are BIOL 111, MATH 251, PSYC 356 or EDCE 404 in the School of Education; 12 units selected in consultation with the department adviser from ANTH, BIOL, CFSC, MATH, PSYC, EDCI or EDFO in the School of Education.
- A student preparing for a career in California schools should plan to qualify for the Clinician Credential for Speech, Language, and Hearing Services. Requirements for the Clinician Credential include the completion of a fifth year. The student should consult the department adviser regarding specific course and practicum requirements.

MINOR SEQUENCES

The following minors in communication are available:

Speech communication, 28 units, including SPCH 104, 216, 328, 417; RELP 361 or 362 may apply toward this sequence for students majoring in religion.

Mass media, 28 units, including CMME 226.

Speech pathology and audiology, 28 units, including SPPA 277, 284, 376; SPCH 315; 12 units selected from SPPA 324, 334, 354, 387, 444, 454, 464, 477, 486. A cognate requirement is BIOL 111.

SPEECH COMMUNICATION

Lower division	SPCH 104 Fundamentals of Speech 4 units
	Oral communication of ideas to others; self-appraisal; evaluation of the speech of others. Does not apply toward any major in communication.
	SPCH 204 Oral Interpretation 4 units
	Theory and practice of oral communication of poetry, prose, drama; contributing to an understanding and appreciation of literature.
	SPCH 216 The Speaking Voice 4 units
	Study and development of vocal habits and skills which produce communicative speech, through voice analysis, appropriate exercises, and interpretative readings.
Upper division	SPCH 304 Advanced Oral Interpretation 4 units
	Giving oral effectiveness to great ideas from memorized readings or through dramatic form. Secular and sacred literature. Prerequisite: Consent of the instructor.
	SPCH 305 Projects in Interpretation 1-4 units
	Individual development in dramatic form and staging techniques. Prerequisite: Consent of the instructor.
	SPCH 315 Transcription Phonetics 3 units
	Speech sounds as elements of language; application to understanding and speaking languages. Emphasis on the International Phonetic Alphabet and its application.
	SPCH 325 Oral Reading of the Bible 4 units
	Primarily for the ministerial student wishing to develop ability in effective, meaningful oral communication of Scripture.
	SPCH 326 Semantics 4 units
	Functions of language in a cultural context; ways in which meaning is derived from symbols, words, and actions.
SPCH 328 Persuasion 4 units	
The psychology of persuasion. Non-Aristotelian concepts derived from communication theory research, psychology, and modern behavioral studies. Practice in oral and written forms.	
SPCH 329 Advanced Public Address 4 units	
Practical experience in platform speaking. Emphasis on organization, logic, and persuasive concepts. Analyses and critiques.	
SPCH 404 Practicum in Play Direction 1-4 units	
Skits, readings, and dramatic productions. Prerequisite: Consent of the instructor.	
SPCH 417 Discussion and Argumentation 4 units	
Forces contributing to the productivity and cohesiveness of groups; nature of group leadership and organization.	
SPCH 424 Classical Rhetorical Theory 4 units	
Rhetorical concepts in the classical world, with emphasis on Plato, Aristotle, Cicero, and Quintilian in relation to modern rhetorical theory. Offered alternate years.	

COMMUNICATION MEDIA

Lower division	CMME 226 Mass Media	4 units
	Print and broadcast media and their relationship to today's world.	
	CMME 227, 228 Newswriting	3, 3 units
	Gathering news and writing news stories; assignments such as a beginning reporter encounters in his first newspaper job.	
	CMME 234 Photojournalism	2 units
	Pictures to give graphic impact to news and feature stories. Processing and editing of pictures taken by the student. May be repeated once for additional credit.	
	CMME 244 Narrative Writing	3 units
	Writing short stories; analyzing short narratives in current periodicals to see how successful writers handle their material.	
	CMME 254 Principles of Broadcasting	4 units
	Broadcast media. Function, structure, and physical operation of the radio station.	
	CMME 255 Fundamentals of Cinematography	2-4 units
	Personal cinematic expression. Practical experience in various phases of film making. Individual projects.	
Upper division	CMME 327 Multi-Media Programing Techniques	4 units
	Planning and creation of multi-media productions. Tailored to students' special interests.	
	CMME 329 Advanced Reporting and News Editing	3 units
	Reporting public affairs; selecting and preparing news stories for publication; writing headlines. Offered alternate years. Prerequisite: CMME 227, 228.	
	CMME 335 Seminar in Religious Journalism	4 units
	History of religious journalism in America; current practices and problems. Individual research projects in church news coverage and religious magazines.	
	CMME 336 Religious Writing	3 units
	Techniques useful in various types of religious articles. Analysis of markets for freelance writing. Offered alternate years.	
	CMME 337, 338 Magazine Article Writing	3, 3 units
	Fact writing: gathering material, analyzing the magazine market, writing, preparing manuscripts for publication. Offered alternate years.	
CMME 344 Workshop in School Publications	4 units	
Writing and editing. Designed for persons involved in production of school newspapers, year-books, etc. Does not apply toward a major in journalism and public relations. Offered alternate years.		
CMME 345 Institutional Public Relations	4 units	
Origin, objectives, and contemporary practice of institutional public relations as a social process, with emphasis on hospital public relations. Offered alternate years.		
CMME 346 Public Relations	4 units	
Use of mass media in public relations; planning and developing public relations programs involving both print and broadcast media. Offered alternate years.		
CMME 354 Station Management and Programing Techniques	4 units	
Radio station operation emphasizing the technical aspects of programing. Offered alternate years.		

- CMME 355 Creative Film Making** 4 units
Cinematic elements; production techniques; equipment; audience evaluations; idea development from treatment to editing. Experience in communicating through film. Individual projects. Offered alternate years.
Prerequisite: Consent of the instructor.
- CMME 365 Script Writing** 4 units
Techniques involved in writing scripts and developing musical accompaniments to film and videotape recording. Principles of visual and sound synchronization. Offered alternate years.
- CMME 427 Newspaper Makeup and Production** 4 units
Various styles of makeup; production procedures. Practical experience; field trips. Offered alternate years.
Prerequisite: CMME 227, 228, 3289.
- CMME 434, 435 Magazine Editing** 3, 3 units
Development of editorial formulas; selection of articles and illustrations; makeup. Term project: in CMME 434, an analysis and restyling of an existing magazine; in CMME 435, the planning of a news magazine. Offered alternate years.
- CMME 436 Seminar in Magazine Journalism** 4 units
Development of magazines in America; current editorial practices. Individual research. Offered alternate years.
- CMME 445 Internship in Journalism and Public Relations** 1-12 units
On-the-job experience arranged and supervised for advanced students.
- CMME 454 Practicum in Radio and Television** 4 units
Production of various types of broadcasting, with on-the-air experience. Offered alternate years.
- CMME 455 Documentary Film Production Techniques** 4 units
Analysis of visual forms, composition, lighting, special effects. Growth, implication, and use of the nonfiction film in public service programming, education, industry, and church, with emphasis on creativity and aesthetic excellence. Individual projects. Laboratory. Offered alternate years.
Prerequisite: CMME 355.

SPEECH PATHOLOGY AND AUDIOLOGY

The student must make formal application to receive consent of the supervisor and the department to enter SPPA 457 and SPPA 487. In considering his application the department will evaluate his academic performance and professional goals.

- Lower division **SPPA 277 Development of Speech and Language** 4 units
Normal speech and language; physiological and environmental factors; genetics of language.
- SPPA 284 Introduction to Speech Pathology and Audiology** 3 units
Major types of disorders; etiology and treatment. A survey course for students majoring in speech pathology and audiology, prospective teachers, and others who may encounter speech disorders in their professions. Observation and participation.
- Upper division **SPPA 324 Language Disorders of Children** 4 units
Impairments of language development in children. Assessment, program planning, and methods of intervention. Observation and participation.
Prerequisite: SPPA 277.

- SPPA 334 Articulation Disorders** **4 units**
 Definition, classification, etiology, diagnosis, and treatment of articulation disorders. Introduction to clinical procedures. Observation and participation.
 Prerequisite: SPCH 315
- SPPA 354 Hearing Problems and Basic Audiometry** **4 units**
 Anatomy and physiology of the auditory mechanism; the nature of the acoustic stimulus; disorders of the ear; problems of the hard-of-hearing. Pure-tone audiometry. Applicable toward California audiometric certification.
- SPPA 376 Speech and Hearing Science** **5 units**
 Acoustics, anatomy and physiology of auditory-vocal communicative processes.
 Prerequisite: BIOL 111.
- SPPA 387 Observation and Participation** **1 unit**
 Attendance at scheduled sessions of a client throughout the quarter to observe clinical management of the communicatively handicapped and to participate as an assistant to the clinician. Limited supervised clinical practice. May be repeated once for additional credit.
- SPPA 424 Adult Language Pathology** **4 units**
 Impairments of language and speech related to organic neuropathology. Observation and participation. Offered alternate years.
 Prerequisite: SPPA 376.
- SPPA 434 Rhythm and Fluency Disorders of Speech** **4 units**
 Stuttering and other disorders: characteristics, theories of etiology, and principles of management. Observation and participation. Offered alternate years.
- SPPA 435 Phonatory Disorders** **4 units**
 Definition, classification, etiology, diagnosis, and treatment of voice disorders. Pitch, intensity, quality and resonance, and laryngeal voicing. Observation and participation. Offered alternate years.
 Prerequisite: SPPA 376.
- SPPA 444 Organic Speech Disorders** **4 units**
 Classification, cause, and manifestations: cerebral palsied, cleft palate, and other oral-facial anomalies; dental malocclusion; speech of the hard-of-hearing. Observation and participation. Offered alternate years.
 Prerequisite: SPPA 376.
- SPPA 454 Audiometry** **4 units**
 Objectives and uses of hearing tests for diagnostic and rehabilitative purposes. Techniques for administering auditory tests and for interpreting their results, with emphasis on pure-tone audiometry. Applies toward California audiometric certification.
- SPPA 457 Clinical Practice in Audiology** **1-4 units**
 Supervised experience in diagnosis and management of hearing impairment. Thirty clock hours of clinical practice required for each quarter unit of credit. Maximum of 5 units in CMDS 487, 488, 497 apply toward a major in speech pathology and audiology.
 Prerequisite: SPPA 354, 454 (may be concurrent); consent of the supervisor.
- SPPA 464 Aural Rehabilitation** **4 units**
 Approaches to achieving optimal functioning with hearing impairment; auditory training, speech reading, amplification, voice conservation, language development and improvement, and counseling.
 Prerequisite: SPPA 354, 454.
- SPPA 475 Acoustic and Physiologic Phonetics** **4 units**
 Lecture, discussion, and demonstration of speech-sound pattern production and analysis.
 Prerequisite or concurrent registration: SPCH 315; SPPA 376.
- SPPA 477 Psycholinguistics** **4 units**
 Mental processes underlying the acquisition and use of language; structure and meaning of language; perception and cognition.
 Prerequisite: SPPA 277.

	SPPA 485	Procedures and Materials in Speech and Language Pathology	3 units
		Role of the specialist in education; techniques and procedures for speech and hearing programs in elementary and secondary schools; relation of speech and hearing services to the total educational program. Observation and participation.	
		Prerequisite: SPPA 324, 334.	
	SPPA 486	Diagnostic Methods in Speech and Language Pathology	3 units
		Purpose for assessment; procedures employed in describing and diagnosing language and speech impairments.	
		Prerequisite: PSYC 356 or EDCE 404 in the School of Education.	
	SPPA 487	Clinical Practice in Speech and Language Pathology	1-4 units
		Supervised practice in diagnosis and therapy. Thirty clock hours required for each unit of credit. Maximum of 5 units in SPPA 487, 488, 497 apply toward a major in speech pathology and audiology.	
		Prerequisite: SPPA 324 or 334; consent of the supervisor.	
	SPPA 488	Directed Teaching in Speech and Language Pathology	8-12 units
		Supervised teaching on the elementary and/or secondary level. Twenty-two clock hours required for each unit of credit. Maximum of 5 units in SPPA 487, 488, 497 apply toward a major in speech pathology and audiology.	
		Prerequisite: SPPA 334, 424, 434, 435, 444, 485, 486, 487; completion of 120 hours of supervised clinical practice; consent of the supervisor.	
	SPPA 499	Direct Study	2-4 units
		Independent study in consultation with the adviser. For advanced students.	
Graduate	SPPA 524	Emergent Language Pathologies	3 units
	SPPA 525	Communication Training in Multiply Impaired Childhood Language Disability, Advanced	3 units
	SPPA 544	Cleft Palate	3 units
	SPPA 554	Advanced Audiological Assessment	4 units
	SPPA 555	Middle Ear Analysis	3 units
	SPPA 556	Cochlear-Vestibular Analysis	3 units
	SPPA 557	Central Auditory Analysis	3 units
	SPPA 558	Pediatric Audiology	3 units
	SPPA 564	Auditory Habilitation and Hearing Aids	4 units
	SPPA 578	Psychoacoustics and Instrumentation	4 units
	SPPA 585	Professional Aspects of Speech Pathology and Audiology	3 units
	SPPA 586	Diagnostics in Speech and Language Pathology, Advanced	3 units
	SPPA 587	Externship in Speech/Language Pathology	1-4 units
	SPPA 589	Externship in Audiology	3 units
	SPPA 624	Seminar in Language Pathology	3 units
	SPPA 654	Seminar in Audiology	3 units

SPPA 664	Seminar in Habilitative Audiology	3 units
SPPA 684	Seminar in Speech and Language Pathologies	3 units
SPPA 694	Research	2-6 units
SPPA 695	Thesis	3-6 units
SPPA 699	Directed Study	Arranged

COMMUNICATION, GENERAL

Lower division	COMM 299 Individual Instruction	1-4 units
	To improve proficiency. May be repeated for additional credit to a maximum of 4 units. Prerequisite: Consent of the instructor.	
Upper division	COMM 488 Theory and Ethics of Communication	4 units
	Modern developments and experimentation in communication theory. Offered alternate years.	
	COMM 489 Christian Communication	4 units
	Message of Christianity as the medium for closing the communications gap between man and God. Philosophies of communication. Does not apply toward a major or minor.	
	COMM 499 Directed Study	2-4 units
	Independent study in consultation with the adviser. For advanced students.	

DEPARTMENT OF
CONSUMER RELATED SCIENCES

- Chairman** MARY P. BYERS, Professor of Consumer Related Sciences
M.S. Columbia University
- Faculty** YVONNE P. SONNELAND, Associate Professor of Consumer Related Sciences
M.H.E.C. Oregon State University
- DINAH S. BAKER, Assistant Professor of Consumer Related Sciences
M.S. Oregon State University
- JUDY E. OSBORNE, Assistant Professor of Consumer Related Sciences
M.A.T. Andrews University
- PAUL W. ROESEL, Assistant Professor of Consumer Related Sciences
M.S. California State University, San Jose
- KATHLEEN M. RUF, Assistant Professor of Consumer Related Sciences
P.H.D. University of Wisconsin
- Collaborating faculty** MARILYN M. BEACH, Instructor in Consumer Related Sciences
M.A. Loma Linda University
- KATHLEEN K. ZOLBER, Professor of Nutrition, School of Health
P.H.D. University of Wisconsin
- RUBY S. HAYASAKA, Clinical Instructor in Dietetics, School of Allied Health Professions
M.S. Loma Linda University
- Lecturers** PAUL S. DAMAZO, Lecturer in Food Service Administration
M.S. Florida State University
- BONNITA M. FARMER, Lecturer in Textiles
M.S. University of Illinois
- BRENDA B. FOCHT, Lecturer in Creative Arts
M.S. Iowa State University
M.A. University of California, Riverside
- R. ELOISE MURDOCH, Lecturer in Interior Decorating
B.S. Pacific Union College
- GAIL T. RICE, Lecturer in Family Health
M.A. Andrews University
- Staff** EDITH M. RHYNUS, Assistant Clinical Instructor in Consumer Related Sciences

Objectives The objectives of the Department of Consumer Related Sciences are to provide specialized instruction as preparation for professional careers and to emphasize the paramount interests and well-being of the individual, the consumer, and the family.

Preparation for teaching A student preparing to teach home economics at the secondary level should plan to qualify for teaching credentials and during his freshman or sophomore year should consult the credentials adviser in the School of Education for detailed information concerning requirements.

A program leading to the Master of Arts degree in the teaching of home economics is described in the BULLETIN of the School of Education.

BACCALAUREATE MAJOR PROGRAMS

- Child development** A student majoring in child development completes the general requirements for the Bachelor of Science degree (*see General Requirements*) and 43 units of coursework in consumer related sciences, including CFSC 244, 274, 275, 276, 277, 278, 476, 477; FDNT 225 or 228; HMEC 184, 446, 488; 20 units of fieldwork, including CFSC 284 (4 units), 484 (12 units), 485, 486 (2 units). Cognate requirements are BIOL 107; EDCE 405, 460 and EDCI 464 in the School of Education; ENGL 415; PEAC 133, 181; PSYC 104, 224, 225; SOCI 414; SPPA 277.
- Clothing and textiles** A student majoring in clothing and textiles completes the general requirements for the Bachelor of Science degree (*see General Requirements*) and 71 units of coursework in consumer related sciences including FDNT 225; HMEC 184, 247, 446, 488; INTR 456; TXTL 254, 255, 256, 257, 364, 455, 457, 458, 464, 466, 467; 4 units from CFSC 274, 278, 474. Cognate requirements are CHEM 101, 102; 8 units in art.
- Home economics** A student majoring in home economics completes the general requirements for the Bachelor of Science degree (*see General Requirements*) and 53 units (21 upper division) coursework in consumer related sciences, including CFSC 274 or 474; FDNT 225; HMEC 184, 446, 475, 488; TXTL 254, 256, 364, 457. This program includes at least 8 units from each of five areas: food and nutrition sciences; child and family science; consumer education and home management; housing, interior design, and equipment; clothing and textiles. Cognate requirements are BIOL 107; CHEM 101, 102, 103; EDCI 436 in the School of Education; PSYC 104, 224; SOCI 104 or ECON 254.
- The urban family and community** A student majoring in urban family and community completes the general requirements for the Bachelor of Science degree (*see General Requirements*) and 53 units of coursework including CFSC 274, 474; FDNT 225; HMEC 184, 446, 474, 488; SOCI 104; 20 units in anthropology, sociology, or social service selected in consultation with the department adviser. Students planning to enter careers in community development or related programs should consider a second major in social service (Division of Behavioral Sciences) in consultation with the department adviser. Cognate requirements are BIOL 107; PSYC 104 or 105, 224, 225; 4 units in art.
- Food service management** A program in food service management, intended to prepare the student for a management position in an educational or industrial food service or in a commercial cafeteria or restaurant, is offered through the Department of Business and Economics.
- Dietetics** Students interested in clinical or administrative dietetics should consult the BULLETIN of the School of Allied Health Professions for information concerning professional programs offered on the Loma Linda campus and for an outline of predietetics requirements.

MINOR SEQUENCES

The following minors in consumer related sciences are available:

Clothing, 28 units (16 upper division) selected in consultation with the department adviser.

Home economics, 28 units, including CFSC 474; FDNT 211, 225; HMEC 446; TXTL 254, 256.

The urban family and community, 28 units, including CFSC 274 or 474; HMEC 446, 474; SOCI 104.

ASSOCIATE DEGREE PROGRAMS

Child and family science A student in the associate degree program in child and family science completes the general requirements for the Associate in Science degree (see *General Requirements*) and 37 units of coursework in consumer related sciences, including CFSC 244, 274, 275, 276, 277, 278, 284 (8 units); FDNT 228; HMEC 184. Cognate requirements are BIOL 107; PEAC 133, 181; PSYC 104, 224; SPPA 277. Suggested elective ENGL 415.

Nutrition care service A student in the associate degree program in nutrition care service completes the general requirements for the Associate in Science degree (see *General Requirements*) and 32 units of coursework in consumer related sciences, including FDNT 225, 226, 227, 235, 286, 287. Cognate requirements are: BIOL 107, 185; CHEM 101, 102, 103; PSYC 104 or 105, 224; PSED 214; SOCI 104.

CERTIFICATE PROGRAMS

Nursery school care A student in the certificate program in nursery school care completes the general requirements for certificates (see *General Requirements*) and 28 units of coursework in consumer related sciences, including CFSC 274, 275, 276, 277, 284 (4 units); FDNT 225. A cognate requirement is PSYC 224.

CHILD AND FAMILY SCIENCE

Lower division	CFSC 244 Family Health	4 units
	Individual, family, and community health factors covering sexuality, pregnancy, family planning, child health, parenthood. Health factors in daily life, aging, and death.	
	CFSC 274 Dynamics of Love and Marriage	4 units
	Maturity, compatibility, conflict, religious factors; specific areas of adjustment in marriage.	
	CFSC 275 Relationship in Child Development Centers	4 units
	Characteristics of children; effective methods of working with children; impact of teacher behavior on behavior of children; teacher-parent and teacher-teacher relationships. Three class hours, two laboratory hours per week.	
	CFSC 276 Developing Creativity in Young Children	4 units
	Development of creativity and self-expression in preschool children through stories, music, rhythms, play activities, and creative media. Three class hours, two laboratory hours per week.	

	CFSC 277 Learning Experiences for Young Children	4 units
	Selection and use of play materials and equipment for group activities; function of these materials in the child's development. Three class hours, two laboratory hours per week.	
	CFSC 278 Child Guidance	4 units
	Ellen G. White's principles of child behavior and family interaction, applied to the guidance of young children.	
	CFSC 284 Directed Teaching in Child Development Centers	2-4 units
	Initial participation in a child-development center program. May be repeated for additional credit.	
	Prerequisite: CFSC 275, 276, 277, or consent of the instructor.	
Upper division	CFSC 474 Family Relationships	4 units
	Interaction and interpersonal relationships through various stages of the family life cycle; influence of family on development of values, goals, attitudes, behavior patterns.	
	Prerequisite: CFSC 274 or consent of the instructor.	
	CFSC 476 Seminar in Child Study	4 units
	Organization and management of the preschool classroom. Principles of child development applied to group and individual work with parents; formulation and presentation of programs for parents. Taken concurrently with CFSC 484.	
	Prerequisite: PSYC 224.	
	CFSC 477 Administration of Child Development Centers	4 units
	Developing centers; essential planning procedures, including curriculum, guidance, health protection, housing, equipment, food service, budgeting; parent-staff involvement, social services, community relations.	
	Prerequisite: CFSC 275, 276, 277; or equivalent; or consent of the instructor.	
	CFSC 484 Directed Teaching in Child Development Centers	12 units
	Taken concurrently with CFSC 476.	
	Prerequisite: CFSC 275, 276, 277, or consent of the instructor.	
	CFSC 485 Fieldwork in Family and Community Services	2-4 units
	Supervised experience in providing help or instruction to family members in various contexts; systematic observation, codification, and reporting of behavior. May be repeated for additional credit.	
	Prerequisite: Consent of the instructor.	
	CFSC 486 Parent Education	2 units
	Basic principles in organization of parent study programs. Formulation and presentation of program for parents.	
Graduate	CFSC 575 Child Development Through Home and School	4 units

CONSUMER SCIENCE

Lower division	HMEC 184 Careers in Home Economics	1 unit
	Analysis of established and emerging consumer related occupations, to help the student assess his interests within this major.	
	HMEC 247 Color: Theory and Application	4 units
	In-depth study of color; its use in and influence on wardrobe, home, business; practical application of theory.	
	HMEC 289 Social and Professional Ethics	4 units
	Social and professional codes of ethics; habits, manners, and grooming.	
	HMEC 299 Directed Study	1-4 units
	Individual guided study. Limited to students majoring in the department.	

	HMEC 444 Management in Family Living	4 units
	Management principles in relation to family resources, goals, and values; principles of work simplification. Three class hours, three laboratory hours per week. Prerequisite: Senior standing or consent of the instructor.	
	HMEC 445 The Physically Handicapped Family Member	4 units
	Physical aspects of the home environment; food preparation, clothing, and recreation; learning problems.	
Upper division	HMEC 446 Consumer Education	4 units
	Personal and family money management, consumer decision making, credit, evaluation of consumer information and protection. Prerequisite: Upper division standing.	
	HMEC 447 Household Equipment	2 units
	Selection, use, and care of household appliances, emphasis on microwave cookery. Offered alternate years.	
	HMEC 474 Studies in Urban Family Problems	4 units
	Problems of home and family: nutrition, consumer needs, family relationships, child care. Methods of helping the inner-city consumer. Offered alternate years.	
	HMEC 475 Demonstration Techniques	4 units
	Selection, organization, and presentation of material for professional home economics demonstrations. Prerequisite: Departmental major or consent of the instructor.	
	HMEC 488 Seminars in Selected Topics	2-4 units
	HMEC 489 Christian Ministry in the Community	4 units
	Community problems of concern to the professional home economist, with particular emphasis on communication and interaction between individual and community. Does not apply toward a major or minor.	
	HMEC 499 Directed Study	2-4 units
	Individual guided study. Limited to students majoring in the department.	
Graduate	HMEC 504 Workshops in Selected Topics	2-4 units
	HMEC 505 Home Economics in Contemporary Society	4 units
	Required for all candidates for Master of Arts degree in secondary teaching in home economics.	
	HMEC 544 Trends in Consumer Problems	4 units
	HMEC 567 Trends and Issues in Home Economics	2-4 units
	HMEC 584 Seminars in Selected Topics	2-4 units
	HMEC 595 Readings and Conferences	2-4 units
	HMEC 597 Selected Problems in Consumer Related Sciences	4 units
	HMEC 598 Project	3-4 units
	HMEC 599 Research and Thesis	4 units

FOODS AND NUTRITION SCIENCE

Lower division	<p>FDNT 204 Principles of Food Science 4 units Principles of physical and chemical factors; sanitary handling and storage in food preparation and preservation. Three class hours, two laboratory hours per week.</p> <p>FDNT 225 Human Nutrition 4 units Nutrients, their digestion and metabolism; nutritional requirements at various age levels. For the medically oriented student.</p> <p>FDNT 226 Orientation to Nutrition Care Service 5 units Dietetics technician in hospital and nutrition education fields. Loma Linda campus only. Fifteen laboratory hours per week. Prerequisite or concurrent registration: FDNT 225.</p> <p>FDNT 227 Nutrition in Disease 4 units Application of nutrition principles to abnormal physical conditions and modified diet requirements. Prerequisite: FDNT 225; BIOL 107; or consent of the instructor.</p> <p>FDNT 228 Child Nutrition 4 units Basic concepts of human nutrition with special emphasis on nutritional needs and problems during pregnancy, lactation, and childhood.</p> <p>FDNT 235 Introduction to Food Service Administration 4 units Application of management theory to food service management, with emphasis on organization, system layout and design, purchasing, labor relations.</p> <p>FDNT 264 Bread Baking for the Family 2 units</p> <p>FDNT 265 Food Preservation 2 units</p> <p>FDNT 286 Fieldwork in Nutrition Care Service 4 units Practical experience in the hospital dietary service and related areas. Loma Linda campus only. May be repeated once for additional credit. Fifteen laboratory hours per week. Prerequisite: FDNT 225, 226.</p> <p>FDNT 287 Fieldwork: Nutrition in Disease 4 units Practical experience in working with the hospital or nursing home patient on a modified diet. Loma Linda campus only. May be repeated once for additional credit. Fifteen laboratory hours per week. Prerequisite: FDNT 225, 226.</p> <p>FDNT 314 Quantity Foods 4 units Fundamentals of institutional food preparation, use and care of equipment, safety and sanitation. Two class hours, six laboratory hours per week.</p>
Upper division	<p>FDNT 318 Meal Management 4 units Family meals; food selection, preparation, and service in relation to management of time, energy, and money. Three class hours, three laboratory hours per week. Prerequisite: FDNT 204.</p> <p>FDNT 324 Catering 4 units Planning, costing, preparing, and serving banquets, buffets, gourmet, and special occasion foods. May be repeated once for additional credit. Two class hours, six laboratory hours per week.</p> <p>FDNT 414 Vegetarian Cookery for the Family 2 units Planning and preparation of balanced meatless meals. One class hour, two laboratory hours per week.</p>

FDNT 416	Experimental Foods	4 units
Relation of physical and chemical reactions in food preparation to product quality; application of experimental procedures. Three class hours, three laboratory hours per week. Prerequisite: CHEM 101, 102.		
FDNT 426	World Nutrition and Health Problems	4 units
National and international nutrition-related problems; effects of geographic, social, political, economic, and technological factors on health and nutritional status; current efforts to find solutions.		
FDNT 435	Organization and Administration of Food Services	4 units
Layout and design; materials selection and care; work simplification.		
FDNT 479	Food Service Management Internship	12 units
FDNT 499	Directed Study	1-4 units

INTERIOR DESIGN

Lower division	INTR 246	Interior Decorating	2 units
Upper division	INTR 448	Housing	4 units
Planning and financing; sociological and aesthetic aspects. Layman's approach to drawing floor plans and perspective sketches of room plans.			
	INTR 456	Decorating and Furnishing the Home	4 units
Art principles applied to selection and use of furniture, fabrics, and accessories appropriate for various types of homes. Three class hours, three laboratory hours per week.			

TEXTILES AND CLOTHING

Lower division	TXTL 254	Clothing Construction for the Family	4 units
Techniques of garment construction, including tailoring for family members of different ages and both sexes. Two class hours, six laboratory hours per week. Prerequisite: TXTL 256 or consent of the instructor.			
	TXTL 255	Flat Pattern Design	4 units
World of the couturiere; use of the commercial basic pattern to develop designs for fashionable clothes for women. Prerequisite: CNSC 256 or consent of the instructor.			
	TXTL 256	Clothing Construction	4 units
Techniques of garment construction. Instruction adapted to student's previous experience. Two class hours, six laboratory hours per week.			
	TXTL 257	Clothing and You	4 units
Selection and purchase of clothing, with emphasis on line, art elements, fabric, and design.			
	TXTL 264	Pattern Alterations	2 units
	TXTL 265	Basic Construction Techniques	2 units

	TXTL 266 Clothing Construction for Men	2 units
	TXTL 267 Sewing with Knits	2 units
	TXTL 274 Creative Stitchery	2 units
Upper division	TXTL 364 Introduction to Textiles	4 units
	Textile fibers, yarns, fabrics, and finishes, with emphasis on selection, use, and care by the consumer. Two class hours, six laboratory hours per week. (Transfer students who have had a corresponding course without laboratory may enroll for laboratory only.)	
	TXTL 374 Advanced Creative Stitchery	2 units
	TXTL 455 Advanced Flat Pattern Design	4 units
	Prerequisite: TXTL 255 and consent of the instructor.	
	TXTL 457 Techniques of Fitting	4 units
	Application of pattern alteration and garment fitting techniques. Prerequisite: Consent of the instructor.	
	TXTL 458 Tailoring	4 units
	Application of tailoring techniques to women's coats and suits. Prerequisite: TXTL 254 and consent of the instructor.	
	TXTL 464 Cultural Aspects of Clothing	4 units
	Survey of influences on clothing, including sociological, psychological, historic, and economic factors.	
	TXTL 466 History of Textiles	4 units
	Development of textiles from ancient times among peoples of diverse cultures. Major focus on textiles from western civilization.	
	TXTL 467 Advanced Textiles	4 units
	Physical and chemical properties of textile fibers; yarn and fabric structure; current developments in the textiles field. Two class hours, six laboratory hours per week. Prerequisite: TXTL 364; CHEM 102.	

DEPARTMENT OF ENGLISH

- Chairman DELMER I. DAVIS, Associate Professor of English
PH.D. University of Colorado
- Faculty VICTOR S. GRIFFITHS, Professor of English
PH.D. University of Nebraska
- RICHARD B. LEWIS, Professor of English
PH.D. Stanford University
- HELEN F. LITTLE, Professor of English
M.A. University of Nebraska
- J. PAUL STAUFFER, Professor of English
PH.D. Harvard University
- M. IRENE WAKEHAM, Professor of English and Linguistics
PH.D. Stanford University
- ROBERT P. DUNN, Associate Professor of English
PH.D. University of Wisconsin
- GROSVENOR R. FATTIC, Associate Professor of English
PH.D. Michigan State University
- MARILYN C. TEELE, Associate Professor of English
M.ED. Boston University
- MARLYS P. OWEN, Assistant Professor of English
M.A. University of Minnesota
- NANCY H. LECOURT, Instructor in English
M.A. Loma Linda University

Objectives The Department of English aims (1) to assist the general college student to understand and appreciate literary art and history and to organize his thoughts and writing effectively, and (2) to help the English major attain scholarship in literature, language, and composition adequate for graduate work, for teaching, or for other professions.

Graduate program A program leading to the Master of Arts degree in English is described in the BULLETIN of the Graduate School.

Preparation for teaching During his freshman or sophomore year, the student who plans to teach English on the secondary level should consult a credential adviser in the School of Education for detailed information concerning requirements.

A program leading to the Master of Arts degree in the teaching of English is described in the BULLETIN of the School of Education.

BACCALAUREATE MAJOR PROGRAM

English A student majoring in English completes the general requirements for the Bachelor of Arts degree (see *General Requirements*) and 52 units (36 upper division) of English coursework, including ENGL 304 and at least 3 units selected from ENGL

204, 305, 306, or CMME 227; 4 units selected from ENGL 385, 475; LING 305; 32 units of literature, including ENGL 445 and ENGL 485; 4 units selected from ENGL 224-225; 16 units selected from ENGL 434-440; 4 units selected from ENGL 454-456. Cognate requirements are EDCI 437 in the School of Education; 8 units from HIST 207, 208, 209; HIST 307 or 308; a foreign language through level IV.

MINOR SEQUENCE

A minor in English is 30 units of coursework above the 200 level.

COURSES

- Lower division
- RDNG 001 Reading Improvement I** **4 units**
 For entering students with low scores on entrance or English Placement Test. Emphasizes study habits, comprehension skills, and vocabulary development. Individual laboratory practice. Does not apply toward a major in English or toward the general requirement in communication skills.
- RDNG 002 Reading Improvement II** **4 units**
 Critical thinking and reading skills, with emphasis on vocabulary development and reading speed. Laboratory reading machines, pacers, and individualized materials. Does not apply toward a major in English or toward the general requirements in communication skills.
- ENGL 005 Introduction to Composition** **4 units**
 Intensive review of grammar and usage, with considerable practice in the sentence, paragraph, summary, outline, and other minor forms. Does not apply toward a major in English or toward the general requirement in communication skills.
 Prerequisite: Satisfactory performance on a placement examination.
- ENGL 101, 102 Freshman English** **4, 4 units**
 Techniques and practice of expository and persuasive writing including an introduction to literary forms and types. Does not apply toward a major in English.
 Prerequisite: Satisfactory performance on a placement examination.
- ENGL 124 Freshman Seminar in Writing and Media Analysis** **4 units**
 Gives the well-prepared student an opportunity to read and evaluate more challenging material and write more sophisticated papers than is possible in ENGL 101, 102. Creative experimentation, student-initiated assignments, and student-directed class sessions. Students performing at grade level of B or better not required to take ENGL 102.
 Prerequisite: Satisfactory performance on a placement examination and on additional diagnostic exercises.
- Satisfactory completion of ENGL 102 or 124 or the equivalent is prerequisite to registration for courses numbered above 200.
- ENGL 204 Creative Writing** **4 units**
- ENGL 224 American Literature to 1860** **4 units**
- ENGL 225 American Literature 1860 to Present** **4 units**
- ENGL 246 Literary Forms and Ideas** **4 units**
 Varied content from quarter to quarter, with specific areas listed in the class schedule. (Drama, the short story, contemporary literature, women in literature, American fiction, etc.) Offered primarily for general students, but applies toward a major in English. May be repeated with new content for additional credit.

	ENGL 255 Religious Literature	4 units
Upper division	ENGL 304 Advanced Composition Required of students majoring in English.	4 units
	ENGL 305 Research Writing	1-4 units
	ENGL 306 Technical Writing Skills for informational writing needed in business, science, and industry; extensive practice in writing letters, proposals, descriptive and analytical reports, and research papers.	4 units
	ENGL 307 Major Themes in Art and Literature An interdisciplinary study of an idea or theme (e.g. the dignity of man, war and peace, man and nature) as treated in selected works of literature, music, and the visual arts.	4 units
	ENGL 354 World Literature	4 units
	ENGL 385 Modern Grammar Major descriptions of the grammar of modern English: traditional, structural, and transformational-generative, with special emphasis on transformational theory; application of grammatical principles to problems of style and dialect.	4 units
	ENGL 415 Literature for Children Analysis of an extensive number of books written by American, British, and European authors.	4 units
	ENGL 416 Literature for Adolescents	4 units
	ENGL 425 Major American Authors	4 units
	ENGL 434 English Literature to 1500 Offered alternate years.	4 units
	ENGL 435 English Literature: Sixteenth Century Offered alternate years.	4 units
	ENGL 436 English Literature: The Seventeenth Century Offered alternate years.	4 units
	ENGL 437 English Literature: The Eighteenth Century Offered alternate years.	4 units
	ENGL 438 English Literature: The Nineteenth Century to 1832 Offered alternate years.	4 units
	ENGL 439 English Literature: The Nineteenth Century after 1832 Offered alternate years.	4 units
	ENGL 440 English Literature: The Twentieth Century	4 units
	ENGL 445 Biblical Literature Required of students majoring in English.	4 units
	ENGL 454 Shakespeare	4 units
	ENGL 455 Milton Offered alternate years.	4 units
	ENGL 456 Major Author Intensive study of a major writer such as Chaucer, Wordsworth, or Hawthorne. May be repeated with new content for additional credit.	4 units

	ENGL 465	Literary Criticism: The Major Texts	4 units
	ENGL 475	History of the English Language Offered alternate years.	4 units
	ENGL 485	English Colloquium Required of seniors majoring in English.	4 units
	ENGL 489	Religion and Literature Contributions of selected literary works to religious thought and experience. Limited to students majoring in English. Does not apply toward a major or minor. Offered alternate years.	4 units
	ENGL 499	Directed Study	1-4 units
Graduate	ENGL 504	Methods and Materials of Literary Study	3 units
	ENGL 505	Seminar for Graduate Teaching Assistants Required of teaching assistants. Applicable as a cognate course; not applicable to 36-unit requirement in English. May be repeated for additional credit.	1 unit
	ENGL 506	Composition and Rhetorical Theory	4 units
	ENGL 507	Problems in Reading	4 units
	ENGL 575	Problems in English Language and Linguistics	4 units
	ENGL 615	Seminar in a Literary Genre	4-5 units
	ENGL 625	Seminar in a Major Literary Period	4-5 units
	ENGL 635	Seminar in a Major Author	4-5 units
	ENGL 645	Seminar in Religion and Literature	4-5 units
	ENGL 655	Seminar in a Literary Theme	4-5 units
	ENGL 695	Research and Thesis in English	4-8 units

DEPARTMENT OF
HISTORY and POLITICAL SCIENCE

Chairman	FREDERICK G. HOYT, Professor of History and Political Science PH.D. Claremont Graduate School
Faculty	WILFRED J. AIREY, Professor of History PH.D. University of Washington
	WALTER C. MACKETT, Professor of History PH.D. University of Southern California
	DELMER G. ROSS, Associate Professor of History and Political Science PH.D. University of California, Santa Barbara
	GARY M. ROSS, Associate Professor of History PH.D. Washington State University
	JONATHAN M. BUTLER, Assistant Professor of Church History PH.D. University of Chicago
	PAUL J. LANDA, Assistant Professor of Church History M.A. Andrews University M.A. Vanderbilt University
Collaborating faculty	GODFREY T. ANDERSON, Research Professor of American History PH.D. University of Chicago

The major in history, or history and political science, is recommended (1) for students who wish to prepare for secondary teaching, graduate study preparatory to college teaching, or the study of law; and (2) for students who seek a broad background in the liberal arts. The recommendations of the department adviser assist the student in selecting a program pattern that meets individual objectives. Students planning to attend graduate school are urged to develop foreign language competence.

Graduate program	A program leading to the Master of Arts degree in history is described in the BULLETIN of the Graduate School.
Preparation for teaching	A student preparing to teach history at the secondary level should plan to qualify for teaching credentials and during his freshman or sophomore year should consult the credentials adviser in the School of Education for detailed information concerning requirements. A program leading to the Master of Arts degree in the teaching of history is described in the BULLETIN of the School of Education.

BACCALAUREATE MAJOR PROGRAMS

History	A student majoring in history completes the general requirements for the Bachelor of Arts degree (see <i>General Requirements</i>) and 52 units (28 upper division) of
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coursework in history, including HIST 207, 208, 209, 256, 257, 265, 394; 20 upper division units distributed over four of six areas: Europe to 1485, Europe since 1485, United States to 1865, United States since 1865, Far East, church history. A cognate requirement is a modern foreign language through level IV. Courses in political science, the behavioral sciences, and economics are recommended.

History and political science

A student majoring in history and political science completes the general requirements for the Bachelor of Arts degree (see *General Requirements*) and 60 units of coursework in history and political science, including HIST 207, 208, 209, 256, 257; PLSC 204, 205, 206, 214, 215, 216; and 16 units of upper division coursework. Recommended courses are HIST 265, 394; a modern foreign language through level IV; courses in the behavioral sciences and economics.

Western thought

A student majoring in Western thought completes the general requirements for the Bachelor of Arts degree (see *General Requirements*) and 72 units of coursework as follows: HIST 207, 208, 209, 394 or 506, 435, 436, 437, 497; PHIL 205, 206, 207; PLSC 484, 485; RELH 474, 475; 12 units selected from the following courses: EDFO 545 in the School of Education; ENGL 354; FREN 484; HIST 466 or 469; PHIL 208, 435; PHYS 305; SOCI 404; RELT 412 (on the Loma Linda campus); RELT 436, 444; SCNC 404. Completion of the program in interdisciplinary studies may be substituted for HIST 207, 208, 209. A cognate requirement is a modern foreign language through level IV.

This major program meets the entire general requirement in the humanities.

MINOR SEQUENCES

The following minors in history are available:

History, 28 units (8 upper division), including HIST 207, 208, 209, 256, 257.

Political science, 32 units (8 upper division), including PLSC 204, 205, 206, 214, 215, 216.

Philosophy, 32 units, including PHIL 205, 206, 207, 208; HIST 435, 436, 437; and 4 units from FREN 484; PHIL 435; PHYS 305; RELT 436.

HISTORY

Lower division	<p>HIST 156, 157 Survey of American History and Institutions 4, 4 units First quarter, to 1865; second quarter, since 1865. Fulfills the baccalaureate requirement in American history and the California teacher certification requirement, but does not apply toward a major or minor in the department.</p> <p>HIST 165 Issues in American History 4 units Selected topics from the entire range of American history. Fulfills baccalaureate requirement in American history for students who qualify by a placement examination, but does not apply toward a major or minor in the department.</p> <p>HIST 207 History of Western Civilization to 1300 4 units Development of civilization, with emphasis on political, economic, religious, social, and cultural institutions.</p>
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	HIST 208 History of Western Civilization 1300-1815	4 units
	HIST 209 History of Western Civilization Since 1815	4 units
	HIST 256, 257 American History and Institutions	4, 4 units
	First quarter, to 1865; second quarter, since 1865. Fulfills baccalaureate requirement in American history, and also applies toward a major or minor in the department. Open to general students who qualify by a placement examination.	
	HIST 265 Problems in American History	4 units
	Detailed investigation of selected problems. For students majoring in the department, and for others with departmental consent.	
	Prerequisite: HIST 256, 257 or equivalent.	
Upper division	HIST 307, 308 British Civilization	4, 4 units
	First quarter, to 1815; second quarter, since 1815.	
	HIST 354 Colonial Latin America	4 units
	Latin America from the arrival of Columbus through the independence movements of the early nineteenth century, history of the Spanish and Portuguese empires in America. Conquest and colonization, political organization, race and society, the church, the economy, the Enlightenment, and various independence movements.	
	HIST 355 Modern Latin America	4 units
	Survey of Latin America from the nineteenth-century independence movements to the present, emphasizing events in the four principal nations of Latin America — Mexico, Brazil, Argentina, and Chile. Traces the traditional struggles of monarchists versus republicans and conservatives versus liberals as they evolved into modern revolutionary reform movements. Roles played by the church, the military, and other power groups.	
	HIST 394 Introduction to Historical Research	4 units
	Philosophy of history, historiography, and the research materials and methods required for the production of a scholarly paper.	
	HIST 396 Oral History	2 units
	Methods of oral history, interviewing, and oral history programs. Uses of oral history in teaching and writing history; techniques of gathering, preparing, and preserving oral history; field experience.	
	HIST 404 History of Rome	4 units
	Offered alternate years.	
	HIST 414 The French Revolution	4 units
	Offered alternate years.	
	HIST 415 The Napoleonic Era	4 units
	Offered alternate years.	
	HIST 416 Europe 1815-1914	4 units
	Offered alternate years.	
	HIST 417 Europe 1914-1938	4 units
	Offered alternate years.	
	HIST 418 Europe since 1938	4 units
	Offered alternate years.	
	HIST 425, 426 History of Russia	4, 4 units
	First quarter, Czarist Russia 862-1917; second quarter, Communist Russia since 1917. Offered alternate years.	
	HIST 427 English Constitutional History	4 units

- HIST 435, 436, 437 History of Ideas** 4, 4, 4 units
 Themes in European philosophy viewed historically and contextually, with some attention to methodological problems. First quarter, Plato and Aristotle; second quarter, Kant, Hegel and Marx; third quarter, Sartre, Lévi-Strauss, James, and Wittgenstein.
- HIST 444, 445, 446 American Diplomatic Relations** 4, 4, 4 units
 First quarter, 1763-1865; second quarter, 1865-1939; third quarter, since 1939. Offered alternate years.
- HIST 447, 448, 449 United States Constitution** 4, 4, 4 units
 The federal constitution and its relation to American institutions. First quarter, to 1850; second quarter, 1850-1937; third quarter, since 1937. Offered alternate years.
- HIST 454 American Colonial History** 4 units
 Offered alternate years.
- HIST 455 Religion in American Life** 4 units
 Offered alternate years.
- HIST 456 Civil War and Reconstruction** 4 units
 Offered alternate years.
- HIST 458 Western America** 4 units
 Offered alternate years.
- HIST 459 California History and Government** 4 units
 Offered alternate years.
- HIST 464, 465 Asia in World Affairs** 4, 4 units
 Reciprocal influences of Europeans, Americans, and Asians. First quarter, from the age of discovery to the eve of World War II; second quarter, since World War II. Offered alternate years.
- HIST 466 The Early Christian Church** 3-4 units
 Study from primary sources of the important men, developments, and ideas in the Christian Church from apostolic times through the fifth century. Offered alternate years.
- HIST 467 The Medieval Church** 3-4 units
 Study from primary sources of the important men, developments, and ideas in the Christian Church from the sixth through the fifteenth centuries. Offered alternate years.
- HIST 468 History of the Papacy** 3-4 units
 Historical and theological development of the Papacy and Roman Catholicism during the patristic, medieval, and modern periods. Offered alternate years.
- HIST 469 The Christian Humanists of the Renaissance** 3-4 units
 Life and thought of Christian humanists who challenged medieval scholasticism and prepared Western Europe for the Protestant Reformation. Offered alternate years.
- HIST 474 The Lutheran Reformation** 3-4 units
 Lutheran Reformation with subsequent theological, political, and sociological developments to 1648. Offered alternate years.
- HIST 476 The Swiss Reformation and Calvinism** 3-4 units
 Leading men of the Swiss Reformation (Zwingli, Bullinger, Calvin, and Beza) and the theological and sociological influences of Calvinism. Offered alternate years.
- HIST 478 The English Reformation** 3-4 units
 Main historical forces and religious movements within the English Reformation until the Westminster Assembly. Offered alternate years.
- HIST 484 Twentieth Century Church History** 3-4 units
 Modern religious trends and their impact upon church and society. Offered alternate years.

	HIST 485 History of Seventh-day Adventism	4 units
	Millerism and early Sabbath-keeping Adventism, anti-Catholicism, antislavery, and church-state relations: "shut-door" theology and missionary expansion; organization, 1888 and reorganization, health and prohibition, education and evangelism. Origin and development of the Seventh-day Adventist denomination to the present.	
	HIST 489 The Religious Aspects of History	4 units
	Philosophy of history, with emphasis on religious aspects and applications. Required for a major in the department; limited to seniors majoring in history. Does not apply toward a major or minor.	
	HIST 494 History Colloquium	4 units
	May be repeated with new content for additional credit.	
	HIST 495 Readings in History	1-6 units
	Limited to history majors with a 3.0 minimum grade point average in the major. Special study in fields specified by the instructor; regular weekly conferences. May be repeated in different areas for additional credit to a maximum of 12 units.	
	Prerequisite: Consent of the department chairman.	
	HIST 497 Proseminar	4 units
	HIST 499 Directed Study	1-6 units
	Prerequisite: Consent of the department chairman.	
	RELH 474, 475, 476 The Christian Heritage	4, 4, 4 units
Graduate	HIST 504 Research Methods in History	4 units
	HIST 506 Historiography	4 units
	HIST 507 American Historical Literature	4 units
	HIST 544 The Emergence of the American Constitutional System	4 units
	HIST 545 United States in the Far East Since 1900	4 units
	HIST 564 Concepts of Diplomacy	4 units
	HIST 634 Seminar in European History	4 units
	HIST 635 Seminar in Church History	4 units
	HIST 645 Seminar: The Coming of the Civil War	4 units
	HIST 647 Seminar in American History	4 units
	HIST 694 Special Problems in History	arranged
	HIST 695 Research and Thesis in History	4-6 units

POLITICAL SCIENCE

Lower division	PLSC 204, 205, 206 American Government: National, State, Local	4, 4, 4 units
	Structure and functions of the government of the United States. Offered alternate years.	
	PLSC 214, 215, 216 Comparative Government	4, 4, 4 units
	Background, constitutional organization, and activities of the governments of England, France, Germany, Italy, Russia, and Japan. Offered alternate years.	
	PLSC 255 Introduction to Law	2 units
	Orientation to the study of law. Taught by a practicing attorney, assisted by colleagues.	

Upper division	<p>PLSC 335, 336, 337 Problems in International Relations 4, 4, 4 units A score or more of the major problems facing the international community with emphasis on the relation of the United States thereto. Basically a discussion format. Offered alternate years.</p> <p>PLSC 454 Inter-American Relations 4 units Relations between the United States and the nations of Latin America and the relations of Latin American nations among themselves. The development of U.S. foreign policy with regard to Latin America, the growth of the Western Hemisphere concept, and the creation and function of the Organization of American States and other regional bodies.</p> <p>PLSC 484 Introduction to Political Theory 4 units Main currents of political thought from Plato to the present. Offered alternate years.</p> <p>PLSC 485 American Political Thought 4 units American political ideas from the colonial period to the present. Offered alternate years.</p> <p>PLSC 494 Workshop in Politics 4 units Consideration of practical political problems during an election year. Offered alternate years.</p> <p>PLSC 495 Readings in Political Science 1-6 units Limited to history and political science majors with a 3.0 minimum grade point average in the major. Special study in fields specified by the instructor; regular weekly conferences. Prerequisite: Consent of the department chairman.</p> <p>PLSC 499 Directed Study 1-6 units Prerequisite: Consent of the department chairman.</p> <p>HIST 447, 448, 449 United States Constitution 4, 4, 4 units</p> <p>HIST 464, 465 Asia in World Affairs 4, 4 units</p>
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DEPARTMENT OF INDUSTRIAL STUDIES

- Chairman** DONALD G. BOWER, Professor of Industrial Studies
ED.D. University of California, Los Angeles
- Faculty** MELVIN G. HOLM, Associate Professor of Industrial Studies
ED.D. University of Missouri
JAKE J. WALCKER, Associate Professor of Industrial Studies
M.A. Walla Walla College
ARTHUR M. WALLS, Assistant Professor of Industrial Studies
M.A. California State University, Long Beach
NEAL G. STEVENS, Instructor in Industrial Studies
B.A. Loma Linda University
- Lecturers** CLIFTON G. GENT, Lecturer in Aviation
MERLE D. MORSE, Lecturer in Automotive Technology
B.A. Loma Linda University
VERNON L. VON POHLE, Lecturer in Architectural Engineering
B.A. Pacific Union College

Objectives Programs of the Department of Industrial Studies are designed for students who desire (1) to enter careers in automotive mechanics, aviation, metal and wood construction, drafting, welding, photography, and maintenance; (2) to gain knowledge of and proficiencies in these operations and preparation essential for management and administrative purposes; and (3) to prepare for the teaching of industrial studies.

Preparation for teaching A student preparing to teach industrial studies includes in his major program INDS 394, 484; 24 units in at least one industrial content area in which he will demonstrate job-entry proficiency; 4 units in each of five additional content areas; EDC1 439 in the School of Education. In addition he should plan to qualify for industrial arts credentials and during his freshman or sophomore year should consult the credentials adviser in the School of Education for detailed information concerning requirements.

BACCALAUREATE MAJOR PROGRAMS

- Industrial studies** A student majoring in industrial studies completes the general requirements for the Bachelor of Science degree (see *General Requirements*) and 60 units of coursework selected in consultation with the department adviser.
- Industrial arts** A student majoring in industrial arts completes the general requirements for either the Bachelor of Arts degree or the Bachelor of Science degree (see *General Requirements*) and 60 units in trade-content areas as outlined in "preparation for teaching" above.
- Photography** A program in photography is also offered through the Department of Art.

MINOR SEQUENCE

A minor in industrial studies is 32 units (14 upper division) of coursework selected in consultation with the department adviser.

ASSOCIATE DEGREE PROGRAM

Institutional plant engineering A student in the associate degree program in institutional plant engineering completes the general requirements for the Associate in Science degree (see *General Requirements*) and 52 units of coursework selected in consultation with the department adviser.

AUTOMOTIVE TECHNOLOGY

Lower division	AUTO 134 Automotive Care 2 or 4 units Theory, detection, and minor repair procedures in electrical, fuel, cooling, lubrication, and brake systems. Maintenance and body care. Does not apply toward a major in industrial studies.
	AUTO 234 Automotive Engine Rebuilding 4 units Theory and function of automotive engines; rebuilding procedures.
	AUTO 235 Automotive Air Conditioning 4 units Theory, function, and service of automotive refrigeration systems.
Upper division	AUTO 334 Automotive Tune-up and Analysis 4 units Theory, function, and service of automotive fuel, ignition, cooling, and emission systems. May be repeated for additional credit.
	AUTO 335 Automotive Electrical Systems 4 units Theory, function, and service of automotive electrical components. May be repeated for additional credit.
	AUTO 336 Automobile Chassis 4 units Design theory, unit function, and repair procedures of front-end alignment, suspension, and brake systems. May be repeated for additional credit.
	AUTO 337 Automotive Transmission and Power Train 4 units Theory, function, and service of automotive automatic and manual transmissions, torque converters, clutch assemblies, drive shafts, differentials, and rear axle assemblies. May be repeated for additional credit.
	AUTO 338 Automotive Body Repair 4 units Techniques and practice of automotive body rebuilding and refinishing. May be repeated for additional credit.

AVIATION

These courses prepare the student to pass Federal Aviation Administration written examinations and flight tests.

In flight school courses, the student contracts for the required flight training at his own expense. He meets regularly with the department aviation coordinator and receives a grade when the FAA flight experience requirements have been met.

Courses 104 and 204 include instructional flights in a simulator and aircraft.

Lower division	AVIA 104	Private Pilot Ground School	4 units
	AVIA 105	Private Pilot Flight School	2 units
	AVIA 204	Commercial Pilot Ground School	4 units
	AVIA 205	Commercial Pilot Flight School	2 units
	AVIA 206	Multi-Engine Flight School	1 unit
Upper division	AVIA 304	Instrument Pilot Ground School	4 units
	AVIA 305	Instrument Pilot Flight School	2 units

CONSTRUCTION AND MAINTENANCE

Lower division	CNST 111	Carpentry I	4 units
		Details of construction through actual practice. Work on house or other building constructed to architectural plans.	
	CNST 112	Carpentry II	4 units
		Continuation of Carpentry I. Types of exterior finish applications; interior finish including door installations, staircases, kitchen and other installed cabinets, interior trim, floors, etc. May be repeated for additional credit.	
	CNST 184	Residence Electrical Wiring	4 units
		Theory and practice in light construction electrical installations under building codes.	
	CNST 185	Residence Plumbing	4 units
		Theory and practice of plumbing systems installation under building codes.	
	CNST 186	Mechanical Equipment of Buildings	4 units
		Maintenance theory and practice for plumbing, electrical, heating, and air conditioning systems in relation to safety rules.	
	INDS 288	Plant Maintenance Management	4 units
		Maintenance supervision; personnel organization; relationships with business, purchasing, and administrative personnel.	
Upper division	INDS 384	Machine Tool Maintenance	2-4 units
		Study and practical experience in care and repair of industrial shop equipment. Areas of study selected with adviser. May be repeated for additional credit.	

DRAFTING

Lower division	DRFT 141	Technical Drawing	4 units
		Technical language of industry. Skills and knowledge in graphic methods of shape and size description used in technical planning, documenting, and distributing within the production industries.	
	DRFT 142	Advanced Technical Drawing	4 units
		Translating and communicating engineering design. Layout procedures and conventions used in the production of working drawings. May be repeated for additional credit.	
	DRFT 244	House Planning	4 units
		Architectural design problems in function, aesthetics, and comparative consumer costs. Drafting references, conventional symbols, and standards used in preparing residence plans for building trades. May be repeated for additional credit.	

Upper division	DRFT 344 Advanced Architecture 4 units Project planning methodology, and drafting for construction systems in use in residence and public buildings. May be repeated for additional credit.
	DRFT 345 Engineering Graphics 4 units Geometric applications, survey illustrations, project planning. May be repeated for additional credit.
	DRFT 346 Structural Drafting 4 units Application of structural data, references, and codes in planning usable details and project drawings of typical structures. May be repeated for additional credit.

PHOTOGRAPHY

Lower division	PHTO 224 Basic Photography 4 units Black and white photography. Includes history, theory, and practice. Using cameras, light meters, and laboratory equipment.
Upper division	PHTO 324 Advanced Photography 4 units Expansion of techniques established in basic photography. Principles of photo design and their application. Theory of natural and artificial light.
	PHTO 325 Color Photography 4 units Nature and properties of color. Laboratory skills in producing color slides, negatives, color prints, and cibachrome. Special effects with color. May be repeated for additional credit.
	PHTO 326 New Directions in Photography 4 units Brings the creative photographer up to date with contemporary styles and photographic procedure. A point of departure from which students take on new viewpoints.
	PHTO 424 Experimental Photography 4 units Skills in technical processes. Techniques in the Sabbatier effect, tone-line, solarization, high contrast, and other material and chemical modifications. Individual guidance and evaluation. May be repeated for additional credit.
	PHTO 425 Applied Photography 4 units A cross section of the technical problems facing the professional photographer. Theory and application of the view-camera, lenses, studio lighting, and advanced darkroom procedure. Individual guidance and evaluation. May be repeated for additional credit.

METAL CONSTRUCTION

Lower division	INDS 264 Metal Machines I 4 units Engine lathe, drill press, and common hand tools (drills, reamers, taps and dies, files, etc.), measuring instruments, and layout. Shop drawings.
Upper division	INDS 364 Metal Machines II 4 units Advanced processes of turning, milling, and hand work, together with operations involving shaping, grinding, finishing, gear calculating, and cutting. Problems in fixtures. Emphasis on close-tolerance work. May be repeated for additional credit.
	INDS 365 Dental Materials 4 units Technical methods and practice with dental materials. Applications of casting, carving processes, machining and hand tooling techniques. Evaluation of design, surface quality, fits and finishes. Emphasis on tolerance and dimension control.

WELDING

Lower division	INDS 171 Oxyacetylene Welding 4 units Operation and technical data. May be repeated for additional credit.
	INDS 172 Electrical Welding 4 units Operation and technical data. May be repeated for additional credit. Prerequisite: INDS 171.
Upper division	INDS 374 Advanced Welding 4 units Heliarc, arc, and oxyacetylene welding. May be repeated for additional credit.

WOOD AND PLASTIC CONSTRUCTION

Lower division	INDS 254 Furniture Construction I 4 units Materials and processes. Emphasis on quality construction and buying. Student selected project. Open to both men and women. May be repeated for additional credit.
	INDS 255 Woodturning 2 units The wood lathe and its use. Cutting tool design, sharpening, and use. Student-selected spindle and face plate projects. May be repeated for additional credit.
	INDS 256 Basic Plastics 4 units Materials and processes in modern industrial plastics.
Upper division	INDS 354 Furniture Construction II 4 units Continuation of INDS 254, with emphasis on industrial practices. Fieldwork. Teacher-specified testing projects. May be repeated for additional credit.
	INDS 356 Upholstery I 4 units Basic reupholstering techniques and selection of materials to complete commercial and household furniture. May be repeated for additional credit.
	INDS 357 Upholstery II 4 units Installation processes in use on major furniture items and selected materials. May be repeated for additional credit.
	INDS 454 Finishing Methods and Materials 4 units Industrial finishing methods; wood, metal, plastics, and fabrics.
	INDS 455 Materials Testing and Evaluation 4 units Lubricants, fasteners, glues, abrasives, finishes. Nondestructive and destructive tests. Specific student-selected projects. May be repeated for additional credit.

PROFESSIONAL STUDIES

Upper division	INDS 394 Shop Planning and Organization 4 units Principles of planning laboratories for industrial work. Equipment selection, acquisition, positioning, and maintenance.
	INDS 387 Problems in Industrial Arts 1-4 units Problems selected in consultation with department chairman. Research problems, supervisory experience for prospective teachers or tradesmen.

	INDS 484 History of Industry	4 units
	Origins and progress of trade and technical work in the United States. Organization, objectives, and scope of employment preparation today.	
	INDS 485 Occupational Orientation and Vocational Counselor Training	4 units
	Analysis of entry-level job requirements, job description, references, and employment data. Principles of personnel placement and employee classification.	
	INDS 489 Industrial Philosophy	4 units
	Foundations of vocational philosophy; the relation of Adventism to the contemporary world of work; the role of industrial educators. Does not apply toward a major or minor.	
	INDS 498 Project in Industrial Production	2-4 units
	Selected project representing an area of concentration in the major field to demonstrate the best effort of a senior. May be repeated for additional credit. Retention of completed work for temporary or permanent exhibition at the discretion of the department.	
	INDS 499 Directed Study	2-4 units
Graduate	INDS 584 Curriculum Construction in Industrial Studies	4 units
	INDS 595 Industrial Studies Seminar	2-4 units
	May be repeated for additional credit.	

DEPARTMENT OF MATHEMATICS

Chairman	GEOFFREY T. JONES, Associate Professor of Mathematics PH.D. University of California, Los Angeles
Faculty	HILMER W. BESEL, Associate Professor of Mathematics M.A. University of Nebraska VERNON W. HOWE, Associate Professor of Mathematics PH.D. Dartmouth College CARLYLE D. FLEMMING, Assistant Professor of Mathematics M.A. Andrews University PATRICIA A. BRENNEMAN, Instructor in Mathematics M.S. Loma Linda University BARRY G. GRAHAM, Instructor in Mathematics M.A. University of California, Riverside
Lecturer	DAVID R. DICKERSON, Lecturer in Mathematics M.A. Loma Linda University

Objectives The department provides a curriculum in mathematics and computer science as a cultural study for all liberal arts students, as a basic tool for the scientist, and as a preparation for graduate study and for teaching.

Preparation for teaching A student preparing to teach mathematics at the secondary level should plan to qualify for teaching credentials, and during his freshman or sophomore year he should consult the credentials adviser in the School of Education for detailed information concerning requirements.

BACCALAUREATE MAJOR PROGRAMS

Mathematics A student majoring in mathematics completes either of the following programs:

Program A consists of the general requirements for the Bachelor of Arts degree (see *General Requirements*) and 48 units of coursework in mathematics, including MATH 131, 132, 133, 231, 232, 233, 324, 345, 299 or 499; 16 units selected from MATH 275, 299, 335, 361, 362, 364, 371, 372, 373, 375, 421, 422, 431, 432, 451, 452, 485, 499. Cognate requirements are PHYS 211 and 12 units of additional related coursework selected in consultation with the department adviser.

Program B consists of the general requirements for the Bachelor of Science degree (see *General Requirements*) and 56 units of coursework in mathematics, including MATH 131, 132, 133, 231, 232, 233, 275, 324, 421, 431, 432, 299 or 499; 12 units selected from MATH 299, 335, 345, 361, 362, 364, 371, 372, 373, 375, 422, 451, 452, 485, 499. (MATH 335 and 422 are recommended for those expecting to pursue graduate studies in mathematics; MATH 345 is required if Program B will be presented to the Commission for Teacher Preparation and Licensing of the State of California.) Cognate requirements are PHYS 211 and 12 units of additional related coursework selected in consultation with the department adviser.

Computer science A student majoring in computer science completes the general requirements for the Bachelor of Science degree (see *General Requirements*) and 56 units of coursework in mathematics, including MATH 131, 132, 133, 231, 232, 233, 275, 324, 361, 371, 372, 373, 299 or 499; 8 units selected from MATH 299, 335, 345, 364, 375, 421, 422, 431, 432, 451, 452, 485, 499. Cognate requirements are PHYS 211 and 212 or 213, 355, 356; 8 units of additional related coursework selected in consultation with the department adviser.

MINOR SEQUENCES

The following minors in mathematics are available:

Mathematics, 29 units, including MATH 131, 132, 133, 231, 232, 233.

Computer science, 33 units, including MATH 131, 132, 275, 361, 371, 372; 12 units selected from MATH 231 and above. (No more than 8 of these upper division units may also apply toward a mathematics major.)

COURSES

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|----------------|---|
| Lower division | <p>MATH 005 Basic Mathematics 4 units
 Arithmetic through simple linear equations. Problem solving (logic). Does not apply toward a major in mathematics or computer science, or toward the general requirements in natural sciences, mathematics, and health. Open only to students who score below the 50th percentile on the SAT quantitative or equivalent test and who score below 80% on the MATH 005 placement examination.</p> <p>MATH 104 Basic Algebra 4 units
 Through formula rearrangement and systems of linear equations. Does not apply toward a major program in mathematics or computer science.</p> <p>MATH 124 Precalculus Mathematics 4 units
 Sets, fundamental laws of numbers, polynomials, factoring over polynomials, solution sets of polynomials, theory of equations, functions, graphs, exponential and logarithmic functions, trigonometric functions and their graphs, trigonometric identities, and trigonometric equations. Does not apply toward a major in mathematics.
 Prerequisite: MATH 104 or secondary school equivalent.</p> <p>MATH 131 Calculus of Elementary Functions 5 units
 Riemann integral; derivatives; fundamental theorem and applications; introduction to differential equations; calculus of logarithmic, exponential, and trigonometric functions. MATH 131 satisfies the calculus requirement of the School of Medicine.
 Prerequisite: MATH 124 or secondary school equivalent.</p> <p>MATH 132, 133 Multivariable Calculus 4, 4 units
 Three-dimensional vector space; addition, scalar, and cross products. Equations of lines and planes. Vector-valued functions of a real variable. Partial differentiation: partial derivative, directional derivative, chain rule, implicit differentiation, minimax problems. Multiple integration. Techniques of integration. Imprinted series.
 Prerequisite: MATH 131 or consent of the instructor.</p> <p>MATH 225 Concepts in Mathematics 4 units
 Sets, number sets and their properties, number sentences, mathematical systems, logic, topics from number theory, topics from geometry, and probability. Does not apply toward a major in mathematics or computer science.
 Prerequisite: MATH 104 or secondary school equivalent.</p> |
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MATH 231, 232, 233 Mathematical Methods for the Physical Sciences 4, 4, 4 units
Determinants, matrix algebra, infinite series, vector analysis, complex numbers, ordinary differential equations, integral transforms, series solution of differential equations, special functions, complex variable, Fourier series.

Prerequisite: MATH 133 or consent of the instructor.

MATH 251 Introduction to Probability 4 units
Review of algebraic concepts, descriptive statistics, probability, random variables and their distributions.

Prerequisite: MATH 104 or secondary school equivalent.

MATH 252 Introduction to Statistical Inference 4 units
Estimating, testing hypotheses; regression and correlation, contingency tables and goodness-of-fit, analysis of variance, nonparametric statistics.

Prerequisite: MATH 251.

MATH 265 Finite Mathematics 4 units
Introductory study, including logic, set theory, matrices, vectors, combining techniques, discrete probability distributions; applications to problems in finance, accounting, marketing, production, and personnel management.

Prerequisite: MATH 104 or secondary school equivalent.

MATH 275 Introduction to Computer Programing 4 units
BASIC-PLUS; applications to mathematically-oriented problems.

Prerequisite: MATH 104 or consent of the instructor.

MATH 299 Directed Study 1-4 units
May be repeated for additional credit with consent of the instructor.

Upper division

MATH 324 Linear Algebra 4 units
Vector spaces, linear transformations, matrices and determinates, eigenvalues and eigenvectors, applications.

Prerequisite: MATH 233 or consent of the instructor.

MATH 335 Complex Variables 4 units
Complex numbers, analytic functions, linear transformation, integration, series, contour integration, conformal mapping and application.

Prerequisite: MATH 133 or consent of the instructor.

MATH 345 College Geometry 4 units
A systematic development of plane and solid Euclidean geometry, using synthetic and analytic methods.

Prerequisite: MATH 133 or consent of the instructor.

MATH 361, 362 Numerical Methods 4, 4 units
Interpolation and approximation, numerical differentiation and integration, solution of non-linear equations, error analysis, numerical solutions of differential equations, and systems of equations.

Prerequisite: MATH 231, 275, or consent of the instructor.

MATH 364 Differential Equations 4 units
Linear equations of the first order, linear equations with constant coefficients, linear equations with variable coefficients, series solutions, Laplace transforms, existence and uniqueness theorems, some applications.

Prerequisite: MATH 231 or consent of the instructor.

MATH 371, 372 Computer and Programing Theory 4, 4 units
Mathematical description of the logical organization of a digital computer and its components, number systems, Boolean algebra, information representation within and without the computer, compiler theory and practice, metalinguistics, operating systems theory, time-sharing theory.

Prerequisite: MATH 275 or consent of the instructor.

	MATH 373 Programing Languages Theory	4 units
	Syntax and semantics, graph theory, table construction and use, memory allocation, pushdown techniques, machine-code generators, error detection and diagnostics. Prerequisite: MATH 371 or consent of the instructor.	
	MATH 375 Advanced Computer Programing	4 units
	Techniques for computer solution of mathematical problems, assembler language. Prerequisite: MATH 275 or consent of the instructor.	
	MATH 421, 422 Algebraic Structures	4, 4 units
	Groups, quotient groups; rings, unique factorization domain, fields, elements of Galois theory. Prerequisite: MATH 324 or consent of the instructor.	
	MATH 431, 432 Analysis	4, 4 units
	Topology of the real line, metric spaces, uniform continuity, properties of the derivative, theory of Riemann integral, Lebesgue measure and integral, convergence theorems. Prerequisite: MATH 231 or consent of the instructor.	
	MATH 451 Probability	4 units
	With application to statistical problems. Probability, independence, random variables, functions of random variables, moment-generation functions, special distributions. Prerequisite: MATH 133 or consent of the instructor.	
	MATH 452 Statistics	4 units
	Classical large-sample and modern small-sample methods. Nature of statistical methods, theoretical frequency distributions, sampling theory, correlation and regression, testing goodness-of-fit, principles of estimation, hypothesis testing, small sample distributions, nonparametric methods. Prerequisite: MATH 451 or consent of the instructor.	
	MATH 485 Seminar in Mathematical Topics	4 units
	Lecture course offered on demand, with content chosen from mathematics or computer science: applied mathematics, foundations, geometry, methods for physics, number theory, topology, etc. May be repeated with new content for additional credit. Prerequisite: Consent of the instructor.	
	MATH 489 Christianity and the Rational Man	4 units
	Man's response to God's call; structures of belief in religion and science. Does not apply toward a major or minor. Identical to PHYS 489.	
	MATH 499 Directed Study	1-4 units
	May be repeated for credit with consent of the department.	
Graduate	MATH 525 Development of Number Systems	4 units
	History of algebraic thought. Algebra of sets, functions, operations, equivalence relations. Construction of the number systems and development of their properties. Some algebras. Oriented to teacher training. Prerequisite: Substantial undergraduate mathematics and consent of the instructor. Pertinent: such courses as MATH 231, 324, 421.	
	MATH 545 Survey of Geometry	4 units
	History of algebraic thought. Construction of the number systems within set theory, up to and including the topological properties of the real line. Oriented to teacher training. Prerequisite: Substantial undergraduate mathematics and consent of the instructor. Pertinent: such courses as MATH 324.	
	MATH 599 Directed Study	1-4 units

DEPARTMENT OF
MODERN LANGUAGES

- Chairman MARGARETE A. HILTS, Professor of French
PH.D. Case Western Reserve University
- Faculty EDWARD W. NEY, Professor of German
PH.D. New York University
- M. IRENE WAKEHAM, Professor of English and Linguistics
PH.D. Stanford University
- JACQUES BENZAKEIN, Associate Professor of French
M.A. University of Wisconsin
- RUTH E. BURKE, Instructor in German and Comparative Literature
M.A. University of California, Riverside
- ERNESTINA F. GARBUTT-PARRALES, Instructor in Spanish
PH.D. University of Southern California
- Lecturers JUAN R. VELEZ, Lecturer in Spanish
B.A. Loma Linda University

Objectives The broad objectives of language study are to gain the insights into national thought, communication, and culture that should concern every educated person; to acquire foreign language facility for purposes of travel or residence abroad; and to meet the language requirements for advanced degrees in other fields.

The specific objectives of a major in language are (1) to attain the skills and develop the scholarship essential for teaching and for graduate study and (2) to prepare for entrance to business and trade, civil service, dentistry, law, library science, medicine, and other professions requiring verbal skills and background in thought.

Adventist Colleges Abroad In cooperation with Adventist Colleges Abroad, the department offers to both the student majoring in language and the general college student the privilege of study in Europe without losing credits or lengthening the course of study. By carefully planning his program with the department and his major professor, the student may earn full credit for study at any of the overseas schools listed under Adventist Colleges Abroad in this BULLETIN.

Students enter this program for three quarters (nine months) beginning in September. To be eligible, the student must be admitted to the College of Arts and Sciences and have the endorsement of the Department of Modern Languages.

Although enrolled overseas, students are registered at this University, are considered in residence, and are eligible for scholarships, loans, and grants offered by the University. Credit earned is recorded each quarter in the Office of the Registrar.

Independent study A student who wishes to study on location a language not offered by the department but needed for his major concentration may present to the department a request for independent language study, accompanied by a detailed study plan and specific objectives as worked out by the student and his adviser. This arrangement is limited to students who have previously studied a language and who have demonstrated ability for independent study.

Preparation for teaching

A student preparing to teach a modern foreign language at the elementary or secondary level should plan to qualify for teaching credentials and during his freshman or sophomore year should consult the credentials adviser in the School of Education for detailed information concerning requirements. The student who wishes to receive the approval of the department for EDCI 457 in the School of Education must take EDCI 440.

Programs leading to Master of Arts degrees in the teaching of French, German, and Spanish are described in the BULLETIN of the School of Education.

BACCALAUREATE MAJOR PROGRAMS

English as a second language

An interdisciplinary program designed for students preparing to teach English to non-English speakers, this program consists of the general requirements for the Bachelor of Arts degree (see *General Requirements*) and 52 units (40 upper division) of coursework, exclusive of courses numbered 101, 102; one modern language through level IV or its equivalent; ANTH 104, 306; ENGL 304, 385, 425, 475; LING 305, 495; SOCI 307; SPCH 315; SPPA 477; 4 units in the literature/civilization/culture of an area in which the student wants to work in English as a second language; EDCJ 440 in the School of Education.

French

A student majoring in French spends at least one academic year in a French-speaking environment, and the department recommends an additional quarter in the summer (preferably following the year abroad) for sociological/cultural research. Two programs in French are currently available:

Program A, designed for students preparing for elementary or secondary teaching, consists of the general requirements for the Bachelor of Arts degree (see *General Requirements*) and 48 units of upper division coursework in French, including FREN 304 or 305, 306, 307, 425, 426. Cognate requirements are European history, 4 units; history of art or music, 4 units; and EDCI 440 in the School of Education. A second language through level IV and LING 305 are recommended.

Program B, designed for students preparing for graduate studies in French, consists of the general requirements for the Bachelor of Arts degree (see *General Requirements*) and 48 units of upper division coursework in French, including FREN 306, 307, 425, 426, and six additional courses in French literature. Cognate requirements are European history, 4 units; history of art or music, 4 units.

German

A student majoring in German completes the general requirements for the Bachelor of Arts degree (see *General Requirements*) and 44 units of upper division coursework in German and linguistics, including GRMN 405; LING 305. Cognate requirements are literature other than German, 4 units; SPCH 315. Additional courses in linguistics and a second foreign language are recommended. Students preparing for elementary or secondary teaching take EDCI 440 in the School of Education.

Spanish

Students who are not proficient in Spanish should study for at least one quarter in a Spanish-speaking country. Two programs in Spanish are available:

Program A, a diversified bilingual/crosscultural major for students preparing for elementary bilingual teaching, requires 28-36 units in each of the following four areas: English and speech, mathematics and physical or life sciences, social sciences, humanities, with a major concentration in Spanish. The program consists of the general requirements for the Bachelor of Arts degree (see *General Requirements*) and 126 units of coursework in Spanish and other disciplines, including ANTH 104, 334; BIOL 107; ENGL 304, 385, 415; HIST 156, 157; MATH 225, 251; MUCT 305; PHYS 304, 305; PSYC 104; SOCI 307; SPAN 304, 305, 307, 388, 409, 424, 427, 429, 474, 477; one course from SPAN 388, 447, 476; LING 305.

Program B, designed for students preparing for graduate studies, consists of the general requirements for the Bachelor of Arts degree (see *General Requirements*) and 44 units of upper division coursework in Spanish, including SPAN 304, 305, 315, 425, and five additional courses in Spanish literature. A second language through level IV and as much additional coursework in Spanish as possible are recommended.

MINOR SEQUENCES

The following minors are available:

French, 28 units, including FREN 201, 202.

German, 28 units, including GRMN 201, 202.

Spanish, 28 units, including SPAN 201, 202, 304, 305.

Linguistics, 28 units (presupposing a foreign language through level IV) including LING 305, 495; electives selected from the following courses: ANTH 306; SPPA 277; SPCH 315, 326; ENGL 385, 475; FREN 306; GRMN 405; PSYC 477; SPAN 304, 305.

GENERAL

Lower division	MDLG 101 Selected Language	1-4 units
	CHIN 101, 102 Chinese, I, II Language, civilization, culture. Individualized instruction. Conversation and laboratory periods as needed.	4 units
	CHIN 201, 202 Chinese III, IV Conversation and composition. Conversation and laboratory periods as needed.	4, 4 units
	JAPN 101, 102 Japanese I, II Language, civilization, culture. Individualized instruction. Conversation and laboratory periods as needed.	4, 4 units
	JAPN 201 Japanese III Conversation and composition. Conversation and laboratory periods as needed.	4 units
	RUSS 101, 102 Russian I, II Language, civilization, culture. Individualized instruction. Conversation and laboratory periods as needed.	4, 4 units

	RUSS 201, 202 Russian III, IV Conversation and composition. Conversation and laboratory periods as needed.	4, 4 units
Upper division	RUSS 335 Russian Culture and Literature	4 units
	JAPN 425 Japanese Culture and Civilization	4 units
	MDLG 429 Paris, Crossroad of the Western World	4 units
	MDLG 437 Masterpieces of Literature May be repeated with new content for additional credit.	4 units
	MDLG 475 Romanticism and the Arts Interdepartmental approach to the Romantic Movement and its manifestation in literature and the arts.	4 units
	MDLG 485 The Avant-Garde Interdepartmental approach to the avant-garde in literature and the arts.	4 units
	MDLG 489 God and Western Literature Does not apply toward a major or minor.	4 units
	EDCI 440 Curriculum and Instruction: Foreign Languages	4 units

ENGLISH AS A SECOND LANGUAGE

	ENSL 101, 102, 103 English as a Second Language Structure of the language, with stress on vocabulary building, pronunciation, reading, and writing. Vocabulary slanted toward everyday activities. Practice sessions as needed.	4, 4, 4 units
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FRENCH

Prerequisite for courses numbered above 300: FREN 202 or equivalent.

Introductory courses	FREN 101, 102 French I, II Language, civilization, culture. Individualized instruction. Conversation and laboratory periods as needed.	4, 4 units
	FREN 201, 202 French III, IV Conversation and composition. Conversation and laboratory periods as needed.	4, 4 units
Language and culture	FREN 304 Conversation	4 units
	FREN 305 Advanced Conversation May be repeated for additional credit.	2 units
	FREN 306 Grammar and Composition	4 units
	FREN 307 Analysis and Criticism	4 units
	FREN 425 Culture and Civilization	4 units
	FREN 426 The French Community	4 units
	FREN 427 Sociological/Cultural Research	4 units

Literature	FREN 347, 348, 349	Literary Currents I, II, III	4, 4, 4 units
		First quarter: Middle Ages through the Renaissance. Second quarter: baroque and classical literature. Third quarter: romanticism through contemporary literature.	
	FREN 456	The Theater: Tragedy	4 units
	FREN 457	The Theater: Comedy	4 units
	FREN 464	Poetry	4 units
	FREN 475	The Novel	4 units
	FREN 476	<i>Héros et Anti-héros</i>	4 units
		From Roland to Ubu.	
	FREN 478	The <i>Philosophes</i>	4 units
		Montaigne, Descartes, Pascal, Diderot, Montesquieu, Voltaire, Rousseau.	
	FREN 484	Existentialism	4 units
		From Kierkegaard to Sartre, Camus, and Marcel.	
	FREN 485	Literature of French-Speaking Africa	4 units
	FREN 499	Directed Study	1-4 units
Graduate	FREN 504	History of the French Language	4 units
	FREN 514	Structure and Style	4 units
		May be repeated for additional credit.	
	FREN 599	Special Studies	2-4 units

GERMAN

Prerequisite for courses numbered above 300: GRMN 202 or equivalent.

Introductory courses	GRMN 101, 102	German I, II	4, 4 units
		Grammar and pronunciation; reading of simple prose; conversation and laboratory drill.	
	GRMN 201, 202	German III, IV	4, 4 units
		Review of grammar, with emphasis on idioms. Reading of German prose to furnish a background of life, culture, and geographical aspects of Germany.	
		Prerequisite: GRMN 102 or equivalent.	
Language and culture	GRMN 304	Practical German Conversation	4 units
		Correct use of vernacular conversation based on everyday life and events. Brief review of grammar.	
	GRMN 305	Readings in the Sciences and Humanities	4 units
		To acquaint the student with the achievements of some outstanding Germans. Recommended for students wishing to acquire the reading knowledge expected of graduate students.	
	GRMN 405	Advanced Grammar and Composition	4 units
	GRMN 427	German Culture and Civilization	4 units

Literature	GRMN 345	Outline History of German Literature	4 units
		Main currents of German literature. Selections from works of representative authors.	
	GRMN 454	Classicism	4 units
		Works of Goethe, Schiller, and their contemporaries. Individual reports in German or in English.	
	GRMN 465	Enlightenment and <i>Sturm und Drang</i>	4 units
		Lessing as representative of the Enlightenment; the early works of Goethe and Schiller.	
	GRMN 474	Romanticism	4 units
		German romanticism; its chief exponents.	
	GRMN 475	Realism	4 units
	German authors from 1830 to 1890.		
	GRMN 484	Contemporary Literature	4 units
	GRMN 486	Religious Trends and Thought in German Literature	4 units
		Authors representing the development of religious thought from the Old High German period to the present, including mysticism, the Reformation, pietism, and the Enlightenment.	
	GRMN 499	Directed Study	1-4 units
Graduate	GRMN 504	History of the German Language	4 units
	GRMN 588	Proseminar in German Literature	4 units
	GRMN 599	Special Studies	2-4 units

SPANISH

Prerequisite for courses numbered above 300: SPAN 202 or equivalent.

Introductory courses	SPAN 101, 102	Spanish I, II	4, 4 units
	SPAN 201, 202	Spanish III, IV	4, 4 units
	SPAN 211, 212	Spanish for the Professional	4, 4 units
Language and culture	SPAN 304	Advanced Grammar I: Phonetics and Morphology	4 units
	SPAN 305	Advanced Grammar II: Syntax and Stylistics	4 units
	SPAN 307	Reading, Composition, Orthography	4 units
	SPAN 409	Contrastive Analysis of Spanish and English	4 units
	SPAN 424	Bilingualism and Biculturalism in the Arts	4 units
	SPAN 425	Hispanic Culture	4 units
	SPAN 427	Mexican-American Folklore and Culture	4 units
	SPAN 429	Chicanos of the Southwest	4 units

Literature	SPAN 315	Introduction to Literary Studies	4 units
	SPAN 346	Medieval and Renaissance Literature	4 units
	SPAN 365	Baroque and Eighteenth Century Literature	4 units
	SPAN 376	Survey of Nineteenth Century Literature	4 units
	SPAN 387	The Generation of '98	4 units
	SPAN 388	Modern Theater and Poetry	4 units
	SPAN 474	Spanish and Latin American Literature for Children	4 units
	SPAN 476	The Latin American Essay	4 units
	SPAN 477	The Contemporary Novel	4 units
	SPAN 486	Modernism and the Avant-Garde	4 units
	SPAN 499	Directed Study	1-4 units
Graduate	SPAN 504	History of the Spanish Language From Vulgar Latin to modern Spanish, with particular emphasis on the phonology and morphology of Spanish Romance.	4 units
	SPAN 525	Seminar in Spanish Literary Criticism Reading of scholarly works illustrating critical methods and techniques of literary analysis. Prerequisite: SPAN 315.	4 units
	SPAN 599	Special Studies	2-4 units

LINGUISTICS

LING 305	Structural Linguistics	4 units
	An introduction to linguistic science, including a brief survey of historical and comparative linguistics, and the fundamentals of structural and transformational grammar.	
SPPA 477	Psycholinguistics	4 units
LING 495	Readings in Linguistics	2-4 units
LING 599	Special Studies	2-4 units

DEPARTMENT OF
MUSIC

Chairman H. ALLEN CRAW, Professor of Music
PH.D. University of Southern California

Faculty PERRY W. BEACH, Professor of Music
PH.D. Eastman School of Music
HAROLD B. HANNUM, Professor of Music
M.MUS. Northwestern University

ANITA N. OLSEN, Associate Professor of Music
Licentiate Royal Academy of Music
Licentiate Trinity College of Music (London)

JOANN R. ROBBINS, Associate Professor of Music
D.M.A. University of Southern California

DONALD W. THURBER, Assistant Professor of Music
M.M.E. North Texas State University

ROBERT C. UTHE, Assistant Professor of Music
M.MUS. University of Montana

DONALD J. VAUGHN, Assistant Professor of Music
M.MUS. University of Redlands

Visiting faculty HERBERT BLOMSTEDT, Visiting Professor of Music
Diplomate Royal Academy of Music (Stockholm)

DAVID V. WILLCOCKS, Visiting Professor of Music
M.A. Cambridge University

Objectives The objectives of this department are to help the student gain an understanding and an appreciation of the musical heritage of man; to provide leisure time cultural and artistic activities, such as group music experiences and intelligent listening; to aid the student in acquiring the knowledge, techniques, and skills necessary for performers, composers, and church musicians.

Preparation for teaching A student preparing to teach music at the elementary or secondary level should plan to qualify for teaching credentials, and during his freshman or sophomore year he should consult the credentials adviser in the School of Education for detailed information concerning requirements. A student planning to teach is advised to complete the program in music education.

A program leading to the Master of Arts degree in the teaching of music is described in the BULLETIN of the School of Education.

COURSES IN APPLIED MUSIC

Regular registration is required of students for applied music studies whether for credit or for audit. Courses in applied music may be repeated for credit by reregistration for the same course number. Enrollment in courses may be limited.

- Individual instruction** Individual instruction in piano, organ, voice, violin, orchestral or band instruments, and conducting is offered with or without credit. Credit is earned as follows: (a) a minimum of nine half-hour lessons per quarter with five practice hours a week for each hour of credit; (b) participation in public recitals as specified by the instructor; (c) successful completion of a final examination.
- Class instruction** Class instruction may be offered in voice, piano, violin, as necessary in lieu of individual instruction.
- Group music** Group music courses may be repeated to a maximum of 12 units and must be taken each quarter by a student majoring in music, except as indicated for the specific degree. A student who registers for credit in a music organization is expected to be in the organization for the entire school year.
- Limitation of credit** (a) Credit in excess of 6 units of individual instruction courses must be supplemented by an equal number of units in theoretical studies; (b) eligibility for upper division credit is determined by the music faculty; (c) the consent of the instructor must be secured before the student performs in public.
- Applicability to major programs** For students majoring in music, the following conditions apply:
1. Individual music instruction must be under the direction of the music faculty.
 2. Individual instruction in the major field (voice, instrument) should be taken each year of residence, and the student must attain proficiency in one field.
 3. Admission to upper division individual instruction courses is granted pending the successful completion of an audition before the music faculty.
 4. A transfer student must take a minimum of 6 units of individual instruction courses in his primary field at this University.
 5. All majors, regardless of their concentration, must pass the piano proficiency test. Details concerning this requirement may be obtained from the chairman of the department.
 6. It is recommended that all students majoring in music with a voice emphasis take SPCH 315.
 7. Candidates for the Bachelor of Music degree are required to present senior recitals as indicated in the various concentrations; these should demonstrate a high level of proficiency.
 8. Attendance is required at a specified percentage of Department of Music programs as well as at certain concerts offcampus.

BACCALAUREATE MAJOR PROGRAMS

- Music** A student majoring in music completes the general requirements for the Bachelor of Arts degree (see *General Requirements*) and 67 units (30 upper divi-

sion) of coursework in music, including MUCT 111, 112, 113, 211, 212, 213, 314, 315; MUHL 205, 335, 336, 337; MURE 485 or 486; a minimum of 6 units in applied music (200 level or above); 9 units of organizations. Cognate requirements are PHIL 435; PHYS 204.

Music education

A student majoring in music education completes the general requirements for the Bachelor of Music degree (see *General Requirements*) and 88-90 units in music, including MUCT 111, 112, 113, 211, 212, 213, 314 or 411, 315, 415; MUED 305; MUPF 316, 317; MUHL 205; two courses from MUHL 335, 336, 337. Also included are 12 units of applied music, 10 of which are in one field (6 units 300 level or above); 11 units of organizations; 10 units of piano, voice and instrument classes, including MUPF 241, 242, 251, 252, 261, 262, 268, 328. Students with primary emphasis in piano are advised to take MUHL 325. Cognate requirements are PHIL 435 and PHYS 204. Additional music courses are recommended as electives.

Performance

A student majoring in performance completes the general requirements for the Bachelor of Music degree (see *General Requirements*) and 104-112 units in music, including MUCT 111, 112, 113, 211, 212, 213, 314, 315; MUHL 205, 335, 336, 337; MUPF 316, 317, 398, 498 (a full senior recital plus one-half junior recital). Also included are 24 units (10 units 400 level) of performance in the primary field, 8 units in one secondary field. Cognate requirements are PHIL 435 and PHYS 204. One of four patterns in performance may be followed:

A student emphasizing piano takes MUCT 411, 415; MUHL 324; MUPF 225, 325; one unit from MUPF 277-286 or 377-386; 9 units of organizations.

A student emphasizing organ takes MUCT 411, 415; MUHL 326; MUPF 328 (2 units); 12 units of organizations.

A student emphasizing an instrument other than piano or organ takes MUCT 411, 415; MUPF 328 (2 units); 12 units of organizations.

A student emphasizing voice takes MUHL 327; MUPF 316, 317, 328 (4 units); MURE 487; 12 units of choral organizations. A cognate requirement is French or German through level IV.

Church music

A student majoring in church music completes the general requirements for the Bachelor of Music degree (see *General Requirements*) and 108 units in music, including MUCT 111, 112, 113, 211, 212, 213, 314, 315; MUHL 205, 326, 335, 336, 337; MUPF 316, 317, 328, 498 (two public recitals: one in the primary emphasis; the other in the primary emphasis, the secondary emphasis, or a combination of both); MURE 485, 486, 487. Also included are 16 units (6 units 300 level or above) of performance in the primary field (organ, voice, or conducting); 12 units (3 units 300 level or above in either organ or voice if the primary emphasis is conducting) divided between the two fields not chosen for primary emphasis; 12 units of choral organizations. Cognate requirements are PHIL 435 and PHYS 204. Recommended courses are RELH 474 or 475 or 476.

MINOR SEQUENCE

A minor in music is 30 units (12 upper division), including MUCT 111, 112, 113; MUHL 335, 336, 337.

MUSIC COMPOSITION AND THEORY

Lower division	MUCT 105 Music Fundamentals	3 units
	Rudiments of music, dictation, sight-singing, and ear-training. Primarily for students without previous music education. Does not apply toward a major in music.	
	MUCT 111, 112, 113 Theory I	4, 4, 4 units
	Fundamentals of musicianship, including four-voice writing of triads, diatonic modulation, nonharmonic tones. Emphasis on correlated ear-training and keyboard harmony. Must be taken in sequence.	
	Prerequisite: MUCT 105 or equivalent.	
	MUCT 211, 212, 213 Theory II	4, 4, 4 units
	First quarter: completes the study of four-voice writing, including the writing of an original chorale. Continued emphasis on ear-training and keyboard harmony. Second quarter: eighteenth century counterpoint, including the chorale prelude, invention, fugue, canon. Third quarter: styles, comparative study of classic, romantic, impressionistic, and twentieth century composers. Must be taken in sequence.	
	Prerequisite: MUCT 111, 112, 113.	
Upper division	MUCT 314 Counterpoint	4 units
	Sixteenth century polyphony, with practice in the stylistic writing of two-part and three-part vocal music.	
	MUCT 315 Music Form	4 units
	Smaller forms, through the sonata, the rondo, and the contrapuntal forms.	
	Prerequisite: MUCT 111, 112, 113.	
	MUCT 411, 412 Composition	3, 3 units
	Practice in writing original compositions in the smaller forms. Emphasis on twentieth century compositional techniques. May be repeated for additional credit.	
	Prerequisite: MUCT 213 and consent of the instructor.	
	MUCT 415 Orchestration	3 units
	Instruments of the orchestra; arranging music for small ensembles and orchestra.	
	Prerequisite: MUCT 213.	
	MUCT 499 Directed Study	1-4 units

MUSIC EDUCATION

Upper division	MUED 305 Basic Music	4 units
	Rote and note singing; music listening; concepts of melody, rhythm, harmony.	
	MUED 499 Directed Study	1-4 units

MUSIC HISTORY AND LITERATURE

Lower division	MUHL 205 Introduction to Music	4 units
	Basic music literature, with some attention to other arts.	
Upper division	MUHL 324 Performance Repertoire: Piano	4 units
	The various periods of piano literature: styles, interpretations, and development of the instrument. Attendance at designated concerts in Riverside and Los Angeles. Requires two quarters.	

	MUHL 326 The Organ and Service Playing	2 units
	Organ and organ literature; problems and techniques of hymn playing, modulation, improvisation, accompaniment of choir and soloists; music selection.	
	MUHL 327 Performance Repertoire: Voice	4 units
	Solo literature from the lute air to twentieth century art song, including examples from Italian, German, French, Russian, Scandinavian, and English repertoire. Requires two quarters.	
	MUHL 335, 336, 337 History of Music	4, 4, 4 units
	First quarter: earliest times through 1600. Second quarter: 1600-1800. Third quarter: 1800 to present.	
	Prerequisite: MUCT 105 or equivalent.	
	MUHL 435 Advanced History of Music	4 units
	A different period selected each year: Renaissance, baroque era, classical era, romantic era, and twentieth century. May be repeated for additional credit.	
	Prerequisite: MUHL 335, 336, 337.	
	MUHL 499 Directed Study	1-4 units
Graduate	MUHL 645 Seminar in the History of Music	4 units

MUSIC PERFORMANCE

Lower division	MUPF 225 Accompanying	2 units
	Principles of and practice in accompanying both vocal and instrumental music. An additional unit may be earned by accompanying a senior recital.	
	Prerequisite: Consent of the instructor.	
Upper division	MUPF 316 Choral Conducting	2 units
	Conducting and rehearsal techniques, diction, tone, selection of repertoire, stylistic interpretation, score preparation, and management and organization of a choral department. Open to juniors and seniors only.	
	MUPF 317 Instrumental Conducting	2 units
	Conducting and rehearsal techniques, score reading, instrumentation, style patterns. Open to juniors and seniors only.	
	MUPF 325 Performance Techniques: Piano	4 units
	General principles of piano teaching methods: development of the hand, phrasing, fingering, pedaling, scales and arpeggios, studies and repertoire, ornaments, musical terms and signs. Requires two quarters.	
	MUPF 328 Performance Techniques: Voice	2 or 4 units
	Fundamental concepts of vocal technique; vocal repertoire appropriate for the developing singer. For voice emphasis students, instruction in analytic and diagnostic skills used in teaching, 4 units. For others, who serve as demonstration models, basic training in singing, 2 units. Requires two quarters.	
Class instruction	MUPF 241, 242 Stringed Instruments	1, 1 units
	Basic techniques of the orchestral stringed instruments.	
	MUPF 251, 252 Woodwind Instruments	1, 1 units
	Orchestral woodwind instruments.	
	MUPF 261, 262 Brass and Percussion Instruments	1, 1 units
	Orchestral brass and percussion instruments.	
	MUPF 268 Basic Piano	2 units
	Functional piano for music students lacking in piano background. May be repeated for additional credit.	

APPLIED MUSIC STUDIES

Individual instruction Attendance may be required at occasional class sessions. Credit at the 100 level does not apply toward a major or minor in music.

MUPF 144, 244, 344, 444	Brass	1-2 units per quarter
MUPF 145, 245, 345, 445	Organ	1-2 units per quarter
MUPF 146, 246, 346, 446	Percussion	1-2 units per quarter
MUPF 147, 247, 347, 447	Piano	1-2 units per quarter
MUPF 148, 248, 348, 448	Strings	1-2 units per quarter
MUPF 149, 249, 349, 449	Voice	1-2 units per quarter
MUPF 154, 254, 354, 454	Woodwind	1-2 units per quarter
MUPF 155, 255, 355, 455	Harpsichord	1-2 units per quarter
MUPF 156, 256, 356, 456	Guitar	1-2 units per quarter
MUPF 398, 498	Recital in Music	0 units
MUPF 417	Advanced Conducting	2 units per quarter
Prerequisite: MUPF 316 and 317.		

Group music Membership in University music groups is open to qualified students with the consent of the instructor.

MUPF 274, 374	Concert Band	1 unit per quarter
Some college-owned instruments available each quarter.		
MUPF 275, 375	Collegiate Choir	1 unit per quarter
MUPF 276, 376	Concert Orchestra	1 unit per quarter
MUPF 277, 377	University Singers	1 unit per quarter
MUPF 278, 378	String Ensemble	1 unit per quarter
MUPF 284, 384	String Quartet	1 unit per quarter
Prerequisite: Consent of the department chairman.		

MUPF 285, 385 Piano Ensemble	1 unit per quarter
Prerequisite: Consent of the department chairman.	
MUPF 286, 386 Wind and Percussion Ensemble	1 unit per quarter
Prerequisite: Consent of the department chairman.	
MUPF 287, 387 Vocal Ensemble	1 unit per quarter
Prerequisite: Consent of the department chairman.	
MUPF 369, 669 Seminar in Applied Music	1-4, 1-4 units
May be repeated for additional credit.	

RELIGIOUS MUSIC

MURE 485 Church Music	4 units
Vocal and instrumental music of the Church from the sixteenth century to the present.	
MURE 486 Hymnology	4 units
Christian hymnody from the Reformation to the present; examination of current hymnals, including modern trends.	
MURE 487 Sacred Choral Literature	4 units
Development of choral singing within the Christian church; literature of all periods; building of repertoire; styles and performance techniques demonstrated in a collegium musicum setting.	
MURE 489 Music and Worship	4 units
Nature of worship; music as an aid to worship; the role of choir, organist, director; congregational participation; music for youth and children; relation between church musicians and ministerial staff. Does not apply toward a major or minor.	
MURE 499 Directed Study	1-4 units
MURE 685 Seminar in Church Music	4 units

DEPARTMENT OF
PHYSICAL EDUCATION, HEALTH, and RECREATION

- Chairman WALTER S. HAMERSLOUGH, Associate Professor of Physical Education
ED.D. University of Oregon
- Faculty EUGENE W. NASH, Associate Professor of Physical Education
M.M. University of Southern California
M.P.H. Loma Linda University
- ROBERT K. SCHNEIDER, Associate Professor of Physical Education
M.A. Loma Linda University
- NELSON E. THOMAS, Associate Professor of Physical Education
PH.D. Florida State University
- JAMES L. PERRY, Assistant Professor of Physical Education (on leave)
M.A. University of Northern Colorado
- HELEN I. WEISMEYER, Assistant Professor of Physical Education
M.S. University of Southern California
- AUBREY L. CHEVALIER, Instructor in Physical Education
B.S. Loma Linda University
- L. JANENE TURNER, Instructor in Physical Education (on leave)
B.A. Loma Linda University
- JUDY R. WILSON, Instructor in Physical Education
B.S. Pacific Union College
- Collaborating faculty WILLIAM T. JARVIS, Associate Professor of Preventive and Community Dentistry,
School of Dentistry
PH.D. University of Oregon
- Lecturer ERVIN H. MATEER, Lecturer in Physical Education
B.A. Loma Linda University
- MYRLE E. RICH, Lecturer in Physical Education

Functions The Department of Physical Education, Health, and Recreation has the following functions: instruction in a variety of physical activities; supervision of the recreation and intramural activities program; and the preparation of teachers and recreational leaders.

Preparation for teaching A student preparing to teach physical education at the elementary or secondary level should plan to qualify for teaching credentials, and during his freshman or sophomore year he should consult the credentials adviser in the School of Education for detailed information concerning requirements.

BACCALAUREATE MAJOR PROGRAMS

Physical education A student majoring in physical education completes the general requirements for either the Bachelor of Arts or the Bachelor of Science degree (see *General Requirements*) and 63 units of coursework in physical education, including PEAC 108, 109, 181, 244-257, 274-278; PETH 204, 214, 216, 264, 265, 266, 355, 356, 357, 385, 408, 424, 426, 427, 429, 444, 483. Cognate requirements are BIOL 111, 112 or 131, 132; EDCI 450 in the School of Education.

- Health and physical education A student majoring in health and physical education completes the general requirements for either the Bachelor of Arts or the Bachelor of Science degree (see *General Requirements*) and 67 units of coursework in physical education, including PEAC 108, 109, 181, 244-257; PETH 204, 214, 216, 264, 265, 266, 355, 356, 357, 385, 408, 414, 415, 416, 424, 426, 427, 429, 444, 483. Cognate requirements are BIOL 111, 112 or 131, 132; FDNT 225; EDCI 450 in the School of Education.
- Recreation A student majoring in recreation completes the general requirements for either the Bachelor of Arts or the Bachelor of Science degree (see *General Requirements*) and 36 units of coursework in recreation including PEAC 244-257 (2 units), 274-278 (2 units), PETH 235, 334, 385, 408, 438, 439, 483. Additional coursework totaling 24 units is selected from one of the following options:
- General Recreation: PEAC 108, 109 (required); ART 201; BUAD 356; MUCT 305; PSYC 304, 455; SOSR 104; SPCH 204.
- Equestrian Recreation: PEAC 123-128 (1 unit); PETH 361, 362 (recommended) 364, 365 (required); AGRI 105, 205, 234, 334; BUAD 356.
- Therapeutic Recreation: PETH 437 (required); PSYC 304, 344, 406, 464, 465, 491; SOSR 104.
- Outdoor Recreation: BIOL 101, 102, 103, 314, 324, 465, 469, 475, 485; PHYS 304.
- Correctional Recreation: ADJS 305, 335, 378, 379; PSYC 455; SOCI 104, 304, 375, 415.
- Health science A student majoring in health science completes the general requirements for the Bachelor of Science degree (see *General Requirements*) and 74 units of coursework, including BIOL 101, 111, 112, 185, 427; CHEM 101, 102, 103; FDNT 225; PSYC 324; PETH 204, 214, 216, 314, 414, 415, 416, 417, 426, 429, 444; SOCI 307.
- Public health Students interested in a program emphasizing biostatistics, environmental health, health service administration, or health education in a medical and public health context should consult the BULLETIN of the School of Allied Health Professions for details of the undergraduate program in public health science offered on the Loma Linda campus.

MINOR SEQUENCES

Minors of 30 units (15 upper division) selected in consultation with the department adviser are available in the following areas:

- Physical education
- Health and physical education
- Recreation
- Health science
- Youth services

ASSOCIATE DEGREE PROGRAM

- Recreation A student in the associate degree program in recreation completes the general requirements for the Associate in Science degree (see *General Requirements*) and 39

units of coursework including PEAC 123-126 (any 2 courses), 133, 177, 204, 244-257, 274-278; PETH 204, 214, 235, 264-266, 334, 438. Cognate requirements are MUCT 105 or MUED 305; ART 204, 264.

COURSES

Lower division	PEAC 101-199 Physical Education Activity	1/2-1 unit per quarter
	Motor skills and physiological development; adaptive programs as needed. Up to 12 courses applicable toward a baccalaureate degree. Does not apply toward a major in physical education.	
	PEAC 101 Swimming I	PEAC 147 Field Hockey
	PEAC 102 Swimming II	PEAC 148 Men's Flagball
	PEAC 103 Swimming III	PEAC 149 Track and Field
	PEAC 104 Synchronized Swimming I	PEAC 150 Men's Soccer
	PEAC 105 Synchronized Swimming II	PEAC 154 Men's Softball
	PEAC 106 Scuba Diving I	PEAC 155 Women's Softball
	PEAC 107 Scuba Diving II	PEAC 156 Volleyball
	PEAC 108 Lifesaving	PEAC 157 Women's Flagball
	PEAC 109 Water Safety	PEAC 158 Women's Soccer
	PEAC 110 Independent Activities	PEAC 159 Water Polo
	PEAC 111 Body Mechanics	PEAC 161 Badminton I
	PEAC 112 Weight Training	PEAC 162 Badminton II
	PEAC 113 Jogging	PEAC 163 Diving I
	PEAC 114 Adaptive Activities	PEAC 164 Diving II
	PEAC 116 Gymnastics I	PEAC 165 Tennis I
	PEAC 117 Gymnastics II	PEAC 166 Tennis II
	PEAC 118 Gymnastics III	PEAC 167 Tennis III
	PEAC 119 Gymkhana	PEAC 171 Golf I
	PEAC 120 Physical Fitness Appraisal	PEAC 172 Golf II
	PEAC 121 Archery	PEAC 173 Golf III
	PEAC 123 Horsemanship Western Style I	PEAC 177 Backpacking
	PEAC 124 Horsemanship Western Style II	PEAC 178 Winter Backpacking
	PEAC 125 Horsemanship Western Style III	PEAC 179 Rock Climbing
	PEAC 126 Horsemanship English Style I	PEAC 181 Movement Skills
	PEAC 127 Horsemanship English Style II	PEAC 182 Self-Test Tumbling
	PEAC 128 Horsemanship English Style III	PEAC 183 Aerobic Rhythms
	PEAC 130 Skiing I	PEAC 184 Aerobic Conditioning
	PEAC 131 Skiing II	PEAC 185 Cross Country
	PEAC 133 Singing Games	PEAC 191 Judo I
	PEAC 134 Skating	PEAC 192 Judo II
	PEAC 135 Sailing	PEAC 194 Self-Defense I
	PEAC 138 Cycling	PEAC 195 Self-Defense II
	PEAC 144 Baseball	PEAC 197 Karate I
	PEAC 145 Men's Basketball	PEAC 198 Karate II
	PEAC 146 Women's Basketball	PEAC 199 Karate III
	PETH 204 Introduction to Physical Education, Health, and Recreation	2 units
	Orients freshman majors and minors to the breadth, scope, and nature of the professional program in health, physical education, and recreation.	
	PETH 214 Personal and Community Health	4 units
	Principles applied to daily living.	
	PETH 216 Care and Prevention of Injuries	2 units
	First aid. Lecture and laboratory.	
	PETH 235 Outdoor Recreation	2 units
	Methods of leadership in camping activities. Special attention given to understanding campers and reaching the goals and purposes of the program. Lecture and field experience.	

	PETH 237 Playground Leadership	2 units
	Aspects of playground and community center operations; leadership; program techniques in private and semipublic agencies.	
	PEAC 244-257 Professional Team Activities	1 unit
	PEAC 244 Baseball	PEAC 249 Track and Field
	PEAC 245 Men's Basketball	PEAC 250 Men's Soccer
	PEAC 246 Women's Basketball	PEAC 255 Women's Softball
	PEAC 247 Field Hockey	PEAC 256 Volleyball
	PEAC 248 Men's Flagball	PEAC 257 Women's Flagball
	PETH 264, 265, 266 Techniques of Officiating	2, 2, 2 units
	Autumn: flagball and soccer (men); basketball and volleyball (women). Winter: basketball and volleyball (men); flagball and field hockey (women). Spring: softball and track and field (men and women).	
	PEAC 274-278 Professional Individual Activities	1-2 units
	PEAC 274 Tennis	PEAC 277 Golf
	PEAC 275 Archery	PEAC 278 Badminton
	PEAC 276 Gymnastics	
	Prerequisite: PEAC 116.	
Upper division	PEAC 306, 307, 308 Underwater Technology	3, 3, 3 units
	Advanced diving.	
	Prerequisite: Scuba certificate.	
	PETH 314 Community Health	3 units
	Problems, agencies, and programs of health in the local, state, national, and world community. Visits to public health facilities.	
	PETH 334 Leisure, Recreation, and Society	4 units
	Principles and organization; public and private agencies; community resources; methods of converting leisure into useful, cultural, and creative activities. Lecture and laboratory.	
	PETH 355 Analysis of Fall Team Activities	3 units
	Materials, methods, and teaching progression. Men: flagball and soccer. Women: field hockey and flagball. Lecture and laboratory.	
	Prerequisite: Men, PEAC 248, 250; women, PEAC 247, 257.	
	PETH 356 Analysis of Winter Team Activities	3 units
	Materials, methods, and teaching progression in basketball and volleyball. Lecture and laboratory.	
	Prerequisite: Men, PEAC 245, 256; women, PEAC 246, 256.	
	PETH 357 Analysis of Spring Team Activities	3 units
	Materials, methods, and teaching progression in track and field. Men: baseball; women: softball. Lecture and laboratory.	
	Prerequisite: Men, PEAC 244, 249; women, PEAC 249, 255.	
	PETH 361, 362 Basic Horse Training Techniques	2, 2 units
	Principles of horse training. Lecture and laboratory.	
	PETH 364, 365 Equine Science	2, 2 units
	Grooming, nutrition, reproduction, diseases.	
	PETH 384 Movement Education in the Elementary School	2 units
	Methods and materials applied to all grade levels. For nonphysical education students.	
	Prerequisite: PEAC 181.	
	PETH 385 Practicum in Elementary School Movement Education	2 units
	Observation and field experience with various grade levels in movement activities. Lecture and laboratory.	
	Prerequisite: PEAC 181.	

PETH 408 Management of Physical Education and Intramural Programs	4 units
Principles and policies applied to programs, staff facilities, and equipment. Includes health, recreation, and intramurals.	
PETH 414 Mental Health and Drug Abuse Education	3-4 units
Mental health; abuse of drugs, alcohol, and tobacco. Teaching methods.	
PETH 415 Consumer Health and Communicable Diseases	4 units
Consumer health, degenerative and communicable diseases. Teaching methods.	
PETH 416 Human Sexuality	2 units
Family living and sex education. Teaching methods.	
PETH 417 Safety Education	2 units
Principles of industrial, farm, home, highway, and school safety; first aid; civil defense.	
PETH 418 School Health Programs	4 units
The total health program; services; environment.	
PETH 424 Mechanics of Movement	4 units
Related to sports, rhythmical activities, and correction of functional defects. Three class periods, one three-hour laboratory per week.	
Prerequisite: BIOL 111 or 131, 132.	
PETH 426 Physiology of Movement	4 units
Effects of movement upon the structure and function of body organs. Three class periods, one three-hour laboratory per week.	
Prerequisite: BIOL 111 or 131, 132.	
PETH 427 Psychology of Movement	4 units
Principles involved in effective motor learning. Three class periods, one three-hour laboratory per week.	
PETH 429 Evaluation of Movement	4 units
Statistics and tests relating to measurement in physical education; emphasis on test administration and application of results. Three class periods, one three-hour laboratory per week.	
PETH 437 Recreation for Special Groups	2 units
Recreational activities for mentally and physically ill, handicapped, and special groups. Lecture and laboratory.	
PETH 438 Recreational Leadership	4 units
Theory and practice in planning, conducting, and evaluating recreation programs in the community, school, and church. Lecture and laboratory.	
PETH 439 Fieldwork in Recreation	2-12 units
Directed experience in public and private recreation agencies.	
PETH 444 Principles of Physical Fitness	2 units
The total physical fitness program. Theory and practice.	
PETH 483 Seminar in Physical Education, Health, and Recreation	2 units
Principles, history, and professional preparation.	
PETH 489 God-Man-Sport	4 units
Philosophical inquiry of the place of movement and sport within the framework of Seventh-day Adventist thinking. Does not apply toward a major or minor, but can apply toward the general requirement in religion.	
PETH 499 Directed Study	1-4 units
Emphasis on research.	

Graduate	PETH 505	History and Issues of Physical Education	4 units
	PETH 506	Philosophy of Physical Education	4 units
	PETH 508	Administration of Physical Education Programs	4 units
	PETH 509	Curriculum and Facilities	4 units
	PETH 524	Human Performance Laboratory	1-4 units
	PETH 526	Scientific Aspects of Physical Activity	4 units
	PETH 527	Motor Learning	4 units
	PETH 528	Laboratory Techniques	4 units
	PETH 585	Movement Education	3 units
	PETH 589	Research Methods	4 units
	PETH 599	Directed Study	2-4 units

DEPARTMENT OF PHYSICS

Chairman	JAMES W. RIGGS, JR., Professor of Physics PH.D. Texas A and M University
Faculty	LESTER H. CUSHMAN, Professor of Physics M.S. University of Southern California ALBERT E. SMITH, Professor of Physics PH.D. Michigan State University LEWIS C. THOMPSON, Professor of Physics PH.D. Rice University RICHARD L. BOBST, Associate Professor of Physics M.A. University of South Dakota
Collaborating faculty	WILLIAM T. CHU, Associate Professor of Radiology, School of Medicine PH.D. Carnegie Institute of Technology

Objectives Fostering the growth of intellectual curiosity that will extend through postcollege years, and building an appreciation of the role of physics in everyday living constitute the general objectives of the department. For the physics major, there are the additional objectives of adequate preparation for entrance to one of the professional curriculums or for graduate study in physics, for secondary teaching in physics, or for employment under the Civil Service classification of junior scientist-physicist or in a similar grade in private industry.

Preparation for teaching A student preparing to teach physics at the secondary level should plan to qualify for teaching credentials, and during his freshman or sophomore year he should consult the credentials adviser in the School of Education for detailed information concerning requirements.

A program leading to the Master of Arts degree in the teaching of physics is described in the BULLETIN of the School of Education.

BACCALAUREATE MAJOR PROGRAMS

Physics A student majoring in physics completes either of the following programs:

Program A consists of the general requirements for the Bachelor of Arts degree (see *General Requirements*) and 68 units of coursework, including 40 units in physics, 28 units in another area of study such as biology, chemistry, mathematics, behavioral science, or industrial arts. Courses are selected in consultation with the department adviser.

Program B, designed for students preparing for graduate studies, consists of the general requirements for the Bachelor of Science degree (see *General Requirements*) and 60 units of coursework in physics and related fields selected in consultation with the department adviser. The cognate requirement is MATH 130.

Biophysics A student majoring in biophysics completes the general requirements for the Bachelor of Science degree (see *General Requirements*) and 56 units of coursework

in biology and physics including, BIOL 101, 102, 103, 364, 404; PHYS 211, 8 units from PHYS 212-215, 324, 358; BPHY 401; 8 units from PHYS: 344, 376, 464, 474; and 4 additional units in either biology or physics. Cognate requirements are CHEM 111, 112, 113, 371; MATH 130, 133, 231, or equivalent.

Engineering physics A student majoring in engineering physics, emphasizing digital computer logic and electronics, completes the general requirements for the Bachelor of Science degree (see *General Requirements*) and 60 units of coursework in physics and related fields selected in consultation with the department adviser. The cognate requirement is MATH 130.

MINOR SEQUENCE

A minor in physics is 28 units selected in consultation with the department adviser.

HONORS PROGRAM

lated fields selected in consultation with the department adviser. The cognate research experience in physics. Because graduation with honors requires the equivalent of two years in the program, interested students should apply early.

Coursework is selected in consultation with a faculty committee and includes PHYS 499 each quarter the student is in the program. One or more oral examinations are required during the program.

ASSOCIATE DEGREE PROGRAM

Engineering physics A student in the associate degree program in engineering physics completes the general requirements for the Associate in Science degree (see *General Requirements*) and 32 units of coursework selected in consultation with the department adviser.

PHYSICS

- Lower division
- PHYS 117 Introduction to Physics** 4-6 units
Elementary mechanics, fluids, sound, electricity, and atomic structure based on a study of models. A preprofessional course for students entering nursing, radiological technology, and other health-oriented professions. Does not apply toward a major in physics.
- PHYS 154 Electricity for Electronics** 4 units
Self-paced, programmed, laboratory-oriented course in elementary electricity, which lays the foundation for electronic circuit analysis. Does not apply toward a major in physics.
- PHYS 204 Physics of Music and Speech** 4 units
Sound waves and their relation to music and speech. Does not apply toward a major in physics.
- PHYS 209 Elementary Computer-Based Physics** 4 units
Exploration of physical ideas through elementary applied mathematical methods, with Basic Computer Language on a department minicomputer and terminals connected to the Supernova and IBM 360 computers.

	PHYS 210 Intermediate Physics	4 units
	Topics in elementary physics and problem solving. For students not adequately prepared for PHYS 211. Does not apply toward a major in physics.	
	PHYS 211 General Physics: Mechanics	4 units
	Required of students majoring in physics or in premedical or pre dental programs. Three class periods, one three-hour laboratory per week.	
	PHYS 212 General Physics: Electricity and Magnetism	4 units
	Three class periods, one three-hour laboratory per week.	
	PHYS 213 General Physics: Atomic and Nuclear Physics	4 units
	Three class periods, one three-hour laboratory per week.	
	PHYS 214 General Physics: Heat and Fluids	4 units
	Three class periods, one three-hour laboratory per week. Prerequisite: PHYS 211.	
	PHYS 215 General Physics: Light and Sound	4 units
	Three class periods, one three-hour laboratory per week. Prerequisite: PHYS 211.	
	PHYS 255 Electronics	4 units
	Self-paced, programed, laboratory-oriented course in electronics, with an introduction to operational amplifiers. Does not apply toward a major in physics. Prerequisite: PHYS 154 or 212.	
	PHYS 256 Digital Computer Electronics	4 units
	Self-paced, programed, laboratory-oriented course. Applied to computers and scientific instrumentation.	
	PHYS 299 Directed Study	1-4 units
	May be repeated for additional credit.	
Upper division	PHYS 304 Astronomy	4 units
	Star study; experiments; field trips. Use of a 16-inch Cassegrainian-Newton reflector telescope. Does not apply toward a major in physics.	
	PHYS 305 Physics and Man	4 units
	Does not apply toward a major in physics.	
	PHYS 306 Computer Methods in Physics	4 units
	Application of vector algebra, vector calculus, matrices, and tensors to problems in mechanics.	
	PHYS 321 Classical Mechanics	4 units
	Intermediate mathematical treatment.	
	PHYS 322, 323 Theoretical Mechanics	4, 4 units
	Newtonian mechanics, oscillatory motion, calculus of variation, Lagrangian and Hamiltonian dynamics, central force motion, two-particle collisions, dynamics of rigid bodies, and special theory of relativity.	
	PHYS 331 Geometrical Optics	4 units
	Lens design and use; aberrations, radiometry, optical instruments.	
	PHYS 332 Modern Optics	4 units
	Diffraction and interference phenomena; Fourier integral transforms in optics, lasers, and holography.	
	PHYS 344 Introduction to Quantum Mechanics	4 units
	Postulates, one- and two-dimensional box problems, numerical solution of Schrödinger's equation, and the simple harmonic oscillator.	
	PHYS 355 Digital Computer Logic	4 units
	Self-paced, programed, laboratory-oriented course.	

PHYS 356 Basic Transistor Electronics	4 units
Self-paced, programed, laboratory-oriented course.	
PHYS 376 Atomic and Molecular Physics	4 units
Perturbation solutions of Schrödinger's equation, atomic and molecular application of quantum mechanics.	
Prerequisite: PHYS 344 .	
BPHY 401, 402 Biophysics	4, 4 units
Physical phenomena associated with biological organisms.	
PHYS 404 Methods of Theoretical Physics	4 units
Matrices, determinants, diagonalization of matrices, operators, and tensor analysis as applied to radiation and matter.	
PHYS 408 Workshop	4 units
Selected topics studied for application to the elementary or secondary school curriculum. Does not apply toward a major in physics.	
PHYS 415 Advanced Physics Laboratory	2-4 units
Optics; nuclear and spectroscopic physics.	
PHYS 434 Advanced Modern Optics	4 units
Polarized light, dispersion theory, crystal propagation.	
PHYS 454 Computer Interfacing	4 units
Self-paced, programed, laboratory-oriented course in interfacing to experimental laboratory apparatus and manufacturing equipment.	
PHYS 457 Analog and Digital Electronics	4 units
Self-paced, programed, laboratory-oriented course, with introduction to computers.	
PHYS 458 Biomedical Electronic Instrumentation	4 units
Electronics as a tool for biological, chemical, physical, and medical instrumentation.	
PHYS 464 Thermal Physics	4 units
Classical statistical mechanics, quantum statistics, and applications to thermodynamics.	
PHYS 474 Nuclear Physics	4 units
Radioactivity, radiation detectors, nuclear reactions, nuclear models, reactor physics, and fission.	
PHYS 475 Solid State Physics	4 units
Bonding of solids, crystal structure, specific heats, bond theory of solids.	
PHYS 481, 482 Electromagnetism	4, 4 units
Theory of electric and magnetic fields, including solution of Laplace's and Poisson's equations; motion of bodies and particles in magnetic and electric fields; electromagnetic waves and radiation.	
PHYS 489 Christianity and the Rational Man	4 units
Man's response to God's call; structures of belief in religion and science. Does not apply toward a major or minor, but can apply toward the general requirement in religion. Identical to MATH 489 .	
PHYS 499 Directed Study	2-4 units
May be repeated for credit.	

Graduate	PHYS 524	Classical Mechanics	4 units
	PHYS 525	Classical Electrodynamics	4 units
	PHYS 526	Quantum Mechanics	4 units
	PHYS 527	Topics in Theoretical Physics	4 units
	PHYS 599	Research and Thesis in Physics	1-4 units

EARTH SCIENCE

	ESCI 205	Geology	4 units
	ESCI 334	Earth Science Fieldwork	1-4 units

ENGINEERING

The first two years of a baccalaureate program in engineering may be completed in the College of Arts and Sciences for transfer to Walla Walla College.

Lower division	ENGR 211, 212	Engineering Mechanics	4, 5 units
		Statics of physical structures; dynamics of particles and structures.	
	ENGR 228	Electrical Circuit Analysis	4 units
		Kirchoff's laws, Thevenin's theorem, two-terminal networks and equations. Laboratory.	
		Prerequisite: MATH 130; PHYS 212.	

DIVISION OF
RELIGION

Dean	WALTER F. SPECHT, Professor of New Testament PH.D. University of Chicago	
La Sierra campus faculty	HAROLD E. FAGAL, Professor of Biblical Studies PH.D. Fuller Theological Seminary	
	FRITZ GUY, Professor of Theology PH.D. University of Chicago	
	J. CECIL HAUSSLER, Professor of Biblical Studies PH.D. University of Southern California	
	KENNETH L. VINE, Professor of Biblical Studies PH.D. University of Michigan	
	THEADORE J. CHAMBERLAIN, Associate Professor of Religion and Sociology D.MIN. School of Theology at Claremont	
	V. BAILEY GILLESPIE, Associate Professor of Biblical Studies PH.D. Claremont Graduate School and University Center	
	MADELYNN J. HALDEMAN, Assistant Professor of Biblical Languages (on leave) M.A. Andrews University	
	PAUL J. LANDA, Assistant Professor of Church History M.A. Vanderbilt University	
	F. LYNN MALLERY, Assistant Professor of Applied Theology D.MIN. San Francisco Theological Seminary	
	ROBERT L. OSMUNSON, Assistant Professor of Biblical Studies ED.D. University of Southern California	
	T. RICHARD RICE, Assistant Professor of Theology PH.D. University of Chicago	
	CHARLES W. TEEL, JR., Assistant Professor of Religion and Sociology PH.D. Boston University	
	DAVID D. OSBORNE, Instructor in Biblical Studies M.DIV. Andrews University	
Lecturers	JOHN J. ROBERTSON, Lecturer in Theological Studies D.MIN. Andover-Newton Theological School	
Field personnel	WATSON A. AFAISE ERVIN BEASLEY BURTON J. BOUNDEY E. TED CALKINS GARY L. CASE JAMES FELL JAMES C. FITZGERALD DANIEL H. GODDARD DANIEL W. GODDARD ALFRED G. KROMMINGA	GERALD B. KUNKEL L. CALVIN OSBORN CLIFFORD J. RASMUSSEN CHESTER ROBINSON ERVIN L. SORENSEN JERRY S. SORENSEN ELWOOD E. STAFF ROBERT F. TOMLIN DOUGLAS VERSTEEG L. NORMAN VERSTEEG

The Division of Religion, while not a part of the College of Arts and Sciences, is closely affiliated with it. Members of the religion faculty who teach on the La Sierra campus are also members of the College faculty; and coursework in the Division of Religion is part of every degree and certificate program in the College. In connection with these interrelationships, the objectives of the division are:

- Objectives
1. To lead students to an understanding of God as Creator and Redeemer, and of man's appropriate response to him.

2. To develop an appreciation for and an understanding of the Bible as the written Word of God, an infallible rule of faith and practice for the Christian.

3. To direct students to an understanding of the basic teachings of the Christian faith and to an articulate expression of that faith as believed and taught by the Seventh-day Adventist church.

4. To lead students to a study of the Bible that utilizes the methodologies of biblical, theological, and historical studies, so that as laymen or ministers they will be able to participate in the work of the church as effective teachers of the Word.

5. To prepare students for the ministry of the church by teaching the basic skills necessary to move into practical fieldwork and seminary training.

6. To communicate to students a sense of personal vocation in connection with the church's mission to preach the Gospel of the kingdom to all the world.

7. To help students to develop a personal religious life of faith, prayer, worship, and service to their fellowmen.

Preparation for teaching

A student preparing to teach religion at the secondary level should plan to complete a ministerial studies major and qualify for teaching credentials. During his freshman or sophomore year he should consult the credentials adviser in the School of Education for detailed information concerning requirements.

Special programs

In preparation for certain kinds of specialized ministry and/or graduate study, a student may wish to combine a major program in religion with a major or minor program in another department. Interdisciplinary curriculums have been developed in religion and history (with emphasis in church history), religion and social service, and religion and behavioral science. Information concerning these curriculums may be obtained from the division office.

BACCALAUREATE MAJOR PROGRAMS

Religion

A student majoring in religion completes the general requirements for the Bachelor of Arts degree (see *General Requirements*) and 56 units of coursework in religion, including RELB 114, 224, 225, 244, 414, 415, 416; RELH 474, 475, 476; RELT 254, 434, 435, 436.

Ministerial studies

The preseminary program is designed for those planning to enter the ministry. A student who intends to major in ministerial studies applies to the Department of Religion during the spring quarter of his sophomore year. In addition, he completes, during that quarter, a prescribed battery of diagnostic tests which cost the student \$10.00. These are planned, along with a two-hour counseling session, to help the student evaluate himself and his call to the ministry. Each application is considered by the faculty of the department, and a letter of response is sent to each applicant before the fall quarter of his junior year.

A student majoring in ministerial studies completes the general requirements for the Bachelor of Arts degree (see *General Requirements*) and 79 units of coursework in religion, including RELB 114, 224, 225, 244, 414, 415, 416; RELH 474, 475, 476; RELP 264, 265, 361, 362, 364, 365 (3 units), 399 (3 units); RELT 254, 434, 435, 436. Cognate requirements are RELL 371, 372, 373, 471, 472, 473; RELP 405 (on the Loma Linda campus).

MINOR SEQUENCES

The following minors are available:

Religion, 32 units (16 upper division), including RELB 114, 224, or 225, 244, 414 or 415; RELT 254, 434, 435; electives, 4 units upper division.

Biblical languages, 33 units, including RELL 371, 372, 373, 471, 472, 473, 481, 482, 486.

ASSOCIATE DEGREE PROGRAM

A student in the associate degree program in Bible work and personal ministry (a program designed for the more mature student) completes the general requirements for the Associate in Arts degree (see *General Requirements*) and 96 units of coursework, including RELB 104, 206, 207, 244, 404, 424; RELT 205, 245, 354; RELP 264, 265, 281, 282, 283; PSYC 104; SOCI 104; SOSR 104; electives, 20 units.

BIBLICAL STUDIES

Lower division	RELB 104 Mission and Message of Jesus	4 units
	Life and ministry of Jesus; his teachings as they relate to current conditions and needs in the church and world. Not open to students who take RELB 105 or 114. Does not apply toward a major in religion or ministerial studies.	
	RELB 105 Gospel of John	4 units
	The Gospel of belief, written to establish faith in Jesus as the world's Redeemer. Johannine concepts of Christ, the Spirit, life, light, grace, and truth. Not open to students who take RELB 104 or 114. Does not apply toward a major in religion or ministerial studies.	
	RELB 114 Jesus and the Gospels	4 units
	Designed for religion majors. Gospels studied as sources for reconstructing the life and ministry of Jesus. Consideration given to preaching from the gospels and communicating their relevance in today's society. Not open to students who take RELB 104 or 105.	
	RELB 204 Acts of the Apostles	4 units
	The New Testament narrative, with emphasis on problems the Church faced in its earliest periods as it prepared to carry the Christian gospel into the Gentile world. Does not apply toward a major in religion or ministerial studies.	
	RELB 206 Message and Times of the Old Testament	4 units
	Survey of the Old Testament, with emphasis on its historical setting, unity, and revelation of the plan of redemption. Does not apply toward a major in religion or ministerial studies.	

	RELB 207 Message and Times of the New Testament	4 units
	Survey of the New Testament, with emphasis on its historical setting, unity, and abiding message as God's new covenant of grace. Does not apply toward a major in religion or ministerial studies.	
	RELB 224 History and Theology of the Old Testament I	4 units
	Creation to the time of David, with special consideration of the covenant relationship between God and Israel and of God's saving acts. Preaching values from the Old Testament.	
	RELB 225 History and Theology of the Old Testament II	4 units
	The time of Solomon to the postexilic era, with emphasis on the authority of the Old Testament for today's preaching.	
	RELB 244 Daniel and Revelation	4 units
	Historical and prophetic study, with emphasis on gospel implications.	
	RELB 299 Directed Study	1-4 units
	Prerequisite: Consent of the department chairman.	
Upper division	RELB 304 Understanding and Sharing Your Bible	4 units
	A theology of and methodology for a successful witness of Christ and His Word. Not open to students majoring in ministerial studies.	
	RELB 404 New Testament Letters	2-4 units
	Verse-by-verse study of selected documents, with emphasis on their theological and practical implications for Christians today. Does not apply toward a major or minor in religion or ministerial studies.	
	RELB 414 Life and Letters of Paul	4 units
	Reconstruction of the life of Paul and the setting of his early letters from Acts. Thessalonian and Corinthian letters, with special attention to the doctrines and practical problems they were written to correct and to their significance for the church today.	
	RELB 415 Theology of Paul	4 units
	Romans, Galatians, and the prison letters of Paul, emphasizing the doctrines of sin, salvation, and sanctification, and the relation of law and grace to Christian liberty.	
	RELB 416 Teachings of the Early Church	4 units
	Paul's ecclesiology, from his pastoral letters to Timothy and Titus. Hebrews, and the letters of James, Peter, John, and Jude as they relate to theological and ethical content of Christianity.	
	RELB 424 Old Testament Prophets	4 units
	Origin and development of Old Testament prophecy as a background for understanding the prophetic writings. Introduction to each writing prophet; the relevance of his message to his own time and to the present. Does not apply toward a major in religion or ministerial studies.	
	RELB 445 Biblical Archaeology	2-4 units
	The Bible in its religious, cultural, and political environment as illuminated by discoveries of modern archaeology. Does not apply toward a major in religion or ministerial studies.	
	RELB 494 Fieldwork in Middle East Archaeology	1-8 units
	Prerequisite: Consent of the instructor.	
	RELB 499 Directed Study	1-4 units
	Limited to students majoring in religion or ministerial studies.	
	RELB 514 Seminar in New Testament Studies	2-4 units
	Prerequisite: Consent of the instructor.	
	RELB 524 Seminar in Old Testament Studies	2-4 units
	Prerequisite: Consent of the instructor.	

THEOLOGICAL STUDIES

- Lower division**
- RELT 106 Introduction to Seventh-day Adventist Beliefs** **4 units**
 The biblical basis, formulation, and implications of the theological convictions of Seventh-day Adventists, with emphasis on those beliefs that distinguish Adventists from other Christians. Limited to students who are not Seventh-day Adventists. Does not apply toward a major in religion or ministerial studies.
- RELT 205 Dynamics of Personal Religion** **4 units**
 The experience of forgiveness, acceptance, and faith; the place and function of prayer, worship, Bible study, fellowship, and witness in religious life. Does not apply toward a major in religion or ministerial studies.
- RELT 245 Studies in Seventh-day Adventist Beliefs** **4 units**
 Fundamental doctrines of Christianity as taught by the Seventh-day Adventist church. Does not apply toward a major in religion or ministerial studies.
- RELT 254 Ellen G. White and the Church** **4 units**
 The prophetic ministry of Ellen G. White in relation to the origin and development of Adventism, with emphasis on the present significance of her writings.
- Upper division**
- RELT 354 Adventist Eschatology** **4 units**
 Study and chronological organization of final events of history as presented in the writings of Ellen G. White. Does not apply toward a major in religion or ministerial studies.
- RELT 404 Christian Foundations** **2-4 units**
 Basic assumptions of Christian belief: the validity of religious experience, the reality of God, the meaning of revelation, the uniqueness of Christianity among world religions. Not open to students who take RELT 436.
- RELT 434 Dimensions of Salvation** **4 units**
 Soteriology, including Christology, atonement, and sanctification; the Sabbath; the church as the community of faith; the final destiny of man.
 Prerequisite: Senior standing or consent of the instructor.
- RELT 435 Christian Understanding of God and Man** **4 units**
 Theological methodology; the nature and function of revelation; attributes of God; the nature of man.
 Prerequisite: Senior standing or consent of the instructor.
- RELT 436 Religious Belief and the Modern World** **4 units**
 Reality and relevance of God for contemporary man.
 Prerequisite: Senior standing or consent of the instructor.
- RELT 437 Current Issues in Adventism** **4 units**
 Selected questions of current interest concerning theological understanding, ecclesiastical polity, church policies, and practices, etc., in preparation for active involvement in the life of the church. Does not apply toward a major in religion or ministerial studies.
 Prerequisite: Consent of the instructor.
- RELT 451 Christian Ethics** **2-4 units**
 Theological foundations of ethics; methods for making sound ethical judgments; implications of Christian belief for selected problems in personal and social ethics. Does not apply toward a major in religion or ministerial studies.
- RELT 464 Religious Development and Nurture** **4 units**
 Biblical principles of emerging self-identity and faith concepts; religious development of children, adolescents, and youth; religious learning problems and practical methodologies in communicating religious values.
- RELT 484 Seminar in Personal Religion** **2-4 units**
 Advanced study of the dynamics of personal religion. Does not apply toward a major in religion or ministerial studies.

RELT 485 Seminar on Church	2-4 units
The nature, mission, and function of church. Sources include biblical denominational, and contemporary literature.	
RELT 504 Colloquium in Seventh-day Adventist Beliefs	2-4 units
Limited to graduate students who are not Seventh-day Adventists.	
RELT 534 Seminar in Theological Studies	2-4 units
Prerequisite: Consent of the instructor.	

PROFESSIONAL STUDIES

Courses in this section do not apply toward the general requirement in religion.

Lower division	RELP 208 Field Literature Evangelism	5 units
	Summer program in field literature evangelism.	
	Prerequisite: Satisfactory prior arrangements with the Division of Religion and the respective conference publishing departments.	
	RELP 264, 265 Evangelism I, II	4, 4 units
	Theory and practice of communicating Adventist beliefs to individuals and groups.	
	RELP 281, 282, 283 Seminar in Personal Ministry	2, 2, 2 units
	Practice and application of the principles involved in Bible work and personal ministry.	
	Prerequisite: Consent of the instructor.	
Upper division	RELP 305 World Missions	4 units
	Special study of the methods, problems, and policies of world missions. Does not apply toward a major in religion or ministerial studies.	
	RELP 361, 362 Homiletics I, II	3, 3 units
	The art of preaching, with emphasis on homiletical literature and methodology, biblical interpretation, and practical experience. Taken concurrently with RELP 365.	
	RELP 364 The Adventist Ministry	3 units
	Personal and professional requirements for the Adventist ministry. Taken concurrently with RELP 365.	
	RELP 365 Externship	1 unit
	Practical application of the principles of church leadership and preaching by assignment to local churches. Taken concurrently with RELP 361, 362, or 364. Limited to juniors and seniors majoring in ministerial studies. May be repeated for additional credit to a maximum of 3 units.	
	RELP 366 Field Program in Pastoral Evangelism	4 units
	Instruction and participation in visitation, Bible studies, church administration, special services, and public evangelism. Summer only; selected location.	
	Prerequisite: Consent of the instructor.	
	RELP 399 Seminar in Ministerial Studies	1/2 unit
	Limited to students majoring or minoring in religion or ministerial studies. May be repeated for additional credit to a maximum of 3 units.	
	RELP 405 Introduction to Clinical Pastoral Counseling	4 units
	Offered on the Loma Linda campus.	

HISTORICAL STUDIES

One course in this section may be chosen to apply toward the general requirement in religion.

Upper division	RELH 474 The Christian Heritage: The Making of Christendom	4 units
	Growth and expansion of the Christian Church and the development of Christian thought from the Apostolic Age to A.D. 1350.	
	RELH 475 The Christian Heritage: The Reform of Christendom	4 units
	Christianity in High Middle Ages and Reformation, with emphasis on sixteenth century developments and shaping of new movements and churches down to A.D. 1648.	
	RELH 476 The Christian Heritage: Christendom since A.D. 1648	4 units
	Growth of modern religious traditions, their influence in Europe and North America, with particular emphasis on the American religious scene and development of Adventism.	
	HIST 466 The Early Christian Church	3-4 units
	HIST 467 The Medieval Church	3-4 units
	HIST 468 History of the Papacy	3-4 units
	HIST 469 The Christian Humanists of the Renaissance	3-4 units
	HIST 474 The Lutheran Reformation	3-4 units
	HIST 476 The Swiss Reformation and Calvinism	3-4 units
	HIST 478 The English Reformation	3-4 units
	HIST 480 Twentieth Century Church History	3-4 units
	HIST 635 Seminar in Church History	4 units

BIBLICAL LANGUAGE

Upper division	RELL 371, 372, 373 Basic Greek I, II, III	4, 4, 4 units
	Linguistic analysis of grammatical structure of both New Testament Greek sentences and English sentences, with emphasis on their differences. A small basic vocabulary is required.	
	RELL 471, 472, 473 Advanced Greek I, II, III	3, 3, 3 units
	Emphasis on syntax as it occurs in Greek New Testament. Passages for translation and for exegesis selected from the Gospels and the Pauline Epistles.	
	RELL 481, 482 Basic Hebrew I, II	4, 4 units
	Biblical Hebrew grammar and textual materials.	
	RELL 486 Seminar in Biblical Languages	4 units
	Prerequisite: Consent of the instructor.	

DEPARTMENT OF
SECRETARIAL and BUSINESS EDUCATION

- Chairman LOIS E. McKEE, Professor of Secretarial and Business Education
ED.D. University of Nebraska
- Faculty IRENE E. ORTNER, Professor of Secretarial and Business Education
M.A. Boston University
Certified Professional Secretary
- CHARLENE A. BAKER, Associate Professor of Secretarial and Business Education
M.A. Columbia University
Professional Diploma, Teacher of Business Subjects, Columbia University

Objectives This department provides specialized instruction for office careers and teaching positions in business education.

Preparation for teaching A student preparing to teach secretarial or business skills at the secondary level should plan to qualify for teaching credentials, and during his freshman or sophomore year he should consult both his department adviser and the credentials adviser in the School of Education for detailed information concerning requirements.

A program leading to the Master of Arts degree in the teaching of business education is described in the School of Education BULLETIN.

BACCALAUREATE MAJOR PROGRAMS

Secretarial administration A student majoring in secretarial administration completes the general requirements for either the Bachelor of Arts or Bachelor of Science degree (see *General Requirements*) and 54 units of coursework, including SECR 103, 121, 122, 123, 211, 212, 305, 324, 325, 376, 461, 462; 8 units of upper division electives in SECR. Cognate requirements are ACCT 201; ECON 254, 255; HMEC 289. Recommended courses are ACCT 202, 203; BUAD 381, 382.

Secretarial administration/medical A student majoring in secretarial administration/medical completes the general requirements for either the Bachelor of Arts or Bachelor of Science degree (see *General Requirements*) and 50 units of coursework, including SECR 103, 121, 122, 123, 211, 212, 244, 305, 325, 376, 461, 462; 4 units of upper division elective in SECR. Cognate requirements are ACCT 201; BIOL 107; ECON 254, 255; HMEC 289.

Secretarial administration/legal A student majoring in secretarial administration/legal completes the general requirements for either the Bachelor of Arts or Bachelor of Science degree (see *General Requirements*) and 46 units of coursework, including SECR 103, 121, 122, 123, 211, 212, 305, 325, 354, 376, 461, 462. Cognate requirements are ACCT 201; BUAD 381, 382; ECON 254, 255; HMEC 289.

Secretarial administration/educational A student majoring in secretarial administration/educational completes the general requirements for either the Bachelor of Arts or Bachelor of Science degree (see *General Requirements*) and 46 units of coursework, including SECR 103,

121, 122, 123, 211, 212, 305, 325, 376, 461, 462; EDFO 404 in the School of Education. Cognate requirements are ACCT 201; ECON 254, 255; HMEC 289; PSYC 405; EDFO 321 in the School of Education. A recommended course is PSYC 324.

Secretarial
administration/
editorial

A student majoring in secretarial administration/editorial completes the general requirements for either the Bachelor of Arts or Bachelor of Science degree (see *General Requirements*) and 50 units of coursework, including SECR 103, 121, 122, 123, 211, 212, 305, 325, 376, 461, 462; CMME 227, 228. Cognate requirements are ACCT 201; ECON 254, 255; HMEC 289; 8 units from CMME 329, 336, 337, 338, 346, 434, 435.

Business education

A student majoring in business education completes the general requirements for the Bachelor of Science degree (see *General Requirements*) and 80 units of coursework in secretarial skills and procedures, business, and economics, including SECR 103, 121, 122, 123, 305, 324, 376; ACCT 201, 202, 203; SECR 211, 212 or ACCT 301, 302; BUAD 341, 381, 382, 405; DAPR 204; ECON 254, 255; HMEC 446. Cognate requirements in the School of Education are EDCI 204, 414, 430, 435, 436; EDFO 305. A recommended course is EDCI 447.

MINOR SEQUENCE

A minor in secretarial administration is 28 units (12 upper division), including SECR 103, 121, 122, 123, 461, 462.

ASSOCIATE DEGREE PROGRAMS

Stenography

A student in the associate degree program in stenography completes the general requirements for the Associate in Arts degree (see *General Requirements*) and SECR 103, 121, 122, 123, 305, 325. Cognate requirements are ACCT 201; HMEC 289. Recommended courses are SECR 111, 112, 113, 211, 212.

Medical office assisting

A student in the associate degree program in medical office assisting completes the general requirements for the Associate in Arts degree (see *General Requirements*) and SECR 103, 121, 122, 123, 244, 305, 325. Cognate requirements are ACCT 201; BIOL 107; HMEC 289. Recommended courses are SECR 111, 112, 113, 211, 212.

SECRETARIAL SKILLS AND PROCEDURES

Lower division

SECR 101 Beginning Typewriting **4 units**
For students with no previous instruction.

SECR 102 Intermediate Typewriting **4 units**
For students with some previous instruction who wish to improve skills or to qualify for advanced typewriting.

Prerequisite: SECR 101 or equivalent.

	SECR 103 Advanced Typewriting	4 units
	Typical typewriting problems to be solved by the secretary. Prerequisite: SECR 102 or equivalent.	
	SECR 104 Personal Typing Review	2 units
	Improvement of typing skills. Individualized instruction, with emphasis on personal and business correspondence, term papers, and arranging material in columnar form. Does not apply toward a major in secretarial administration.	
	SECR 110 Personal Shorthand	2 units
	A new system of shorthand for use in personal notetaking. Programed instruction. Does not apply toward a major in secretarial administration.	
	SECR 111, 112, 113 Theory of Gregg Shorthand	4, 4, 4 units
	Speed goal for year: 80 words per minute on new material.	
	SECR 121 Office Services I	4 units
	Evaluation and refinement of basic skills in office work.	
	SECR 122 Office Services II	4 units
	Procedures involving the use of adding, calculating, transcribing, duplicating, and filing equipment. Prerequisite: SECR 102, 121, or equivalent.	
	SECR 123 Office Services III	4 units
	Duties encountered in most offices: processing mail, making appointments, receiving callers, etc. Personal traits of the successful employee. Prerequisite: SECR 102, 121, 122.	
	SECR 211, 212 Shorthand Dictation and Transcription	4, 4 units
	Development of shorthand speed; fast and accurate transcription at the typewriter. Speed goal: 120 words per minute on new material. Prerequisite: SECR 103 (may be taken concurrently), 113, or equivalent.	
	SECR 244 Secretary in a Medical Office	4 units
	Organization of the medical office; procedures for making appointments, recording information, and other aspects; human relationships; introduction to medical terminology. Prerequisite: SECR 102, 123.	
	SECR 274 Medical Office Procedures	3 units
	Supervised observation and experience in medical offices. Weekly conference with supervisor. May be repeated once for additional credit. Prerequisite: SECR 244; consent of the department.	
	SECR 299 Directed Study	1-4 units
Upper division	SECR 305 Secretarial Seminar	1/2 unit per quarter
	Enrichment program for secretarial and business education students. Required of all students majoring in a program of the department each quarter of attendance at the university. Recommended for students minoring in a program of the department.	
	SECR 324 Business Communications	4 units
	Effective written communication as a tool of management.	
	SECR 325, 326 Word Processing	4, 4 units
	Practice in the use of word processing equipment for form paragraphs and letters, machine transcription, and special typing projects in the student's specialized area. Prerequisite: SECR 103, 123.	

- SECR 344 Secretary in a Medical Office** **4 units**
 Additional assignments in SECR 244 for upper division credit. Not open to sophomores.
 Prerequisite: SECR 102, 123.
- SECR 354 Secretary in a Law Office** **4 units**
 Legal terminology and forms. Activities characteristic of secretarial work in the office of an attorney.
 Prerequisite: SECR 123.
- SECR 376 Office Administration** **4 units**
 Functions and activities. Interrelationships of personnel, equipment, and service.
- SECR 461, 462 The Administrative Secretary** **4, 4 units**
 Attitudes, responsibilities, and personal qualities of the executive secretary. Class discussion, in-basket assignments, and work simulation. Offered alternate years.
 Prerequisite: SECR 123.
- SECR 474, 475 Practicum in Secretarial Work** **3, 3 units**
 Supervised work experience. Professional reading and conferences.
 Prerequisite: Consent of the department.
- SECR 489 Ethics for the Christian Office Employee** **4 units**
 Attitudes, responsibilities, and traits which should distinguish the Christian in an office environment. Does not apply toward a major or minor, but can apply toward the general requirement in religion. Offered alternate years.
- SECR 499 Directed Study** **1-4 units**

BUSINESS EDUCATION

- Upper division **BUED 499 Directed Study** **1-4 units**
- EDCI 435, 436 Curriculum and Instruction in Business Education** **4, 4 units**
 Literature, history, philosophy, and methods of business education. First quarter, shorthand and typewriting; second quarter, bookkeeping and general business.
 Prerequisite: EDCI 430 (may be concurrent).
- Graduate **BUED 514-520 Workshop in Business Education** **2-3 units**
 Concentrated consideration of a major problem or area in terms of procedures, materials, research, and individual projects.
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| BUED 514 Shorthand | BUED 517 Bookkeeping and Accounting |
| BUED 515 Typewriting | BUED 518 General Business |
| BUED 516 Office Practice | BUED 519 Data Processing |
- BUED 525 Trends and Problems in Business Education** **4 units**
 Analysis of problems, trends, and recent developments in business education, with particular attention to individual student needs or interests.
- BUED 527 Evaluation of Research in Business Education** **4 units**
 Analysis of major research studies and the classroom relevance of their findings.
- BUED 614 Seminar in Office Administration** **4 units**
 Contemporary problems in office administration. Emphasis on trends and developments and on individual student research.
- BUED 615 Curriculum Seminar in Business Education** **4 units**
 History, philosophy, and processes of curriculum construction. Development of a curriculum and of individual business courses.

INTERDEPARTMENTAL COURSES

EARTH SCIENCE

- ESCI 205 Geology** 4 units
Geological processes of the earth, including rock formation, wind and water erosion, mountain building, volcanic activity, and earthquakes. Field trips.
- ESCI 334 Earth Science Field Work** 1-4 units
Field study of earth science problems.
Prerequisite: ESCI 205 or consent of the instructor.
- ESCI 431, 432 Geochemistry** 4, 4 units
Chemical concepts and their geochemical applications in areas of interest in elementary geology.
Prerequisite: CHEM 351, 352; ESCI 205 or equivalent; and consent of the instructor.
- ESCI 531, 532 Advanced Topics in Geochemistry** 4, 4 units
Prerequisite: CHEM 351, 352; ESCI 205 or equivalent; and consent of the instructor.

INTERDISCIPLINARY STUDIES

Two concurrent, two-year series of wide-ranging courses totaling 48 units are offered for students admitted to the program in interdisciplinary studies. This program constitutes an alternative way of meeting most of the general requirements for the baccalaureate degrees conferred by the College.

Because of the integrated and sequential nature of the courses, students may enter the program only at the beginning of the fall quarter of their freshman year, and must register for both courses each quarter. A student may transfer out of the program at the end of any quarter, and the credit earned may be applied toward the various general requirements.

Further information about the program and its criteria for admission may be obtained from the Office of the Dean.

- Lower division **INTD 101, 102, 103 Human Being and Behavior I** 4, 4, 4 units
Principal factors that contribute to personal identity and influence human behavior: social, psychological, economic, political, religious.
- INTD 151, 152, 153 Development of Ideas I** 4, 4, 4 units
The place of scientific understanding and achievement in Western culture, including the history of science, its methods and limitations, its impact on life and the natural environment, and its relation to Christian faith.
- INTD 201, 202, 203 Human Being and Behavior II** 4, 4, 4 units
Human existence in society: the structure, dynamics, and behavior of small and large groups, including the family, school, church, and economic and political institutions and systems.
- INTD 251, 252, 253 Development of Ideas II** 4, 4, 4 units
Music, literature, and visual art in relation to the events and ideas that produced them.
- INTD 499 Directed Study** 1-4 units

LIBRARY SCIENCE

LIBR 204 Techniques of Library Research
For the general student.

2 units

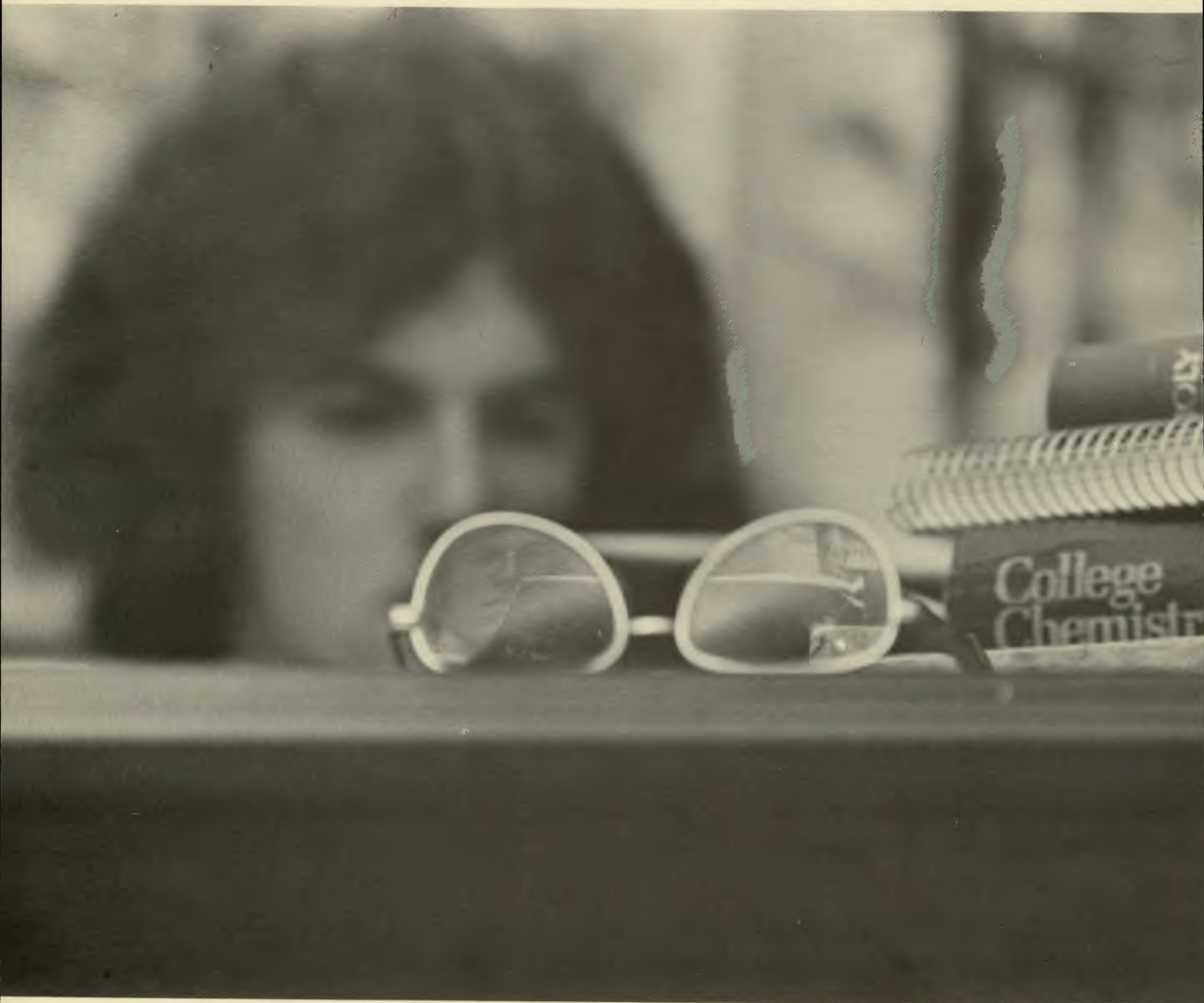
PHILOSOPHY

A minor in philosophy is offered through the Department of History.

Lower division	PHIL 205 Knowledge	4 units
	Features of valid thinking; the possibility, types, and instruments of knowledge, with special attention to the rationalist and empiricist traditions.	
	PHIL 206 Being	4 units
	Analogy and inference as logical tools; concepts of nature, man, and God; synthesis and evaluation of a worldview that starts from Christian premises.	
	PHIL 207 Value	4 units
	Analysis of the nature, criteria, and application of value judgments in ethics and aesthetics.	
	PHIL 208 Logic	4 units
Analysis of principles of deductive and inductive reasoning, using methods of classical and modern logic.		
Upper division	PHIL 435 Aesthetics	4 units
Principles underlying the creation and appreciation of the fine arts, leading to a basis for evaluation of artistic expression.		

SCIENCE

Upper division	SCNC 404 History of Science	4 units
Scientific thought and institutions from antiquity to the mid-twentieth century; the emergence of science as a cultural force. Topics: origins of modern science, contributions of astronomy to scientific practice, the chemical revolution of the eighteenth century, the idea of evolution in geology and biology, the development of modern physics.		







III

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THE TRUSTEES

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Vice President	Development Affairs	

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Librarian	GRACE P. HOLM, M.S.
Associate Librarian	JONATHAN N. HARDT, M.S.L.S.
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Assistant Deans	ANITA M. HAYES, B.S. POLLY K. PFLAUMER, M.A.

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Accountant	EARL M. GILLESPIE, B.A.

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Director	JOHN T. HAMILTON, M.MUS.
Public Information Officer	BONNIE L. DWYER, B.A.

ARTS AND SCIENCES

LA SIERRA CAMPUS COMMITTEES

Awards and Scholarships	LaVern R. Andress, <i>Chairman</i> William M. Allen David R. Dickerson	Malcolm S. Fisher Laurene W. Jenkins Walter C. Mackett	Judy E. Osborne George T. Simpson Students
Religious Activities Committee	Walter F. Specht, <i>Chairman</i> David D. Osborne, <i>Cochairman</i> Gary L. Bradley Walter S. Hamerslough Maurice D. Hodgen Laurene W. Jenkins	Paul J. Landa F. Lynn Mallery V. Norskov Olsen Robert L. Osmunson T. Richard Rice John J. Robertson Gary M. Ross	Beulah F. Stevens Charles W. Teel, Jr. Tracy R. Teele Kenneth L. Vine Lloyd H. Wilson Adeny S. Woods Students
Student Affairs Committee	Tracy R. Teele, <i>Chairman</i> P. Sherrill Baugher Jacques Benzakein Theadore J. Chamberlain Roger A. Churches David R. Dickerson	Agnes R. Eroh Malcolm S. Fisher Victor S. Griffiths Walter S. Hamerslough Melvin G. Holm Ivan G. Holmes	Laurene W. Jenkins Ruth C. Maschmeyer Judy E. Osborne Gaines R. Partridge T. Richard Rice Students
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Teacher Education Council	Viktor A. Christensen, <i>Chairman</i> Donald G. Bower Kendall D. Butler Mary P. Byers Rogers A. Churches	Delmer I. Davis Agnes R. Eroh Margarete A. Hilts Frederick G. Hoyt Geoffrey T. Jones	C. Grant Macaulay Lois E. McKee Willard H. Meier Wilma F. Phillips Peter G. Strutz

THE COLLEGE OF ARTS AND SCIENCES

FRITZ GUY, PH.D., Dean

IVAN G. HOLMES, PH.D., Associate Dean

FAYE M. CHAMBERLAIN, B.S., Assistant to the Dean

ADMINISTRATIVE COMMITTEES

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Curriculum	Ivan G. Holmes, <i>Chairman</i> Jacques Benzakein C. Douglas Eddleman	John W. Elick Harold E. Fagal Grosvenor R. Fattic Lois E. McKee	Nelson E. Thomas Leland Y. Wilson
Student Recommendations	Laurence W. Botimer, <i>Chairman</i> William M. Allen Richard L. Bobst	David R. Dickerson Carlyle D. Flemming Laurene W. Jenkins Ivan G. Holmes	Norman L. Mitchell Carolann S. Rosario Albert E. Smith Tracy R. Teele

FACULTY of the COLLEGE, with
COLLABORATING FACULTY MEMBERS, LECTURERS, and OTHERS

Teachers holding faculty status in the College of Arts and Sciences constitute the Faculty of the College.

Some whose primary faculty appointments are in other Schools of the University are listed in departments of the College as Collaborating Faculty.

Lecturers and Assistant Instructors have teaching positions but not faculty status in the College.

All teachers listed in the departments are found in the alphabetical listing below, with the exception of adjunct and field personnel. The code letters indicate the department where information about the teacher is found.

AGRI	Agriculture	HIST	History and Political Science
ART	Art	INDS	Industrial Studies
BHAV	Division of Behavioral Sciences	MATH	Mathematics
BIOL	Biology	MDLG	Modern Languages
BSNS	Business and Economics	MUSC	Music
CHEM	Chemistry	PHYS	Physics
CNSC	Consumer Related Sciences	PSED	Physical Education
COMM	Communication	RLGN	Division of Religion
ENGL	English	SECR	Secretarial and Business Education

Achord, Clifford D.	BHAV	Boram, C. Arnold	AGRI
Achord, Thaddeus C.	BHAV	Botimer, Laurence W.	CHEM
Airey, Wilfred J.	HIST	Botttroff, Stephen M.	COMM
Allen, William M.	CHEM	Bower, Donald G.	INDS
Anderson, Dale L.	AGRI	Bradley, Gary L.	BIOL
Anderson, Godfrey T.	HIST	Brailsford, Margaret J.	COMM
Andress, Vern R.	BHAV	Brand, Leonard R.	BIOL
Andress, Monte R.	BHAV	Britt, E. Evelyn	COMM
Arendt, Kenneth A.	BIOL	Bullas, Leonard R.	BIOL
Arshat, Ben D.	BHAV	Burgdorff, George G.	AGRI
		Burke, Ruth E.	MDLG
Baker, Bruce W.	BHAV	Burman, Robert J.	ART
Baker, Charlene A.	SECR	Butler, Jonathan M.	HIST
Baker, Dinah S.	CNSC	Byers, Mary P.	CNSC
Banks, R. Richard	BHAV	Byrd, Donald J.	BSNS
Beach, Perry W.	MUSC		
Becker, E. Lee	BSNS	Campbell, Paul O.	COMM
Benzakein, Jacques	MDLG	Carr, John E.	AGRI
Besel, Hilmer W.	MATH	Case, Norman M.	BIOL
Bisseger, Lynda B.	BSNS	Centerwall, Willard R.	BHAV
Bjerkkan, Ak-Chr.	BHAV	Chadwick, Arthur V.	BIOL
Blomstedt, Herbert	MUSC	Chamberlain, Theadore J.	BHAV, RLGN
Bobst, Richard L.	PHYS	Chu, William T.	PHYS

Churches, Roger A.	ART	Hartley, Jack L.	COMM
Clausen, Conrad D.	BIOL	Harwood, Richard R.	AGRI
Cohen, Melvin S.	COMM	Hausler, J. Cecil	RLGN
Couperus, Molleurus	BHAV	Havlicek, William J.	ART
Craw, H. Allen	MUSC	Hayasaka, Ruby S.	CNSC
Cushman, Lester H.	PHYS	Herrmann, E. Clifford	CHEM
Dagleish, Arthur E.	BIOL	Hillock, Wilfred M.	BSNS
Damazo, Paul S.	CNSC	Hilts, Margarete A.	MDLG
Darnell, Robert C.	BHAV	Himeno, Edward T.	BHAV
Davis, Delmer I.	ENGL	Ho, Yuk Lin	BIOL
Davis, M. Jerry	BHAV	Holm, Melvin G.	INDS
Dickerson, David R.	MATH	Holmes, Ivan G.	CHEM
Dimmig, Judith R.	BHAV	Holt, Lottie A.	BHAV
Dunn, Janice D.	COMM	Horsley, June H.	BHAV
Dunn, Robert P.	ENGL	Howard, Carolyn R.	BHAV
Eddleman, C. Douglas	BIOL	Howe, Vernon W.	MATH
Elick, John W.	BHAV	Hoyt, Frederick G.	HIST
Elkins, Marlin E.	AGRI	Jacques, Brian J.	COMM
Eroh, Agnes R.	ART	Jarvis, William T.	PSED
Evans, Harrison S.	BHAV	Johnson, Lyle E.	CNSC
Evard, Rene	CHEM	Jones, Geoffrey T.	MATH
Fagal, Harold E.	RLGN	Jordon, Carl F.	BHAV
Farmer, Bonnita M.	CNSC	Kooreny, Ralph L.	BSNS
Fattic, Grosvenor, R.	ENGL	Kunihira, Shirou	BHAV
Fields, William N.	CNSC	Landa, Paul J.	HIST, RLGN
Flemming, Carlyle D.	MATH	Lathrop, Earl W.	BIOL
Focht, Brenda B.	CNSC	Lecourt, Nancy H.	ENGL
Ford, Robert E.	BHAV	Lessard, George M.	CHEM
Ford, Robert M., Jr.	BSNS	Lewis, Richard B.	ENGL
Fraser, Ian M.	BIOL	Little, Helen F.	ENGL
Galaway, Ronald A.	CHEM	Lowry, Jean B.	COMM
Gent, Clifton G.	INDS	Mackett, Walter C.	HIST
Gillespie, V. Bailey	RLGN	Mallery, F. Lynn	RLGN
Gray, Clarence L.	ART	Mateer, Ervin H.	PSED
Griffiths, Victor S.	ENGL	Maxwell, A. Graham	BHAV
Grubbs, Harry M.	AGRI	Mazat, Alberta S.	BHAV
Gurney, W. David	BSNS	McCluskey, Elwood S.	BIOL
Guy, Fritz	RLGN	McKee, Lois E.	SECR
Haddad, Anees A.	BHAV	Milliken, Harold R.	BIOL
Haldeman, Madelynn J.	RLGN	Minton, Reuel A.	BSNS
Hamerslough, Walter S.	PSED	Mitchell, Norman L.	BIOL
Hannum, Harold B.	MUSC	Moore, Roberta J.	COMM
Hanson, Calvin J.	BSNS	Morse, Merle D.	INDS
		Murdoch, R. Eloise	CNSC

Nash, Eugene W.	PSED	Shelden, H. Raymond II	CHEM
Nelson, J. Michael	BHAV	Smith, Albert E.	PHYS
Ney, Edward W.	MDLG	Sonneland, Yvonne P.	CNSC
Niswonger, Jerome W. H.	BHAV	Specht, Walter F.	RLGN
Norriss, Norma G.	BHAV	Stauffer, J. Paul	ENGL
Nutter, Robert L.	BIOL	Stevens, Neal G.	INDS
		Stirling, James H.	BHAV
Olsen, Anita N.	MUSC	Strutz, Peter G.	BHAV
Ortner, Irene E.	SECR		
Osborne, David D.	RLGN	Tarr, W. Fletcher	COMM
Osborne, Judy E.	CNSC	Teel, Charles W.	BHAV
Osbourn, Fred H.	BHAV	Teel, Charles W., Jr.	BHAV, RLGN
Osmunson, Robert L.	RLGN	Teele, Marilyn C.	ENGL
Ozaki, Mamie M.	BHAV	Testerman, John K.	BIOL
		Thomas, Nelson E.	PSED
Perry, James L.	PSED	Thompson, Lewis C.	PHYS
Petersen, Richard L.	AGRI	Thurber, Donald W.	MUSC
Pfeiffer, Baldur B.	BHAV	Toms, Theodore J.	BHAV
Presha, Joseph S.	BHAV	Turner, L. Janene	PSED
Provonsha, Jack W.	BHAV		
		Uthe, Robert C.	MUSC
Read, Lawrence J.	ART		
Reeves, John M.	BHAV	Vaughn, Donald	MUSC
Rice, Gail T.	CNSC	Velez, Juan R.	MDLG
Rice, T. Richard	RLGN	Vine, Kenneth, L.	BHAV, RLGN
Rich, Myrle E.	PSED	von Pohle, Vernon L.	INDS
Riggs, James W., Jr.	PHYS		
Riley, W. Fred	AGRI	Wagner, Edward D.	BIOL
Robbins, Joann R.	MUSC	Wakeham, M. Irene	BHAV, ENGL, MDLG
Robertson, John J.	RLGN	Walcker, Jake J.	INDS
Roesel, Paul W.	CNSC	Walls, Arthur M.	INDS
Rosario, Carolann S.	BIOL	Walton, Lewis R.	BSNS
Ross, Delmer G.	HIST	Webster, Clyde L.	CHEM
Ross, Donnice D.	BIOL	Weismeyer, Helen I.	PSED
Ross, Gary M.	HIST	West, Evaline E.	BHAV
Roth, Ariel A.	BIOL	Widmer, Elmer A.	BIOL
Rowley, Rodney R.	COMM	Willcocks, David V.	MUSC
Ruf, Kathleen M.	CNSC	Wilson, Judy R.	PSED
Ryckman, Raymond E.	BIOL	Wilson, Leland Y.	CHEM
		Winter, Charles E.	BIOL
Schneider, Robert K.	PSED	Woods, Adeny S.	BHAV
Schultz, Robert L.	BIOL		
Semaan, Jabbour S.	BHAV	Zaugg, Wayne E.	CHEM
Sharpnack, Harold I.	BHAV	Zolber, Kathleen K.	CNSC
Shelden, H. Raymond	CHEM		

Certain persons retain faculty status in the College even though they are not currently teaching and are therefore not listed in the departments. These include former teachers who have been designated emeritus faculty by the Board of Trustees and those who have been appointed to other positions of service to the University.

- ALONZO L. BAKER, Emeritus Professor of Political Science
PH.D. University of Southern California
- STANLEY BULL, Emeritus Professor of Psychology
PH.D. University of Michigan
- H. RUSSELL EMMERSON, Emeritus Professor of Architectural Engineering
B.E. University of Southern California
- JOHN T. HAMILTON, Associate Professor of Music
M.MUS. Northwestern University
- MAYBEL V. JENSEN, Emeritus Professor of Special Education
M.A. University of Southern California
- WILLIAM M. LANDEEN, Emeritus Professor of History
PH.D. University of Michigan
- DONALD E. LEE, Associate Professor of Physics
PH.D. New York University
- WILLIAM D. LEECH, Emeritus Professor of Chemistry
PH.D. California Institute of Technology
- THOMAS A. LITTLE, Emeritus Professor of English
PH.D. University of Nebraska
- MAURICE E. MATHISEN, Professor of Chemistry
PH.D. Stanford University
- GEORGE G. O'BRIEN, Professor of Mathematics
PH.D. University of Maryland
- V. NORSKOV OLSEN, Professor of Church History
PH.D. University of London
DR. THEOL. University of Basel
- NORVAL F. PEASE, Emeritus Professor of Applied Theology
PH.D. Michigan State University

ALUMNI FEDERATION

The Alumni Federation was organized in 1958. This organization provides an avenue by which the several alumni associations, distinctive of emphasis represented by curriculums of the University, join their common concern for the continued welfare of the institution. In turn, through the Federation the University demonstrates its interest in the continued general and professional development of the alumni, whom it regards as the ultimate and true expression of its accomplishments.

By united and reciprocal interaction, the Alumni and the University seek to ensure a growing community of scholars, practitioners, and citizens dedicated to excellence. Vitaly concerned with excellence in education, the Federation lends itself to enlarging the sphere of influence for good envisioned by the founders of the University.

The Federation seeks to foster unity and loyalty and to promote the growth of the total institution and at the same time the best interests of each part. The Federation endeavors —

1. To foster the natural bond among alumni of each individual school, maintaining the right of alumni to direct their own group activities.
2. To assist the University and its schools in their duty to provide for the continuing general welfare of all students, faculty, and alumni.
3. To encourage alumni, through constituent associations, to assist in providing adequate and dependable financial support both for the University and for alumni activities.

ACCREDITATION

- The University** **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 Western Associations of Schools and Colleges (prior to January 1962, Western College Association) February 24, 1960. Became Loma Linda University July 1, 1961. Professional curriculums started and approved as indicated.
- ARTS AND SCIENCES:** Founded in 1922 as La Sierra Academy, a secondary school; in 1927 became Southern California Junior College; in 1946 was accredited as the four-year La Sierra College; in 1967 became College of Arts and Sciences of the University.
- THE GRADUATE SCHOOL:** Started in 1954. Accredited through University accreditation.
- The professions** **DENTAL HYGIENE:** Started in 1959. Approved by the Council on Dental Education of the American Dental Association since September 7, 1961.
- DENTISTRY:** Started in 1953. Approved by the Council on Dental Education of the American Dental Association since May 23, 1957.
- DIETETICS:** Certificate program started in 1922; baccalaureate degree conferred 1932-54; graduate program offered since 1954. Internship program continuously approved by American Dietetic Association since October 1957; reestablishment of baccalaureate program authorized October 1971.
- EDUCATION:** School of Education organized in 1968 and approved by the California State Board of Education June 12, 1969.
- HEALTH:** Started in 1948; reorganized in 1964. Approved by the American Public Health Association June 23, 1967.
- MEDICAL RECORD ADMINISTRATION:** Started in 1963. Approved by the Council on Medical Education of the American Medical Association since December 1, 1963.
- MEDICAL TECHNOLOGY:** Started in 1937. Approved by the Council on Medical Education of the American Medical Association since August 28, 1937.
- 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.
- NURSING:** Hospital school started at Loma Linda in 1905. Hospital school added at Los Angeles in 1924. Degree school organized in 1948. Accredited by the National Nursing Accrediting Service December 10, 1951, with approval continuing under the National League for Nursing. Initial 1917 approval of 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 1959.
- OCCUPATIONAL THERAPY:** Started in 1959. Initial approval by the American Occupational Therapy Association and the Council on Medical Education of the American Medical Association June 10, 1960. Full approval March 30, 1962.
- PHYSICAL THERAPY:** Started in 1941. Initial approval by the Council on Medical Education of the American Medical Association June 6, 1942. Reapproved by the Council and by the American Physical Therapy Association February 3, 1961.
- RADIOLOGICAL TECHNOLOGY:** Started in 1941. Approved by the Council on Medical Education of the American Medical Association since November 19, 1944.

INSTRUCTIONAL RESOURCES

LIBRARIES The University has two main libraries (one on the Loma Linda campus and one on the La Sierra campus), and the joint holdings are as follows:

Books, bound periodicals, audiovisual materials	433,261
Current periodical subscriptions	3,102

Bus service is supplied on schedule each weekday between the two campus libraries so that students and faculty can have access to both libraries. Immediate information can be obtained and lending arrangements made by telephone or mail.

Materials that are not available in either campus library or in the immediate community are obtainable through interlibrary loan. At Loma Linda the teletypewriter (TWX) can be used for interlibrary communication. This equipment can also provide teachers and graduate students computer-printed bibliographies on medical-related subjects through the Medline and services in which the Loma Linda library participates.

La Sierra campus	Books, bound periodicals, audiovisual materials	152,641
	Current periodical subscriptions	1,137

The La Sierra campus library is a general liberal arts collection, with concentrations in history, religion, English, and education. A collection of nineteenth-century Seventh-day Adventist books and pamphlets is in the Heritage Collection. In addition to the microfiche Library of American Civilization already purchased (21,000 titles), the library is augmenting microform holdings.

Loma Linda campus	Books and bound periodicals	280,620
	Current periodical subscriptions	1,965

The acquisitions of the Vernier Radcliffe Memorial Library on the Loma Linda campus are in medicine, dentistry, allied health professions, and graduate programs; and included in the acquisitions is a liberal arts undergraduate collection in support of certain graduate and professional programs. About half of the resources are in medical and related fields. Some rare materials in the history of medicine are included in the holdings.

Since 1957 this library has been the official west coast depository for Seventh-day Adventist literature regularly provided by church publishing houses in North America. The publications are in the Heritage Collection established in 1971. Here also are the Ellen G. White source materials, University archives, and an in-process collection of published and unpublished works pertaining to the early Adventist Movement.

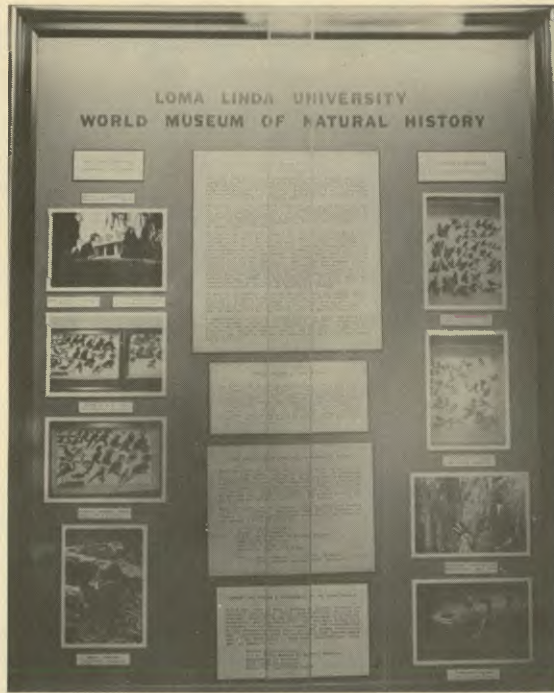
The Human Relations Area Files on microfiche make available primary source materials on most of the known cultures of the world.

Consortium The following colleges and universities have formed a consortium under the name Inland Empire Academic Library Cooperative to give full borrowing privileges to students and faculty members of the following institutions:

- Azusa Pacific College, Azusa
- California Baptist College, Riverside
- California State College, San Bernardino
- California State Polytechnic University, Pomona
- La Verne College, La Verne
- Loma Linda University, Loma Linda/La Sierra campuses
- University of California, Riverside
- University of Redlands, Redlands
- Community colleges in the area

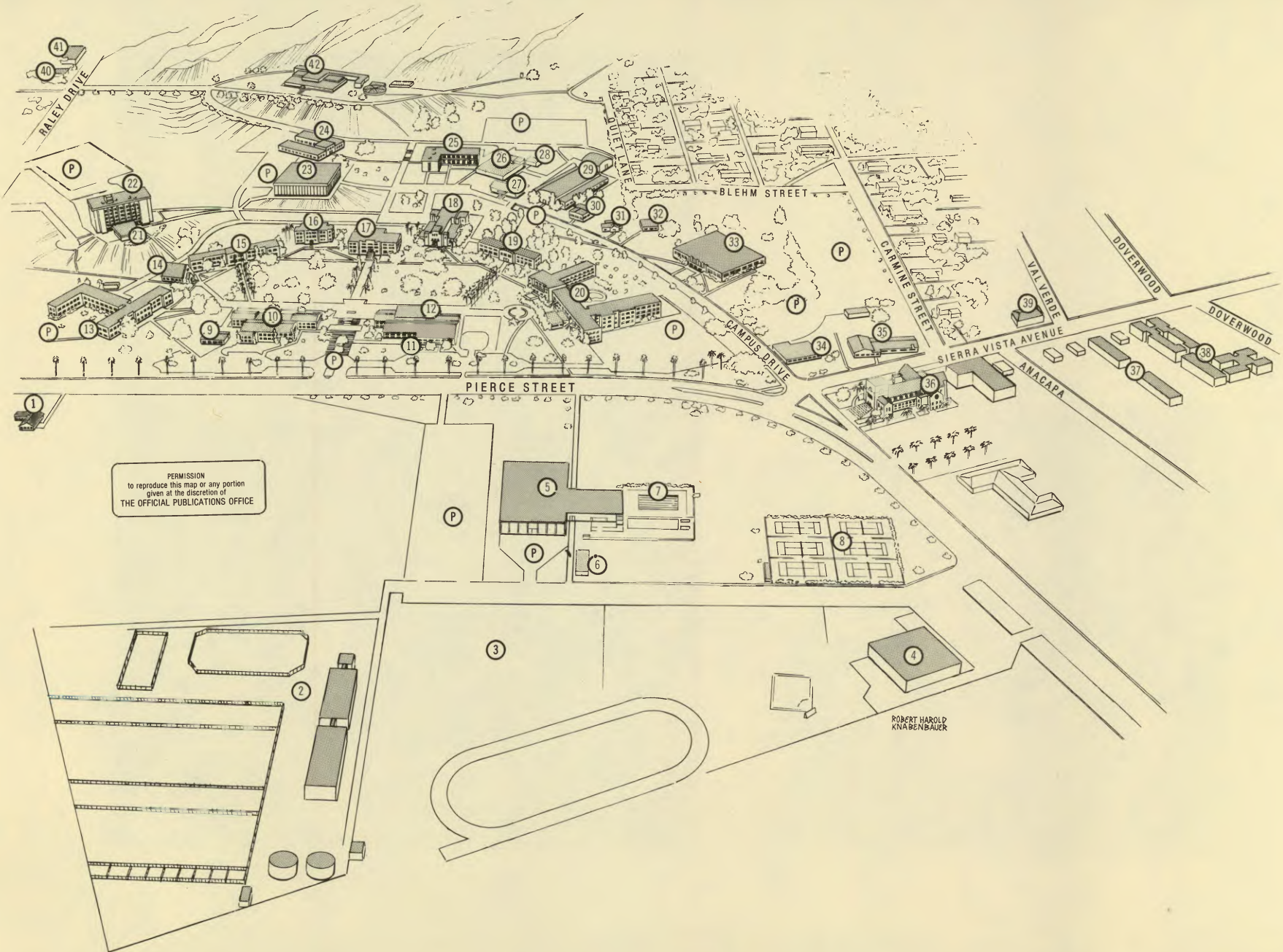
Community Within driving distance of the University campuses are other collections accessible to faculty and students: the University of California (Los Angeles and Irvine campuses), the University of Southern California, the Los Angeles public library, the inland area public libraries, and the unique holdings of the Henry E. Huntington Library and Art Gallery.

COMPUTER SYSTEM The Biomathematics Department maintains an extensive computer complex serving students and faculty in both academic and scientific functions. The facility consists of two major resources, both located in the Medical Center. The Scientific Computation Facility is organized to accommodate the research function; Biomathematics Computing Services caters to the computer-related instructional needs of the University. Available facilities span the range from small-scale to large-scale systems. Particular emphasis has been given to providing real-time data acquisition and graphical output capabilities. An advanced and very powerful computing system has recently been installed to facilitate the modeling and simulation of complex systems. Programing aids are available to expedite the man-machine dialogue and to assist in applying the computer to the solution of problems in a variety of disciplines. An extensive program library serves many routine needs: but researchers are encouraged to write their own specialized programs for their own particular needs. Programing instruction and assistance are provided for this purpose.









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LA SIERRA CAMPUS MAP

NUMERICAL LEGEND

- 1 Agriculture
- 2 Dopp Equestrian Center
- 3 Recreation fields
- 4 College Market / Bookstore
- 5 Alumni Pavilion / Gymnasium
- 6 Physical Education office
- 7 Swimming pool
- 8 Tennis courts
- 9 Security
- 10 Administration
- 11 Student Center
- 12 The Commons / Food Service
- 13 Calkins Hall: men
- 14 Matheson Chapel
- 15 South Hall: women
- 16 San Fernando Hall: Physics
- 17 La Sierra Hall: Counseling / Education / English / History and Political Science / Mathematics / Modern Languages / Religion
- 18 Hole Memorial Hall: Auditorium / Music / Education / Testing
- 19 Gladwyn Hall: women
- 20 Angwin Hall: women
- 21 Meier Chapel
- 22 Sierra Towers: men
- 23 The Library
- 24 Ambs Hall: Industrial Studies
- 25 Consumer Related Sciences
- 26 Communication / KLLU / Nursing
- 27 Art
- 28 Nursing
- 29 Industrial building
- 30 Mail Service / Custodial Service
- 31 Health Service
- 32 Animal quarters
- 33 Palmer Hall: Biology / Chemistry / World Museum of Natural History
- 34 Behavioral Sciences
- 35 Sierra Vista Chapel / Welfare Center

- 36 La Sierra Church
- 37 Walnut Grove Apartments
- 38 Sierra Vista Apartments
- 39 Sierra Vista House
- 40 Rhoads House
- 41 Raley House
- 42 Physical Plant Services Department / Receiving

ALPHABETICAL LEGEND

- Academic Affairs VP, 10
 Accounting Service, 10
 Administration, 10
 Admissions and Records, 10
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 Alumni Affairs, 10
 Alumni Pavilion, 5
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 Angwin Hall: women, 20
 Animal quarters, 32
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 Chemistry, 33
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- College of Arts and Sciences, 10
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 Communication, 26
 Consumer Related Sciences, 25
 Counseling Center, 17
 Custodial Service, 30
 Dean of Students, 10
 Development VP, 10

- Education, School of, 17
 Employment, student, 10
 English, 17
 Equestrian center, 2

- Financial Affairs VP, 10
 Food Service, 12

- Gladwyn Hall: women, 19
 Graduate School, 10
 Gymnasium, 5

- Health Service, 31
 History and Political Science, 17
 Hole Memorial Hall, 18

- Industrial building, 29
 Industrial Studies, 24
 Information, Public, 10

KLLU, 26

- La Sierra Church, 36
 La Sierra Hall, 17
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 Maintenance, 42
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 Men's residences, 13, 22, 40, 41
 Modern Languages, 17
 Museum, 33
 Music, 18

- News, Public Information, 10
 Nursing, associate degree, 28

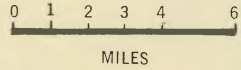
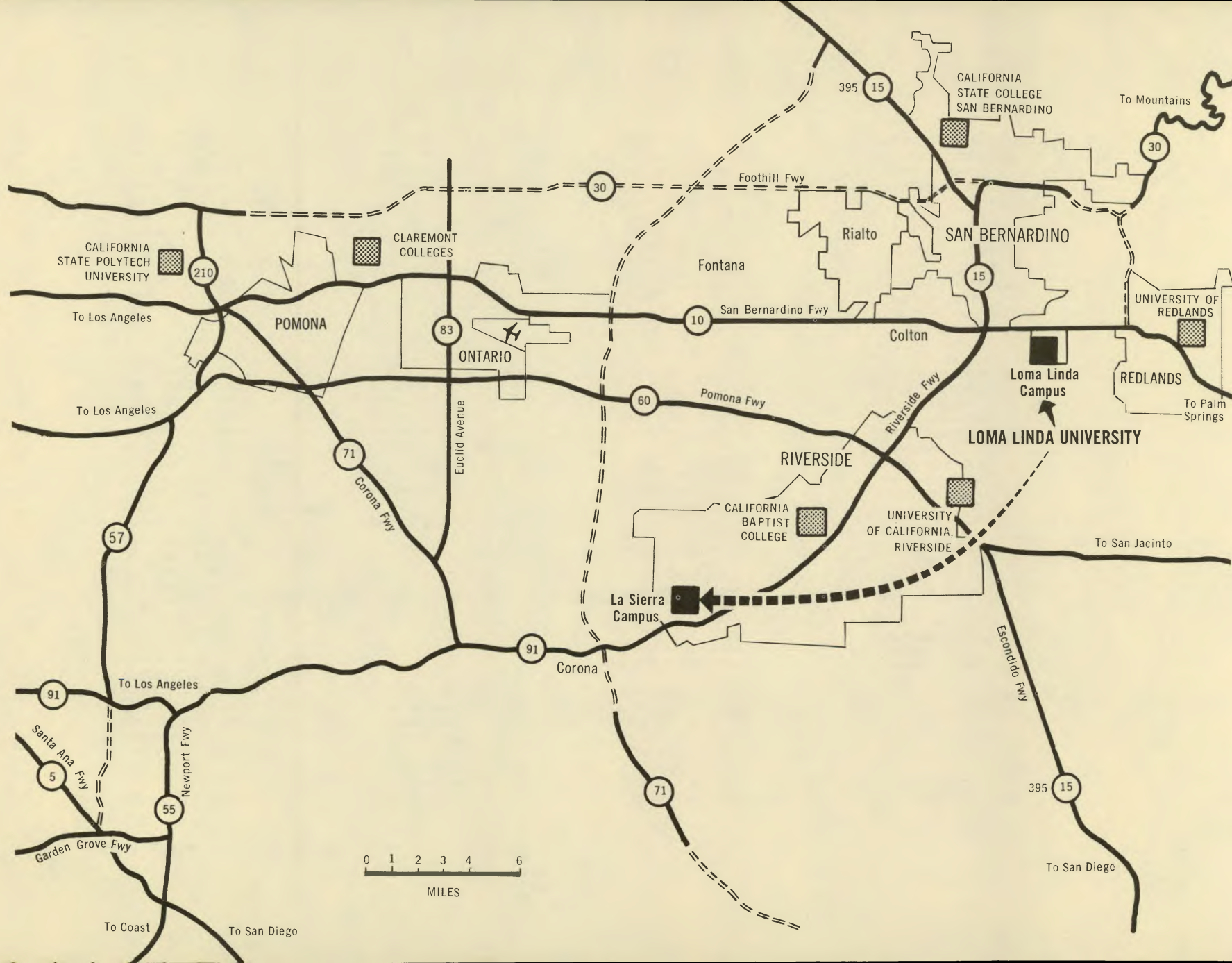
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	785-2210	Dean of the College	785-2025	Angwin Hall (women's residence)
	785-2176	Admissions	785-2005	Associated Students
	785-2002	Campus Business Administrator	785-2182	Bookstore
	785-2100	Dean of Students	785-2002	Business Administrator
	785-2006	Registrar	785-2124	Calkins Hall (men's residence)
	785-2266	School of Education	785-2081	Chaplain
			785-2011	Counseling Service
		DEPARTMENTS	785-2227	Dean of Men
	785-2204	Agriculture	785-2166	Dean of Women
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	785-2105	Biology	785-2214	Extension
	785-2060	Business and Economics	785-2251	Financial Aid
	785-2148	Chemistry	785-2138	Food Service
	785-2157	Communication	785-2031	Gladwyn Hall (women's residence)
	785-2146	Consumer Related Sciences	785-2100	Housing
	785-2241	English	785-2100	Immigration
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	785-2218	Industrial Studies	785-2044	Library
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	785-2017	Psychology		
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	785-2039	Secretarial and Business Education		
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UNIVERSITY INFORMATION

Both campuses	General University interests Admission Student welfare, housing, visas Student finance Records	The President Admissions Office Student Affairs Office Student Aid and Finance Office Registrar's Office
La Sierra campus	MAIL: Riverside California 92505 College of Arts and Sciences School of Education	TELEPHONE (area 714): Riverside Dean 785-2210 Dean 785-2266
Loma Linda campus	MAIL: Loma Linda California 92354	TELEPHONE (area 714): 796-7311 Redlands 824-0800 San Bernardino 824-0800 Riverside
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	School of Health	Dean
	School of Medicine	Dean
	School of Nursing	Dean
	Division of Religion	Dean
	The Graduate School	Dean

