

PACIFIC UNION COLLEGE GENERAL CATALOG



2010-2012

129TH-130TH ACADEMIC YEARS

MAILING ADDRESS:
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ANGWIN, CA 94508-9707
(707) 965-6311

PACIFIC UNION COLLEGE IS AN EQUAL OPPORTUNITY EDUCATIONAL INSTITUTION.

Pacific Union College

Is accredited by:*

The Accreditation Association of Seventh-day Adventist
Schools, Colleges and Universities
The Accrediting Commission for Senior Colleges and
Universities of the Western Association of Schools and
Colleges (985 Atlantic Ave., Ste. 100, Alameda, CA 94501;
(510) 748-9001)
State of California Department of Education

Offers programs accredited by:

Commission on Teacher Credentialing
Council on Social Work Education (Baccalaureate)
International Assembly for Collegiate Business Education
National Association of Schools of Music (Baccalaureate)
National League for Nursing Accrediting Commission
(Baccalaureate and Associate Degree Programs)

Is a member of:

American Association of Collegiate Registrars and
Admissions Officers
American Association of Presidents of
Independent Colleges and Universities
Association of American Colleges and Universities
Association of Governing Boards of Universities and Colleges
Association of Independent California Colleges
and Universities
California Council on the Education of Teachers
College Placement Council
Council of Independent Colleges
Independent Colleges of Northern California
National Association of Independent Colleges
and Universities
National League for Nursing

North American Association of Summer Sessions
Western Association of Graduate Schools

Is approved by:

The Attorney General of the United States for
nonimmigrant students
California Board of Registered Nursing
California Commission on Teacher Credentialing

Equal Opportunity Commitment

Pacific Union College is committed to equal opportunity for qualified men and women of any handicap, race, color, national or ethnic origin. It extends to them all the rights, privileges, programs and activities generally accorded or made available to members of the college community. It does not discriminate against qualified persons on the basis of handicap, sex, race, color, national or ethnic origin in administration of its educational and admissions policies, financial affairs, employment programs, student life and services, or any other college-administered program.

*Accreditation documents may be viewed in the Office of the Vice President for Academic Administration.

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Areas of Study

* Denotes an Emphasis or Concentration

Baccalaureate Degree

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* Accounting, p. 60
* Finance, p. 60
* General Business, p. 60
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* Management, p. 61
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Communication, pp. 79, 80
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* Journalism, p. 80
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Early Childhood Education, p. 90
Engineering, p. 161 (*Affiliated Program*)
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* British and American Literature, p. 112
* Writing, p. 112
* Drama, p. 112
* Teaching English to Speakers of Other Languages (TESOL), p. 112
* English Education, p. 112
Environmental Studies, p. 52
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Graphic Design, pp. 182, 183
* Design, p. 182
* Illustration, p. 183
* Web, p. 183
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* American History p. 123
* European History p. 124
Intercultural Communication, p. 80, 81
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Liberal Studies, p. 92
Mathematics, p. 129
Music, pp. 140, 141, 142
* Music Education, p. 140
* Music Performance, p. 141

Natural Science, pp. 53, 76, 160
* Biology, p. 53
* Chemistry, p. 76
* Physics, p. 160
Nursing, pp. 155, 156
Photography, p. 183
Physical Education, p. 117
* Teacher Education, p. 117
Physics, p. 159
Psychology, pp. 165, 166
Religion, pp. 174, 175
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* Health Professions, p. 175
* Theology and Christian History, p. 175
Social Studies, p. 124
Social Work, p. 166
Spanish, p. 135
Theology, p. 173

Baccalaureate Degree-Completion

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Teaching Credential, pp. 90, 92
California Single Subject (Secondary)
Teaching Credential, pp. 90, 92
SDA Elementary Teaching
Credential, pp. 90, 92
SDA Secondary Teaching
Credential, pp. 90, 92

Master of Education

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Certificate (see p. 112)

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Minors

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Art History, p. 185
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Biology, p. 53
Business Administration, p. 64
Chemistry, p. 77
Communication, p. 81
Computer Science, p. 86
Drama, p. 113
English, p. 113
Environmental Studies, p. 53
Film and Television Production, p. 185
French, p. 136
German, p. 136
History, p. 124
Italian, p. 136
Mathematics, p. 131
Physical Education, p. 118
Physics, p. 161
Psychology, p. 167
Public Relations/Journalism, p. 81
Religion, p. 175
Spanish, p. 136
Writing, p. 113

Preprofessional Curricula

 (see p. 21)

Art Therapy
Chiropractic
Dental Hygiene
Dentistry
Health Information Management
Law
Medical Radiography
Medical Technology
Medicine
Occupational Therapy
Occupational Therapy Assisting
Optometry
Osteopathy
Pharmacy
Physical Therapy
Physical Therapy Assisting
Physician's Assistant
Public Health
Respiratory Therapy
Speech Pathology
Veterinary Medicine

Pacific Union College, a distinctive Seventh-day Adventist college in the liberal arts tradition, is characterized by the intentional integration of faith and learning. As such, the College's curriculum is designed to provide its students with the type of essential learning outcomes that all students will need to both survive and thrive in the twenty-first century. The Association of American Colleges and Universities, the leading association concerned with the quality, vitality, and public standing of undergraduate liberal arts education, defines these essential learning outcomes:

- Knowledge of human cultures and the physical and natural world through study in the sciences and mathematics, social sciences, humanities, histories, languages, and the arts, focused by engagement with big questions, both contemporary and enduring.
- Intellectual and practical skills, including inquiry and analysis, critical and creative thinking, written and oral communication, quantitative literacy, information literacy, teamwork and problem solving, practiced extensively across the curriculum in the context of progressively more challenging problems, projects, and standards for performance.



Heather J. Knight

- Personal and social responsibility, including civic knowledge and engagement – local and global, intercultural knowledge and competence, ethical reasoning and action, foundations and skills for lifelong learning, anchored through active involvement with diverse communities and real-world challenges.

- Integrative and applied learning, including synthesis and advanced accomplishment, across general and specialized studies demonstrated through the application of knowledge, skills, and responsibilities to new settings and complex problems.*

At PUC, however, all of these exciting essential learning outcomes are mediated through the teaching of caring and committed Christian professors who present their disciplines through the lens of faith. Furthermore, this profound intellectual and spiritual journey takes place in a magnificent natural environment designed to draw our students even closer to a loving Creator. So, welcome to Pacific Union College, a very special place that you will find to be “academically outstanding and spiritually authentic.

Let the learning begin!

**Aim High and Make Excellence Inclusive*
Strategic Plan, 2008-2012

Association of American Colleges and Universities, p. 3.

Calendar, 2010-2012

September 2010

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November 2010

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December 2010

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April 2011

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May 2011

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June 2011

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August 2011

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September 2011

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May 2012

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June 2012

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July 2012

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August 2012

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2010-2011

Fall Quarter (2010)

W-Su	September	15-19	New Student Orientation
M		20	Instruction begins
M		27	Last day to enter or delete courses
W-S	October	6-9	Fall Revival
F-Su		15-17	Parents Weekend
M	November	15	Last day to withdraw from courses
F		19	Thanksgiving recess begins (4:00 p.m.)
Su		28	Thanksgiving recess ends (10:00 p.m.)
M-Th	December	6-9	Final examinations

Winter Quarter (2011)

Su	January	2	New Student Orientation
M		3	Instruction begins
M		10	Last day to enter or delete courses
M		17	Martin Luther King Day; no classes/labs
W-S		19-22	Winter Revival
F	February	4	Mid-quarter vacation; no classes/labs
M		28	Last day to withdraw from courses
M-Th	March	14-17	Final examinations

Spring Quarter (2011)

Su	March	27	New Student Orientation
M		28	Instruction begins
M	April	4	Last day to enter or delete courses
T		5	2011-12 registration begins/Seniors
F-Su		15-17	Alumni Weekend
M		18	2011-12 registration begins/All students
M-S	May	2-7	Week of Prayer
M		23	Last day to withdraw from courses
M		30	Memorial Day; no classes/labs
M-Th	June	6-9	Final examinations
F-Su		10-12	Commencement

Summer Quarter (2011)

M	June	13	Instruction begins
M	July	4	Independence Day; no classes/labs
Th	August	11	End of Summer Quarter

2011-2012

Fall Quarter (2011)

W-Su	September	21-25	New Student Orientation
M		26	Instruction begins
M	October	3	Last day to enter or delete courses
W-S		12-15	Fall Revival
F-Su		21-23	Parents Weekend
F	November	18	Thanksgiving recess begins (4:00 p.m.)
Su		27	Thanksgiving recess ends (10:00 p.m.)
M		28	Last day to withdraw from courses
M-Th	December	12-15	Final examinations

Winter Quarter (2012)

Su	January	8	New Student Orientation
M		9	Instruction begins
M		16	Martin Luther King Day; no classes/labs
T		17	Last day to enter or delete courses
W-S		25-28	Winter Revival
F	February	10	Mid-quarter vacation; no classes/labs
M	March	5	Last day to withdraw from courses
M-Th		19-22	Final examinations

Spring Quarter (2012)

Su	April	1	New Student Orientation
M		2	Instruction begins
M		9	Last day to enter or delete courses
T		10	2012-13 registration begins/Seniors
F-Su		20-22	Alumni Weekend
M		23	2012-13 registration begins/All students
M-S	May	7-12	Week of Prayer
M		28	Memorial Day observed; no classes/labs
T		29	Last day to withdraw from courses
M-Th	June	11-14	Final examinations
F-Su		15-17	Commencement

Summer Quarter (2012)

M	June	18	Instruction begins
W	July	4	Independence Day; no classes/labs
Th	August	16	End of Summer Quarter

Using this Catalog

You should become acquainted with this catalog before you begin your studies at Pacific Union College and should consult it throughout your college career. It is an important resource which describes the policies you must follow and the requirements you must meet in order to achieve your academic goals.

You should use this catalog to find information regarding the academic program that you have selected. Even if you have not yet decided on a major, you should become familiar with the general education program and plan a schedule of courses based on its requirements. Though an academic advisor is provided to offer guidance and advice, *you have the ultimate responsibility for meeting the requirements of the program you choose.*

Every effort has been made to ensure that the information in this catalog is correct at the time of publication. Altered circumstances and policy changes, however, may affect the accuracy of the information it contains. Consequently, should any regulations or program requirements be in conflict with information in this catalog, current regulations and requirements govern.

The catalog presents only an overview of college policies and regulations. Other existing requirements are equally binding, though not published in this catalog.



History

The Seventh-day Adventist Church has a heritage of strong commitment to education. Its members expressed this commitment during the late 1800s and early 1900s by establishing schools and colleges near major population centers across North America. In 1874 the Church founded its first college in Battle Creek, Michigan. A few years later the rapidly growing California church began looking for a good location for a school in Northern California.

In the vineyards of Healdsburg, fifteen miles north of Santa Rosa, the searchers found an ideal property. Total cost of the imposing brick structure and its furnishings, just off Healdsburg's main street, was thirty gold coins. The new school, to which Pacific Union College traces its roots, opened April 11, 1882, with two teachers and twenty-six students. In 1899, to reflect more accurately the school's purpose and its expanding curriculum, the school's name was changed to Healdsburg College; it became Pacific Union College in 1906.

When the Angwin Resort on Howell Mountain, above Napa Valley's St. Helena, became available, the College Board sensed the opportunity to secure more adequate space for the growing school and the associated businesses that had

been established to provide student employment. They bought the buildings and land for \$60,000. On September 29, 1909, Pacific Union College was dedicated at its present Angwin site. The resort's hotel, bowling alleys, and cottages became dormitories, classrooms, and faculty homes. Students and faculty worked together building other structures, often using lumber harvested from college property.

The Campus

Today the institution occupies a 200-acre main campus surrounded by approximately 1800 acres of college-owned agricultural and forested land. The school's estate includes 60 major structures as well as faculty homes, necessary utilities, and other buildings. Fifteen academic buildings house the library, classrooms, laboratories, and offices. West Hall, the oldest, dates from 1917. The newest, Chan Shun Hall, is a modern science complex, in use since 1986. It includes 55,000 square feet of classroom, laboratory, and office space. Four women's residence halls can accommodate approximately 700 students; three men's halls, approximately 600.

The Area

The college is located on Rancho La Jota, whose title is based on an old Mexican land grant. It is surrounded by places of historic significance in the development of the American West: Sonoma, the northernmost Spanish mission in California and the scene of the Bear Flag Revolution; Fort Ross, the southernmost Russian outpost on the continent; Sutter's Fort and the California gold diggings; and the routes of early explorers, traders, and immigrant groups.

Howell Mountain, the school's site, is a junction point for the life zones of north and south, coast and interior, and is recognized as an unusually rich area for studying plant and animal life. About one hundred miles from the campus, at Albion in Mendocino County, the college owns fourteen acres where it operates the Albion Field Station. This primitive region, where the Albion River empties into the Pacific Ocean, presents unusual opportunities to study marine biology and botany.

The San Francisco, Oakland, and Sacramento International Airports are within a two-hour drive from the campus. Bus service from St. Helena to Napa, Berkeley, Oakland, San Francisco, and other cities brings the cultural opportunities of large urban communities within reach of the student body.

Pacific Union College is a Christian liberal arts college sponsored by the Seventh-day Adventist Church. Its mission is to prepare its students for fellowship with God and service to Him through service to humanity. To achieve its mission, the college offers an excellent education, informed by a distinctive Seventh-day Adventist Christian point of view, to all who appreciate the school's unique values and its integration of faith and learning. Paying special attention to Christianity's role in civilization, the college considers liberal arts study with a Christian perspective to be uniquely valuable not only for its own sake, but also as a basis for career training and professional life.

Christian Liberal Education

Liberal arts education with a Christian perspective prepares one to live in responsible human freedom. Such study promotes a balanced self-development. It frees one from the confines of personal experience and immediate interests and encourages entering with understanding into the experience of others. It advocates at once a tolerance of differing views, the respect those views deserve, and vigorous engagement with them. It fosters those lifelong habits of curiosity and serious inquiry that sustain the growth of the human spirit. It develops creative self-expression, including the ability to speak

Pacific Union College is a Seventh-day Adventist learning community offering an excellent Christ-centered education that prepares its students for productive lives of useful human service and uncompromising personal integrity

and write articulately. It provides breadth and flexibility for coping and adapting in a changing world.

The Major

As an essential part of their liberal arts education, students choose majors for specialized study in harmony with their personal interests and as preparation for successful entry into their chosen careers or into graduate study. The college regularly reviews all programs to maintain their quality and to ensure that they respond to current student demand and to the changing needs of the Church and the larger community.

General Education Core

The structured general-education core gives scope of knowledge. The liberal arts emphasis in both the major and the general-education core promotes quality of understanding. The graduate should therefore have a growing knowledge and

an enlightened appreciation of the major areas and modes of learning. A personally appropriated Christian view of the origin and purpose of human life should give this knowledge coherence for each student.

Independent, Critical Thinking

Beyond giving information, the disciplines of the liberal arts create the environment for students to develop their abilities to think analytically, critically, and independently. Students are challenged to find original solutions for a variety of problems. Such study teaches not only the different modes of inquiry and their valid uses, but also their limitations.

Faith and Learning

In a church-related college, tensions may sometimes occur between the claims of a religious belief system and those of academic pursuits. But because faith without thought is not an acceptable alternative to thought without faith, such unresolved tensions should never force the sacrifice of one to protect the other. Ideally, they should energize creative study of the valid claims of both faith and learning and of their interrelationships. A foundation of knowledge and understanding strengthens faith. Because the challenge of resolving ambiguities and uncertainties often produces the most valuable new insights, such study should

The Mission of the College

both preserve intellectual honesty and enhance a faith worth holding. Knowing truth does indeed bring freedom.

Responsible Freedom

Students are urged through their total college experience to evaluate their own convictions and to infuse them with enduring cultural values and essential Christian principles. They are invited to recognize that changing times require a fresh statement of this heritage, but not its compromise. They are challenged to blend these timeless values and principles in a distinctive lifestyle that includes responding helpfully to human need, wherever encountered, in a natural expression of their own Christian calling. As Jesus showed, the finest incarnation of responsible freedom is in compassionate human service.

The Mission Realized

The mission of the college is therefore partly realized when its students leave the campus well prepared for advanced study and for selfless service to humanity in productive careers marked by uncompromising personal integrity. The mission is more perfectly realized when these same students are set on their way free to approach their potential as persons restored in the image of God and as agents of His grace in the world.

Orientation for New Students

Prior to fall quarter, the college provides an orientation program to acquaint new students with various aspects of campus life. Activities include a weekend retreat, familiarization with the use of campus facilities and services, and social gatherings to provide opportunity for becoming acquainted with other students and with faculty members.

Prior to winter and spring quarters, an orientation information session is held to acquaint new and transfer students with various aspects of campus life.

Student Housing

As a Pacific Union College student, you must register your housing in the Student Services Office. Housing policies also apply if you are enrolled in summer sessions or working full or part time on campus during summer sessions.

Residence Halls

Pacific Union College affirms the values to be gained from being primarily a residential college. If you are an unmarried student age 22 or younger who accepts admission to the college, you agree to live in a residence hall— unless you apply for and are granted an exception.

Residence halls are available to students currently enrolled at Pacific Union

College who meet eligibility requirements. If you are age 24 or older you may live in a residence hall on a “space-available” basis upon application.

Off-Campus Housing

If you are an unmarried student in good standing, your request for off-campus housing may be approved if you are:

1. age 23 or older,
2. age 22 and will be turning 23 during the current academic year,
3. a fifth-year senior (Student Missionary and Taskforce years may count as one year),
4. a holder of an earned bachelor’s degree,
5. a single parent,
6. divorced or widowed,
7. living with parents or other immediate relatives (grandparents, aunts, uncles, siblings at least 25 years old) in their primary residence,
8. a student with significant financial need and are offered room and board at substantial savings (you are required to live in the host family’s home), or
9. a part-time student enrolled for six or fewer credits.

Requests for off-campus housing are considered and acted upon annually. You should secure approval before signing a lease for off-campus housing.

Unmarried community students are not to live in “coed” groups.

Dining

Bon Appétit at PUC Café provides a selective menu and a variety of services to satisfy the needs and tastes of a cosmopolitan campus community. The college provides a lacto-ovo-vegetarian menu on the à la carte plan. If you have any special dietary needs, you should visit the General Manager to make any necessary special arrangements.

If you live in a residence hall, you are expected to take your meals in the PUC Café and are charged a minimum fee each quarter. For further information, see the section entitled “Financial Information” in this catalog.

Bon Appétit caters for small-group activities, picnics, and banquets. Small groups and organizations may reserve three auxiliary dining rooms in the Dining Commons (all food is to be prepared by Bon Appétit). Reservations are made at the Bon Appétit office.

Telephone Information

One telephone line is provided in each residence hall room for on-campus calling. You are to provide your own telephone—either touch-tone or pulse. Optional local calling and direct-dial long distance calling are available through the Telecommunications Department located in ITSS. These services operate on a prepaid system that is accessed via a Personal Security Code (PSC) given to you upon request.

Student Life and Services

To arrange for off-campus telephone service, you request and obtain your PSC from the Telecommunications Department and, at the Cashier's Office, make a deposit of \$5.00 or more on your PSC account. When the deposit is exhausted, local and long-distance calls are discontinued until you make a further deposit. You are not charged for calls to toll-free numbers (such as calling card numbers), but a PSC with a credit balance is required to place the call.

Telephone service does not permit you to accept collect calls or order any "outside" telephone service that is billed to your dorm room telephone number. If you do accept a collect call, you must pay for the call plus a \$500.00 per-call service charge. Also, local telephone company features, such as "Call Waiting", "Caller ID", etc., are not compatible with college telephone equipment. Any damage or misuse of the telephone system or equipment will result in a \$500.00 fee per violation.

Billing for collect calls and/or inappropriate telephone behavior will be added to your college account

Health Services

Health Services is a health care provider offering a wide range of services to the campus population. Health Services offers direct medical care for common medical conditions and referrals to outside medical providers/specialists when needed. For additional information, please refer to the web site located at www.puc.edu/healthservices.

Library Services

The W. E. Nelson Memorial Library provides the information resources and technology for the research needs of students and faculty. Library holdings

include over 150,000 books and more than 57,000 DVDs, CDs, music scores, and other media material. The library subscribes to over 33,000 electronic journals and 639 print periodicals. The Heritage Room in the library houses the Pitcairn Islands Study Center, one of the world's largest collections of material about the Pitcairn Islands, as well as the College Archives, the Maxwell Collection, the Walter Utt Collection, the Veltman Collection, and several other collections from individuals who have played prominent roles in the Seventh-day Adventist Church and/or Pacific Union College.

Teaching and Learning Center

The Teaching and Learning Center (TLC) is dedicated to helping you transition from high school to college. The Center also provides a variety of academic support services to help you develop your abilities for a successful college experience. The TLC services include free tutoring and mentoring; opportunities to develop note-taking skills, study skills, and other effective learning strategies; programs to enhance student persistence; accommodation for learning disabilities; and academic advising for undeclared students.

Disability Support Services

Pacific Union College complies with Section 504 of the 1973 Rehabilitation Act, the Americans with Disabilities Act of 1990, and the applicable state and local regulations regarding students with disabilities. The college is committed to promoting and achieving equitable learning opportunities and participation for students with documented disabilities.

The Disabilities Coordinator at the Teaching and Learning Center organizes

the support services for students with documented disabilities. It is your responsibility to provide current documentation (no more than three years old) of your disability.

If you have formal documentation of a disability and are enrolled at Pacific Union College, you are responsible for notifying the Disabilities Coordinator for academic accommodation.

You are not eligible to receive disability accommodations from the college if you do not provide valid disability documentation, self-prescribe your condition, or have not requested accommodation.

Student Veteran Services

As a Yellow-Ribbon school, Pacific Union College enthusiastically welcomes student veterans as they enter or return to college.

The Veterans Services Coordinator at the Teaching and Learning Center provides college orientation, advocacy, and problem-solving strategies for student veterans' unique needs. If you are a veteran student, you are encouraged to contact the Veterans Services Coordinator so that you may learn about the resources available to you.

A Student Veterans' Club is available to support student veterans and their families. The club focuses on social activities, community service, and education the community about veteran needs and services. Additionally, a Veteran and Family Support Group is available to assist in the transition to Pacific Union College, provide information, and refer participants to community and veteran resources.

Information regarding credit for military training and GI Bill benefits may be found in the sections of this catalog entitled "Academic Information and Policies" and "Financial Information".

Career and Counseling Center

The Career and Counseling Center is an important resource for personal and academic success. You may make appointments for personal, occupational, and career counseling through the Center coordinator. Referral service to other professionals in the immediate vicinity is also available through the Center.

The Career and Counseling Center provides the following services:

Psychological Services

Professional, confidential emotional and psychological support is available on an individual, couple, family or group basis. Counselors want to help you deal with any anxiety, depression, stress, personal situational difficulties, or other personal problems that might interfere with your academic performance or seriously compromise your quality of life.

Testing Services

The Career and Counseling Center is an official non-Saturday test site for professional school admissions. Test application forms, national testing dates and deadlines are available.

Additionally, the center coordinates CLEP examinations and other institution-based examinations.

Career Services

Career testing and personality testing are available through the Career and Counseling Center. Career counseling is also available so that you may discuss career options, self-assessment, skills, interests, values, goals, and job-seeking strategies. Additionally, the Center offers assistance as you develop effective interview skills and write résumés and application letters.

Internship and Graduate School Exploration

The Career and Counseling Center coordinates on-campus resources for internship and graduate school exploration. Representatives from professional schools, businesses, industries, technological firms, human services, educational organizations, and government agencies visit Pacific Union College to interview students for local, regional, and national positions. Interviews are conducted on campus, usually in the Career and Counseling Center.

Student Life

Pacific Union College is an independent, coeducational institution, operated in harmony with the beliefs, practices, and educational philosophy of the Seventh-day Adventist Church. In keeping with the special character of the college, you are encouraged to relate your academic study to your understanding of the Christian faith.

The college emphasizes the development of sound Christian character and makes a continuous effort to maintain an atmosphere that encourages commitment and growth in a personal relationship with Jesus Christ. Thus faith and learning combine to prepare you for a life of Christian service.

College Standards for Student Conduct

In harmony with the purposes of the college, you are expected to consistently avoid all forms of personal conduct that are scholastically deleterious or spiritually or morally destructive. You are expected to refrain from the use of drugs, alcoholic beverages, tobacco, and improper conduct between the sexes, and to respect the facilities of the college and the property of others.

Applicants unwilling to pledge compliance with these standards will not knowingly be accepted or retained at Pacific Union College. If you find yourself out of harmony with these standards and social policies, or your conduct and attitude show evidence of a negative or noncooperative influence, you may expect dismissal from the college.

The Student Services Office publishes the *Student Handbook* (www.puc.edu/studenthandbook/), which presents in detail the standards of conduct referred to above. Application to and enrollment in the college are viewed as evidence that you have chosen to abide by the practices and regulations that appear in official college publications.

Religious Life

In keeping with the special character of this Christian college, you are expected to attend a specified number of worship and vesper services, all of which are planned to stimulate growth and maturity in Christian living.

You may participate in a variety of other religious activities: small group meetings, cell groups, the Student Missionary program, short-term mission opportunities, off- and on-campus service groups, and retreats. These activities provide opportunities for you to be active in service to God and humanity.

Cultural Activities

Cultural activities include a Fine Arts Series featuring guest artists and members of the music faculty in classical music concerts; the Heubach Lecture Series and the Longo Lecture series, each of which offers outstanding presentations by distinguished guest speakers; and Rasmussen Art Gallery exhibitions featuring guest artists, members of the art faculty, and student art work. These events are provided to the campus and surrounding community free of charge.

Student Life and Services

Recreational Facilities

College recreational facilities include a lounge and game room in the Campus Center (Dining Commons, first floor); a gymnasium with three full-size basketball courts where basketball, volleyball, futsal and badminton are available; a fitness center with cardio machines and weight rooms containing free weights and weight machines; an Olympic-size swimming pool; lighted outdoor tennis courts; and athletic fields for softball, soccer, volleyball, flagball, and running track. Recreational areas near the college offer skiing, golfing, scuba diving, and boating.

Student Association

As a student, you are a voting member of the Student Association. The Association is responsible for promoting and conveying the ideals and objectives of the college and coordinates a number of social and religious activities and other services on campus. These include producing the campus newspaper (*Campus Chronicle*), the student-faculty directory (*Funnybook*), the yearbook (*Diogenes Lantern*), and the video yearbook.

The main purpose of the Student Association is to serve as a liaison with college administrators. The SA Senate is an additional forum for addressing relevant campus issues.

You are invited and encouraged to participate in the various opportunities the Association provides for activities and leadership. A detailed description of the organization of the Student Association appears in the Association's Constitution and Bylaws.

Family Rights and Privacy Act (FERPA)

In maintaining student records, Pacific Union College complies with the Family Educational Rights and Privacy Act of 1974 (FERPA). This act affords students certain rights with respect to their education records. For a full description of these rights, see "Appendix B: Student Rights Under FERPA" in this catalog.

Grievance Policies and Procedures

The college has developed grievance policies and procedures to ensure that members of its constituent groups are not being treated in an unjust, unethical, or discriminatory manner. Statements detailing these policies and procedures are in the *Student Handbook*.

Pacific Union College will accept your application for admission regardless of your race, age, sex, or national origin so long as your attitude and behavior are in harmony with the goals and traditions of this Seventh-day Adventist college and your abilities and preparation indicate the probability of academic success.

Although church affiliation is not required for admission, you are expected to abide by the policies outlined in this catalog and the *Student Handbook*. To qualify for admission, you must give evidence of intellectual competence, high moral character, satisfactory health, and a genuine desire to learn.

Application Procedures

1. Apply online at *www.puc.edu/enrollment*. There is no fee for online applications.
2. Alternative to applying online: Send a completed Pacific Union College Application for Admissions (available from the Admissions Office) along with a \$30 nonrefundable application fee to the Admissions Office.
3. Request that transcripts be sent directly to the Pacific Union College Admissions Office from:
 - a) the academy or high school from which you graduated; and
 - b) all colleges you previously attended.

Applicants are responsible for the transfer of transcripts of all high-school and college work attempted. Anyone who willfully refrains from transferring all scholastic records, or does not give full and truthful information concerning previous attendance at other educational institutions, will not knowingly be accepted or retained as a student. The transcripts become the property of the college and are kept on permanent file.

4. Submit the necessary references:
 - a) This requirement is automatically met if you apply directly from a constituent Seventh-day Adventist academy in the Pacific Union.
 - b) Bachelor of Science in Nursing students need to provide the references required as part of their application to the nursing program.
 - c) All others applicants must have one completed reference form sent to the Admissions Office (the form is available online at *www.puc.edu/enrollment*).
5. International applicants must meet the additional requirements detailed in the following sections of this catalog: “Admission of International Students” under ADMISSION and “International Students” under FINANCIAL INFORMATION.
6. Wait for a decision letter. When all

pertinent documents are on file—application form, transcripts, and recommendation—the application will be processed and you will promptly be notified in writing of the action taken.

No student should at any time come to the college for the purpose of registering without having first received a formal notification of acceptance.

Acceptance Follow-Up Procedures

The letter of acceptance outlines further steps necessary before registration:

1. If you will be a residence hall student, complete the room reservation form and send it, together with a \$150 room reservation fee, to the Admissions Office. Alternatively, fill out the form and pay the fee online at *www.puc.edu/residencehallreservation*.
The room reservation fee is refundable if your notice of cancellation is received by September 1. No refunds are made for cancellations after September 1 or for failure to appear for registration.
2. Take the required college entrance examination and be sure that scores are on file in the Admissions Office. Pacific Union College participates in the American College Testing Program (ACT) as an essential element in academic advising. Each first-year

Admission

and transfer applicant with fewer than 30 quarter credits must provide ACT (or SAT) scores. *You may be accepted without these test scores, but you must take the test before you attend your first courses.*

3. The college's Health Services Department is required to have on file basic medical information to meet county requirements. The minimum information necessary is:
 - a) Current personal and family medical history
 - b) Recent physical examination including TB testing
 - c) Childhood immunization records
 - d) Current health insurance.Forms can be downloaded at www.puc.edu/healthservices.

Reapplication Procedures

1. If your residence as a student at Pacific Union College has been broken for three or more consecutive quarters, you must follow regular application procedures in order to re-establish student status.
2. If your residence as a student at Pacific Union College has been broken for less than three consecutive quarters, you may contact the Admissions Office to have your original application updated and re-activated.

Admission to Regular Undergraduate Standing

You will have regular admission status if you have an acceptable recommendation and qualify in one of the following categories:

1. Students having secondary-school graduation, or its equivalent, and a GPA of at least 2.3 (C+) in the courses listed as "minimum requirements".

Minimum Requirements

- 4 years of English
- 2 years of Mathematics, including Algebra
- 1 year of Science
- 1 year of History

Strongly Recommended*

- 3 years of Mathematics, including Algebra II and Geometry
 - 3 years of Science, including Biology, Physics, and Chemistry
 - 2 years of History, including U.S. and World History
 - 2 years of Foreign Language
 - Computer Literacy
2. Students lacking secondary-school graduation who have passed the Test of General Educational Development (GED) with a standard score of 400 or above on each of the five tests and an average standard score of 500 for all five tests.
 3. Students seeking early entrance to college and lacking secondary-school graduation who have passed the California High School Proficiency Examination (CHSPE). You are expected to have met the following requirements:
 - a) Successful completion of a minimum of two years of secondary school.
 - b) A personal interview of applicant and parents by an admissions officer of the college or a designated representative.
 - c) A letter from the applicant stating the rationale for early entrance into college.
 - d) Recommendation by the faculty of the secondary school last

* *If you have completed the strongly recommended courses, you will probably have fewer requirements in your general-education program. See "General Education Requirements for the Baccalaureate Degree."*

attended, including an evaluation of social and academic readiness for college.

4. Home school applicants who have contacted the Admissions Office and discussed their individual situation. Home school applicants should anticipate providing ACT or SAT scores plus transcripts or GED scores, or other evidence of high school completion.
5. Transfer students who have completed at least 45 quarter hours of transferable college credit with a minimum cumulative GPA of 2.0.
6. Transfer students who have completed less than 45 quarter hours of college credit must meet the admission standards for first-year freshmen.
7. Reapplicants who have both a minimum cumulative and a Pacific Union College GPA of 2.0 and have maintained an acceptable citizenship record.

Other Types of Admission

In addition to admission on regular academic standing, there are other types of admission at Pacific Union College.

Admission by Advanced Enrollment

Advanced Enrollment status is for secondary-school students of superior ability who wish to enroll in some college courses while completing requirements for secondary-school graduation. For admission to this status, you must meet the following criteria:

1. Completion of your sophomore year with a GPA of at least 3.5.
2. Recommendation from the secondary-school faculty supporting your ability to benefit from early college enrollment and specifying your remaining requirements for graduation

and the method of fulfilling them.

3. Written rationale for early entrance into the college program and evidence of superior motivation.

Students in this category are granted regular admission, subject to secondary-school graduation.

Admission of International Students

If you are an international student, you will be considered for admission when you have:

1. met all requirements for regular admission;
2. provided certified English translations of transcripts;
3. provided the required reference, written in English;
4. presented evidence of ability to meet all financial obligations to the college (see also the section of this catalog entitled “International Students” under FINANCIAL INFORMATION); and
5. demonstrated ability to pursue studies in the English language by presenting a satisfactory score on one of the following exams:

Minimum score of 70

TOEFL (Test of English as a Foreign Language), Internet Based

Minimum score of 14

ACT, English Subject

Minimum score of 360

SAT, Critical Reading Section

Minimum score of 5.5

IELTS (International English Language Testing System), Academic Version

Minimum score of 48

PTE (Pearson Test of English), Academic Version

Admission on First Quarter Academic Probation

You may be admitted on first quarter academic probation status if you qualify in one of the following categories:

1. Applicants for admission as first-year students who meet the requirements of one of the categories above, but whose GPA in the courses listed as “minimum requirements” is at least 2.0 but less than 2.3.
2. Applicants for admission as first-year students who have taken the GED test with standard scores of not less than 350 on each of the five tests and an average standard score of at least 450 for all five tests.
3. Transfer students who are granted admission by special action of the Admissions Committee even though they do not meet the GPA requirements stated above.

If you are admitted on academic probation, you may take up to 15 hours each quarter, including any required remedial courses, until you achieve regular enrollment status. (For further information, see the section entitled “Academic Information and Policies” in this catalog.)

Admission as a Guest Student for Transfer Credit

If you have been accepted for study in another college or university and wish to earn credit at Pacific Union College for transfer, you are not required to follow regular admission procedures. You need only apply to Enrollment Services at least one month prior to the beginning of the quarter for which you expect to register at Pacific Union College.

Admission as a Special Non-Degree or Audit Student

If you do not meet college entrance requirements or do not wish to qualify for a degree, but do wish to take certain courses at the college level on either a credit or an audit basis, you may apply for admission as a special non-degree student. On this basis you are permitted to select courses for study without reference to the requirements of any prescribed curriculum. Enrollment in any particular course is subject to the approval of the instructor and to your meeting any course prerequisites.

Applicants for admission as special students are expected to follow the same procedures for application and registration as regular applicants. Ordinarily, a special student may register for one to six quarter hours at any one time.

Institutional Student Learning Outcomes

The outcomes for the Academic Program* and for General Education**, together with these Institutional Student Learning Outcomes, comprise a Christian liberal arts education at Pacific Union College.

“Joyful is the person who finds wisdom, the one who gains understanding” (Proverbs 3:13)

- **Wholeness**
PUC graduates will make mature, independent choices integrating the needs of body, mind, and spirit.
- **Integrity**
PUC graduates will live lives based on the highest ethical standards.
- **Service and Stewardship**
PUC graduates will practice the Biblical imperatives to serve humanity, resist injustice, and care for the created world.
- **Diversity**
PUC graduates will value and learn from diversity.
- **Our Adventist Heritage**
PUC graduates will understand and value the major tenets of Seventh-day Adventist Christian thought, including the blessing and significance of the Sabbath.
- **Maintaining Lifelong Learning**
PUC graduates will continue to practice the intellectual skills and curiosity necessary to learn and grow creatively throughout life.



* The Academic Program Student Learning Outcomes can be found online at <http://www.puc.edu/academics/degrees-programs>.

** The General Education Student Learning Outcomes can be found in the section entitled “General Education” in this catalog.

Pacific Union College is a Christian liberal arts institution of higher education offering studies and activities designed to promote the harmonious development of each student—spiritually, mentally, socially, and physically.

Through religious services, classroom instruction, and a varied program of social and cultural activities, the college seeks to assist in the development of both character and intellect. A sincere attempt is made to create an environment in which each student may freely arrive at a realistic and satisfying concept of human nature and of humanity's relation to the universe.

Character as a code of moral and spiritual values, and intellect as the tool of reason, are integrated in the learning experience in order to provide a firm base for effective, ongoing contributions to the church and society.

In essence, the college seeks to

- promote the development of a sense of values and a personal philosophy of life as an outgrowth of commitment to the Christian faith;
- stimulate intellectual curiosity essential to the discovery of truth;
- encourage creativity in thought and expression;
- demonstrate that learning is both discipline and pleasure and that meaningful, lasting benefits accrue to those who throughout life continue to experience the satisfaction of learning;
- introduce students to the great body

of knowledge by which people understand and relate to their physical and social environments;

- develop certain basic skills and abilities that contribute to satisfactory social and occupational relationships; and
- nurture our learning community by meeting weekly at Campus Colloquy.

Degrees

While Pacific Union College is primarily a four-year liberal arts institution, it also offers two-year programs leading to associate degrees, professional four-year degrees, a graduate program in education, and preprofessional programs.

Degrees Offered

- **Associate Degree:**
Associate of Science (A.S.)
- **Baccalaureate Degrees:**
Bachelor of Arts (B.A.)
Bachelor of Science (B.S.)
- **Professional Baccalaureate Degrees:**
Bachelor of Business Administration (B.B.A.)
Bachelor of Music (B.Mus.)
Bachelor of Social Work (B.S.W.)
Bachelor of Science in Nursing (B.S.N.)
Bachelor of Science in Management (B.S.M.)
Bachelor of Science in Early Childhood Education (B.S.E.C.E.)
- **Graduate Degree:**
Master of Education (M.Ed.)

Other Curricula

Teacher Education Program

Teacher education at Pacific Union College is a two-step, five-year program involving preparation in subject-matter areas and professional education courses required for Seventh-day Adventist and California State teaching credentials.

Although provision is made for you to obtain both a baccalaureate degree and a preliminary teaching credential at the end of four years, a fifth year of study is necessary to meet professional credential requirements for both the State of California and the Seventh-day Adventist denomination. For further information, see the section entitled "Education" in this catalog.

Preprofessional Curricula

Preprofessional curricula and advising are offered to prepare students for admission to certain types of professional schools. For a list of available curricula, see p. 4 of this catalog.

Certificate

A TESOL (Teaching English to Speakers of Other Languages) Certificate is available through the English Department for students who wish to gain extra skills in working with second-language learners either at home or abroad. For further information, see the section entitled "English" in this catalog.

The Academic Program

The Associate Degree Program

The two-year associate degree program is designed for students interested in occupations requiring a limited amount of training.

Graduation Requirements for the Associate Degree

It is your responsibility to become acquainted with all graduation requirements published in this catalog and to plan a program of studies that will fulfill them. Candidates for associate degrees must complete the residence and general requirements that follow.

► *Residence Requirements:*

You must satisfy the following minimum residence requirements on the Angwin campus or as a participant in an extension program.

1. A minimum of 24 quarter hours.
2. The last 12 hours of the major.

► *General Requirements:*

You must satisfy the following general requirements to earn the associate degree.

1. A total of 90 quarter hours of course work (some associate degrees may require more).
2. A resident and cumulative GPA of 2.0 (C) or above*.
3. Completion of the general education requirement specified for the degree sought.
4. Completion of an associate-degree major according to the specified guidelines.
5. Filing of an Application to Graduate and Graduation Contract. You must

file these two documents with the Records Office no later than the first two weeks of the final quarter prior to the expected date of completion.

6. Completion of any correspondence work and filing of all transfer credit with the Records Office at least a full quarter before expected graduation. If you wish to take course work at another college during the quarter prior to graduation, you must obtain permission from the Records Office in harmony with established guidelines.

► *The Associate Degree Major:*

The specific requirements for each major are given under the departmental listings, and the following requirements apply to all majors:

1. No course, including required cognates, with a grade below C- may apply toward the major*.
2. You must maintain a minimum GPA of 2.0 (C) in the major*.

Some departments may have additional requirements, as outlined in the departmental listings.

You may earn more than one major, provided that you complete all courses and cognates required for both. However, a minimum of 30 quarter hours in the second major must not overlap those in the first.

The Baccalaureate Degree Program

Preparation for a career involves both general and specialized education. Courses of study leading to a baccalaureate degree are designed to give a general understanding of the major academic disciplines and to provide for specialization in the field of your major interest.

In most programs the first two years are primarily devoted to general educa-

tion, but you should also take certain elementary and intermediate courses in your proposed major during these years.

If you have not yet selected a major, you may pursue a general program of education while exploring several fields of knowledge. One can usually do this without loss of time or credit if the program is carefully planned in consultation with your faculty academic advisor.

Graduation Requirements for the Baccalaureate Degree

It is your responsibility to become acquainted with all graduation requirements published in this catalog and to plan a program of studies that will fulfill them. Candidates for baccalaureate degrees must complete the residence and general requirements that follow.

► *Residence Requirements:*

You must satisfy the following minimum residence requirements on the Angwin campus or as a participant in an extension program.

1. 36 of the last 48 quarter hours immediately preceding conferral of your degree.
2. 30 quarter hours of upper-division course work.
3. One-half the upper-division hours in your major.
4. For students taking a minor, 6 upper-division hours for the minor.

► *General Requirements:*

You must satisfy the following general requirements to earn the baccalaureate degree.

1. A minimum of 192 quarter hours of coursework, including 60 hours at the upper-division level. (Within the hours required for a baccalaureate degree, most students will find room for elective courses that will also enrich their general preparation).
2. A resident and cumulative GPA of 2.0 (C) or above.

* *The nursing major includes additional course grade and GPA requirements. For more information see the section entitled "Nursing".*

3. Completion of the general education requirement specified for the degree sought.
4. Completion of a baccalaureate-degree major according to the specified guidelines.
5. Filing of an Application to Graduate and Graduation Contract. You must file these two documents with the Records Office no later than the first two weeks of the final quarter prior to the expected date of completion.
6. Completion of any correspondence work and filing of all transfer credit with the Records Office at least a full quarter before expected graduation. If you wish to take course work at another college during the quarter prior to graduation, you must obtain permission from the Records Office in harmony with established guidelines.
7. Completion of GNST 401, Senior Assessment Seminar. For a course description, see the section entitled “General Courses” in this catalog.

► **The Baccalaureate Degree Major:**

A major consists of a minimum of 45 quarter hours. The specific requirements for each major are given under the departmental listings, and the following requirements apply to all majors:

1. No course, including required cognates, with a grade below C- may apply toward the major.
2. You must maintain a minimum GPA of 2.0 (C) in the major.

Some departments may have additional requirements, as outlined in the departmental listings.

You may earn more than one major or emphasis, provided that you complete all courses and cognates required for both. However, a minimum of 30 quarter hours in the second major or emphasis must not overlap those in the first.

► **The Baccalaureate Degree Minor:**

You may choose to earn a minor if you earn a baccalaureate degree. However, a minor is not required for graduation.

A minor consists of a minimum of 30 quarter hours. The specific requirements for each minor are given under the departmental listings, and the following requirements apply to all minors:

1. No course, including required cognates, with a grade below C- may apply toward the minor.
2. You must maintain a minimum GPA of 2.0 (C) in the minor.
3. A minimum of 20 hours in the minor must not overlap those in the major.
4. The minor must have a name different from that of the major.

You should consult with your academic advisor about a minor if you plan to teach, if you desire teaching credentials, or if you anticipate attending a graduate or professional school that requires a concentration in a discipline other than the major.

The Master Degree Program

A program leading to a Master of Education is available. If you are interested in this degree, you should consult the section entitled “Education” in this catalog. Address specific questions to the chair of the Education Department.

Completion of Degree Requirements

It is the responsibility of each student to satisfy degree requirements. You are expected to acquaint yourself with the various policies and requirements published in the catalog and, in consultation with your advisor, to plan your course of study accordingly.

Catalog Requirements

You normally meet the graduation, general education, and major course requirements of the catalog current the year you first enter Pacific Union College. You have the option of qualifying under any catalog in effect during the time you are in continuous residence. You may choose the requirements for your major and for general education from separate qualifying catalogs if you wish.

If your residence as a student at Pacific Union College is broken by a period of more than three consecutive quarters (excluding summer quarter), you must meet the requirements of the catalog under which you return to the college, or of a subsequent catalog.

Degree Candidacy

You may apply for degree candidacy when you begin the academic year during which it will be possible to complete all requirements for graduation. To apply, file an Application to Graduate and Graduation Contract at the Records Office.

Degree Conferral

Degrees are conferred at the end of each quarter. Information regarding the degree conferral dates and procedures can be found in the section entitled “Academic Policies and Information”.

Commencement Information

Information regarding the commencement ceremony, graduation with academic distinction, and diplomas can be found in the section entitled “Academic Policies and Information”.

Multiple Degrees

Multiple degrees may be conferred concurrently or subsequently if you have met all the major and general-education requirements for each degree and the requirements for multiple majors.

The Academic Program

General Education

Regulations Governing General Education

1. Unless expressly excluded by a statement in the departmental course listings, a general education course in the field of your major may both satisfy the general education requirement and apply toward your major.
2. Credit hours from any given course may be applied to only one area of general education.
3. No course with a grade below D- may apply toward general education.
4. The general-education program contains prerequisite requirements (IV.A.1-4 and VIII) that may be met through the satisfactory completion of certain courses at a regionally-accredited secondary institution. If you complete such courses through home school or at an unaccredited secondary institution, you may elect to validate each course by passing departmental challenge examinations.

IGETC

The Intersegmental General Education Transfer Curriculum (IGETC) is a series of courses offered in the California community colleges for students who plan to transfer to baccalaureate-level institutions. There are two options: UC and CSU. :

- UC Completion of the UC IGETC will satisfy all requirements for areas I, II, III, and IV in the PUC baccalaureate general education package EXCEPT for requirement I.B, Oral Communication. Students who complete the UC IGETC will still be required to meet this requirement.
- CSU Completion of the CSU IGETC will satisfy all requirements for areas I, II, III, and IV in the PUC baccalaureate general education package.

Students who complete the IGETC will still be required to meet all requirements for areas V, VI, VII, and VIII in the PUC baccalaureate general education package.

Completion of the IGETC must be certified by a community college counselor and submitted to Pacific Union College with the student's final transcript prior to the first term of enrollment.

Transfer Students

The main objective of the general education program is not so much to require a prescribed list of courses as it is for students to achieve the *purposes* of general education as stated in each section. The courses listed are those by which Pacific Union College students achieve the purposes of the program. Acceptable transfer courses for meeting requirements may not in every case be identical, but they must achieve the purposes of each section.

English Course Placement

English course placement is determined by the score you received on the English subsection of the ACT exam (ACTE) or the verbal subsection of the SAT exam (SATV):

- ENGL 099: Students with ACTE scores of 0-14
Students with SATV scores of 0-370
- ENGL 100: Students with ACTE scores of 15-18
Students with SATV scores of 380-460
Students who have completed ENGL 099
- ENGL 101: Students with ACTE scores of 19-36
Students with SATV scores of 470-800
Students who have completed ENGL 100

If you do not submit ACT or SAT scores, you will be placed in ENGL 099 (international students) or ENGL 100 (all other students). This placement may be modified upon receipt of scores or upon completion of a placement test at the English Department. If you are placed into ENGL 099 or ENGL 100, you will be required to take the appropriate English course during the first quarter of your enrollment at Pacific Union College.

Algebra Course Placement

If you did not complete a full year of Algebra II with semester grades of C- or better at an accredited secondary institution, you will be required to take algebra at Pacific Union College in order to meet the algebra requirement.

You will be placed in the algebra courses based on the score you received on the mathematics subsection of the ACT exam (ACTM) or the mathematics subsection of the SAT exam (SATM):

- MATH 019: Students with ACTM scores of 0-18
Students with SATM scores of 0-490
- MATH 096: Students with ACTM scores of 19-36
Students with SATM scores of 500-800
Students who have completed MATH 019

If you do not submit exam scores, you will be placed in MATH 019. This placement may be adjusted upon receipt of scores or upon completion of a waiver test available at the Mathematics Department.

General Education Requirements for the Associate of Science Degree

The general education requirements for the A.S. degree are listed below.

Modified general education requirements for the A.S. degree with a major in Nursing can be found in the section entitled “Nursing”.

- A. College Writing
 - ENGL 101* College English
- B. Oral Communication
 - One oral communication course.**
- C. Algebra
 - A full year of Algebra II with semester grades of C- or better at an accredited secondary institution
or
MATH 019* Introductory Algebra (or waiver test) *and*
MATH 096* Intermediate Algebra (or waiver test)
- D. Revelation, Belief, and Action
 - A minimum of 9 hours of religion courses**, including at least 3 hours from RELB. Students who transfer at least 45 hours from public colleges and universities must take 5 hours of religion, including at least one RELB course.
- E. Health
 - One health course.**
- F. Fitness:
 - Two physical education activity courses**, taken during two different quarters. One must be an aerobic course.
- G. Electives
 - Two courses from at least two of the following areas**:
 1. History/Social Sciences
 2. Literature/Visual Arts/Music/Philosophy/Foreign Language
 3. Natural World/Sciences/Statistics

General Education Requirements for the Baccalaureate Degree

The general education requirements for the B.A. and B.S. degrees are listed below.

Modified general education requirements for the other baccalaureate degrees can be found in their respective departmental sections as follows:

B.B.A.	Business Administration
B.Mus.	Music
B.S.E.C.E.	Education
B.S.M.	Business Administration
B.S.N.	Nursing
B.S.W.	Psychology/Social Work

I. Foundations of Learning

- A. College Writing
 - ENGL 101-102* College English

This requirement should be completed by the end of the freshman year and must be completed by the end of the sophomore year.

Students who complete this requirement will be able to think and read critically; learn collaboratively; write clearly; and find, evaluate, and use secondary sources.

- B. Oral Communication
 - One of the following courses:

COMM 105	Speech Communication (Freshmen only)
COMM 226	Public Speaking (Non-freshmen only)

Students who complete this requirement will be able to communicate effectively through speaking and learning in a variety of contexts; critically evaluate argumentative claims; and learn collaboratively.
- C. Statistics
 - STAT 222 Introduction to Statistics

Students who complete this requirement will be able to reason critically in their use of statistical data.

The Purpose of General Education at Pacific Union College

The general education program at Pacific Union College seeks to provide students with the **knowledge, values, and skills** they need to live Christ-centered productive lives of integrity and service in a complex world.

- A **knowledge** of human cultures and the natural world;
- Seventh-day Adventist Christian values, including integrity, justice, compassion, and wholeness;
- The following skills:
 - To communicate effectively in both written and spoken English;
 - To think critically and creatively about information, ideas, and arguments;
 - To locate and use appropriately a broad variety of resources and information; and
 - To learn and work collaboratively.

The purposes of General Education are more specifically defined in each of the subsections.

* See facing page for course placement guidelines.

** Selections are to be made from courses that meet baccalaureate degree general education requirements (see the following section).

* See facing page for course placement guidelines.

The Academic Program

II. History and Social Sciences

A. History:

- One of the following sequences:

HIST 101-102 History of World Civilizations

HIST 134-135 History of the United States

Students who complete this requirement will be able to apply the methods of the historian to think critically about historical developments and ideas within a broad cultural context.

B. Social Sciences:

- Two of the following courses; one course from anthropology (ANTH), psychology (PSYC), or sociology (SOC) and a second course with a prefix different from that of the first:

ANTH 124 Cultural Anthropology

ECON 261 Macroeconomics

ECON 265 Microeconomics

GEOG 210 World Regional Geography

HIST 351 History of Culture

MKTG 360 Consumer Behavior

PLSC 124 Introduction to American Government

PLSC 328 Critical World Issues

PSYC 121 General Psychology

PSYC 390 Gender Issues

SOCI 121 Introduction to Sociology

SOCI 214 The Family

SOCI 232 American Social Problems

SOCI 355 "Racial" and Ethnic Relations

Students who complete this requirement will be able to employ the methods of the social scientist to think critically about human behavior and interaction, including how humans create and are influenced by social, cultural, economic, and political structures.

III. Arts and Humanities

A. Literature:

- ENGL 301 Great Books (Juniors and seniors only)
Students who complete this requirement will be able to read literature for pleasure and understanding, and think, read, and write critically about literary texts within a broad cultural context.

B. Visual Arts, Music, Philosophy, Language and Culture:

- B.S. Students: Three of the following courses, each from a different subsection.
- B.A. Students: Three of the following courses- one from subsection 1, one from subsection 2, one from subsection 3.

1. Visual Arts

ARTH 107 American Art

ARTH 108 History of Far Eastern Art

ARTH 115 History of Western Art

ARTH 116 History of Western Art

ARTH 278 Women Artists

2. °Music:

MUHL 105 Survey of Music

3. Philosophy:

PHIL 101 Introduction to Philosophy

PHIL 390 History and Philosophy of Science

PHIL 485 Issues in Science and Religion

PLSC 274 Introduction to Political Thought

RELT 320 Philosophy of Religion

4. Language and Culture

Demonstrated beginning-level language proficiency will not be applied to meet this requirement. It may only be met through an approved college-level language and culture course, such as one of the following:

CHIN 111 Beg Chinese I (Language & Culture)

FREN 111 Beg French I (Language & Culture)

GRMN 111 Beg German I (Language & Culture)

ITAL 111 Beg Italian I (Language & Culture)

SPAN 111 Beg Spanish I (Language & Culture)

Students who complete this requirement will be able to think critically about the development of human knowledge and expression, appreciate the perspectives and contributions of people of other cultures and historical periods, and identify standards of aesthetic value.

IV. The Natural World

Students will inquire into the nature of science and will explore relationships between the sciences and other realms of human thought, including culture, philosophy, history, and ethics. They will consider both the benefits and the limitations of science and technology.

A. Prerequisites:

1. Algebra:

► One of the following options:

- a) A full year of Algebra II with semester grades of C- or better at an accredited secondary institution
or
- b) MATH 019** Introductory Algebra (or waiver test) *and* MATH 096** Intermediate Algebra (or waiver test)

This requirement should be completed by the end of the freshman year and must be completed by the end of the sophomore year.

2. Life Science:

► One of the following options:

- a) A full year of biology with semester grades of C- or better at an accredited secondary institution
or
- b) BIOL 105 Introduction to Biology

3. Chemistry:

► One of the following options:

- a) A full year of chemistry with semester grades of C- or better at an accredited secondary institution
or
- b) CHEM 101 Introductory Chemistry

4. Physics:

► One of the following options:

- a) A full year of physics with semester grades of C- or better at an accredited secondary institution
or
- b) PHYS 105 Introduction to Physics

B. Requirements:

1. Scientific Inquiry:

- GSCI 205 Scientific Discoveries**

Students will explore the major discoveries of science through an interdisciplinary approach.

2. Insight Through Investigation:

- One course from the following**:

ASTR 115	Astronomy
BIOL 101	Human Anatomy
BIOL 102	Human Physiology
BIOL 111	Biological Foundations
or 112 or 113	
BIOL 227	Natural History of California
BIOL 331	Marine Science
CHEM 102	Survey of Organic Chemistry
CHEM 103	Survey of Biochemistry
CHEM 111	General Chemistry
GEOL 233	Geology
MICR 134	General Microbiology
PHYS 111	General Physics
PHYS 211	Physics with Calculus

Students will study and practice the scientific method in a laboratory course in the natural sciences.

- ** Note: Completion of any of the following sequences will satisfy both science requirement 1 (Scientific Inquiry) and science requirement 2 (Insight through Investigation):

BIOL 101-102/	Human Anatomy-Human Physiology/
MICR 134	General Microbiology
BIOL 111-112-113	Biological Foundations
CHEM 111-112-113	General Chemistry
PHYS 111-112-113	General Physics
PHYS 211-212-213	Physics with Calculus

3. Science and Society:

- One course from the following:

BIOL 355	Issues on Origins
BIOL 450	Philosophy of Origins
ENVR 360	Conservation Biology
ENVR 361	Energy and Climate Change
ENVR 362	Pollution and Environmental Quality
PHYS 390	History and Philosophy of Science
PHYS 485	Issues in Science and Religion

Students will explore relationships between the sciences and other realms of human thought, including culture, philosophy, history and ethics.

** See course placement guidelines listed previously.

The Academic Program

V. Revelation, Belief, and Action

Students will explore the nature, forms, and uses of belief; the relationship between Christian belief and revelation; and the applications of belief to life, emphasizing Christian expression of faith in service. Since the Bible records selected revelations of God through centuries of human experience, students will be asked to use it as the central text of study for approaching an understanding of God's will and of the Christian tradition.

A. Studies in Religion

- At least 18 hours from RELB, RELH, RELL, RELP, and RELT courses, including least 6 hours from RELB courses. A maximum of 9 lower-division hours may apply. Up to 2 hours of credit may be chosen from section B below to apply to this requirement.

B. Religious Issues in Other Disciplines:

This section is optional. Students may elect one course from the following list, and 2 hours of credit will apply to the section A requirement above:

BIOL 355	Issues on Origins
BIOL 450	Philosophy of Origins
PHYS 485	Issues in Science and Religion
PSYC 435	Psychology of Religion
PSYC 490	Issues in Religion, Ethics, and the Human Sciences (also listed as SOWK 490)
SOCI 435	The Sacred and Profane in Society

These courses provide an opportunity for students to examine the meeting points between a specific discipline and Christian faith. Because of the integrated nature of these courses, departments other than Religion are involved in their delivery.

Note: Requirement in Religion for Transfer Students:

Students who transfer from public colleges and universities must complete the following minimum requirement in religion (sections A and B) at Pacific Union College:

0-44 hours of transfer credit: Take the full requirement.

45-89 hours of transfer credit: Take at least 14 hours, including at least 6 hours from RELB courses. A maximum of 9 lower-division hours may apply.

90-134 hours of transfer credit: Take at least 10 hours, including at least 6 hours from RELB courses. A maximum of 9 lower-division hours may apply.

135+ hours of transfer credit: Take at least 6 hours, including at least one RELB course.

VI. Health and Fitness

In order to achieve a comprehensive, balanced education, students should acquire and develop the knowledge, skills and habits necessary to sustain a sound mind in a sound body.

A. Health:

- One course from the following:

FDNT 235	Nutrition
HLED 162	Fitness for Life
HLED 166	Health Education
HLED 169	Current Health Concerns

Students will understand major health issues such as nutrition, stress management, substance abuse, and Seventh-day Adventist health principles and their application.

B. Fitness:

- One activity course for each year in residence, with a maximum of four courses. One must be a course designated as an aerobic activity course (course number ends with A).

ESAC All courses

Students will participate in exercise and physical activity.

Note: Requirement in Fitness for Transfer Students:

Students who transfer must complete the following minimum requirement in fitness (section B):

0-44 hours of transfer credit: Take the full requirement.

45-89 hours of transfer credit: Take at least three activity courses, including one aerobic activity course.

90-134 hours of transfer credit: Take at least two activity courses, including at least one aerobic activity course.

135+ hours of transfer credit: Take at least one aerobic activity course.

VII. Practical and Applied Arts

A truly liberal education is comprehensive, affecting the whole person. In the courses listed below, students will broaden their applied and manual skills.

- At least 4 hours, to be selected from two or more of the following subsections:

A. Practical Arts:

AGRI 212	Home Greenhouse Gardening (2)
AGRI 213	Home Vegetable Gardening (2)
ARTF 121	Drawing Fundamentals (2)
ARTF 212	Ceramics I (2)
ARTP 241	Photography I (3)
ANY MUEN	Music Ensembles (1)
DRMA 141	Dramatic Arts Society) (1)
DRMA 341	Dramatic Arts Society) (1)
MUSP 120-124	Music Lessons (class instruction) (1)
MUSP 320-324	Music Lessons (class instruction) (1)
MUSP 162	Music Lessons (general) (1-2)
MUSP 362	Music Lessons (general) (1-2)

Students will participate in activities which lead to skills that are both useful and enriching.

B. Information Management:

CPTR 105	Introduction to Computers (3)
CPTR 115	Introduction to Computer Programming (4)
INFS 144	PC Operating Systems (1)
INFS 148	PC Spreadsheets (1)
INFS 149	PC Databases (1)
OFAD 201	Word Processing (2)
OFAD 203	Word Perfect (2)

Students will acquire the basic knowledge and skills necessary to use computers to manage information.

C. Management of Personal Finance:

ACCT 121	Financial Accounting I (3)
BUAD 118	Personal Money Management (3)
BUAD 223	Personal Law (2)
BUAD 335	Real Estate (4)

Students will learn to manage personal financial resources.

D. Personal Skills:

COMM 223	Interpersonal Communication (3)
PSYC 126	Assertive Behavior (2)
PSYC 227	Conflict Resolution & Relationship Skills (3)

Students will develop skills for dealing with personal relationships and life crises.

VIII. Foreign Language (B.A.)

This section is required of all B.A. students and is recommended for students in other curricula.

1. Prerequisite:

- One of the following options:
 - a) Two full years of a foreign language with semester grades of C- or better at an accredited secondary institution
or
 - b) Satisfactory completion of an elementary-level college sequence in a foreign language such as one of the following:

FREN 111-112-113	Beginning French I-II-III
GRMN 111-112-113	Beginning German I-II-III
ITAL 111-112-113	Beginning Italian I-II-III
RELL 125-126-127	Beginning Greek I-II-III
RELL 427-428/	Biblical Hebrew I-II/
RELB 445	Hebrew Exegesis
SPAN 111-112-113	Beginning Spanish

2. Requirement*:

- A language-cultural experience in a foreign language through one of the following options:
 - a) An intermediate-level college sequence in a foreign language such as one of the following:

RELL 235-236/	Intermediate Greek I-II/
RELB 335	Greek Exegesis
SPAN 132-133	Intensive Intermediate Spanish I-II
SPAN 151-152-153	Intermediate Spanish I-II-III

or
 - b) An elementary-level college sequence in a foreign language not previously studied.

Students who complete this requirement will be able to read and communicate at the intermediate level in a foreign language or at the beginning level in two foreign languages. They also will be able to appreciate and think critically about another culture.

* This requirement may be waived (with no college credit) for students who demonstrate one of the following:

- 1) Completion of at least four years of formal schooling conducted in a foreign language with a C average or better in a country where that language is the native tongue. (Contact the Records Office)
- 2) Intermediate-level proficiency on an exam approved by the Modern Languages Department. (Contact the department chair)

The Honors Program

The Honors Program offers an alternative baccalaureate-level general education program for academically motivated students. It is built around a series of “great books,” or core texts, illustrating significant themes in the liberal arts. These works are supplemented by selected contemporary works, including films.

Students who complete the Honors Program have **no other general education requirements**. Students who fulfill the Honors Program requirements graduate “With Honors,” as designated on the official transcript, graduation program, and diploma.

Students with passing grades may transfer out of the Honors Program into the regular General Education program. Consult with the Honors director for specific details.

The Goal of the Honors Program

The goal of the Honors seminars is to create an atmosphere in which students feel free to experiment with ideas and to test them in open debate with classmates and teachers. The program presents significant books, films, art, and music in a Christian context. Each student, regardless of educational goals, is encouraged to seek truth and to act upon it.

Admission to the Honors Program

Students with the following qualifications may apply for admission to the Honors Program: a strong academic record in high school, including four years of English, two years of history, three years of mathematics (including Algebra II*), a year each of biology*, chemistry*, and physics*; a “solid” subject GPA of at least 3.5; and standardized test scores (SAT, ACT, or equivalent) at the 80th percentile or higher.

Transfer students: Students with adequate freshman G.E. credit may be admitted to the Honors Program as late as fall quarter of the sophomore year, from which point they must complete 9 of the 12 required seminars. Juniors may apply for transfer into the program only if 1) they are willing to complete 9 seminars, or 2) they have been in an Honors program elsewhere, in which case they normally will be required to complete 6 seminars, including the summer term abroad. Transfer students must meet the Honors entrance requirements and provide two letters of recommendation from college teachers supporting their ability to do superior academic work. All transfer students must complete the Honors Project and cognate requirements.

* *If a student is admitted without having successfully completed these courses in high school, the student will need to complete the appropriate college course(s) prior to graduation (see Section IV, Part A, of the General Education Requirements).*

Honors Program Requirements

Students must maintain at least a 3.3 cumulative GPA while in the Honors Program.

Students complete 67 general education hours as follows*:

► Freshman Seminars:

HNRS 110	Foundations (5)
HNRS 120	Liberty and America (5)
HNRS 130	Scripture I (5)

► Sophomore Seminars:

HNRS 210	Cosmos (4)
HNRS 220	Self and Society (4)
HNRS 230	Scripture II (4)

► Summer Term Abroad:

HNRS 300	Beauty (5)
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► Junior Seminars:

HNRS 310	Virtue (4)
HNRS 320	Christianity (4)
HNRS 349	Pattern (4)

► Senior Seminars:

HNRS 410	Alterity (4)
HNRS 420	Progress (4)

► Senior Project:

HNRS 498	Honors Project (3)
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► Language Study

12 hours of language study, which may be fulfilled by Biblical Greek (RELL 125, 126, 127, 235, 236) or by completion of a year-long intermediate college-level sequence in a foreign language (Spanish, French, German, etc). Waived upon demonstrated intermediate-level proficiency in a foreign language.

For course descriptions, see the section entitled “Honors Courses” in this catalog.

Students should be aware of several additional features of the Honors Program:

1. The freshman seminars have a particularly strong writing component.
2. The Summer Term Abroad involves a month of study outside the United States.
3. The Honors Project allows students to examine an issue or problem of their own choosing. In consultation with a faculty advisor and the Honors director, students submit an Honors Proposal by the end of the junior year. A public presentation of the project must occur no later than two weeks prior to graduation.

Changes in academic policies made and announced during the school year have the same force as if they were published in this catalog. Policies may not be waived or amended except by petition to and approval by the Academic Standards and General Education Committee. If you wish to petition for an exception to an academic policy, complete a Special Request form (available at the Records Office), ask the appropriate department chair to endorse your request, and return it to the Records Office.

Registration and Enrollment

You are expected to register online through Lantern/Web Advisor (accessible from the college web site) for all your courses during the registration periods as announced in this catalog.

Financial Clearance

A financial restriction is placed on each student's registration account 30 days prior to the start of each quarter. During this period, students are required to obtain financial clearance from the Student Financial Services Office. For further information, see the section entitled "Financial Information" in this catalog. *If, at the end of the second day of courses, you have not received financial clearance, your registration will be cancelled and your reserved spot in your*

courses will no longer be guaranteed. After clearing finances, you may re-register for any available courses until the last day to add courses.

Changes in Registration

To avoid changes in registration, you should plan your program carefully. You may add courses or withdraw from them before the published deadlines. *You are responsible for checking your Lantern schedule to make sure that it is correct.*

Late Registration

You must complete registration for each quarter by the last day to add courses (one week after instruction begins).

You may not register for a course after the last day to add courses except by petition to and approval by the Academic Standards and General Education Committee. To request late registration for a course, you must complete a Late Add Request form (available at the Records Office), ask both the course instructor and your academic advisor to endorse your request, and return it to the Records Office. If your request is approved, you will be charged a late registration fee of \$25 cash payable at the Records Office or \$35 charged to your account.

Even if emergency circumstances make it impossible to complete your registration as described above, *you may not under any conditions continue attending a course after the fifth week of the quarter unless you are officially*

enrolled. No grade is issued or recorded on the transcript, or credit awarded, for any course for which you are not officially enrolled by the end of the fifth week of the quarter. (For summer quarter and other courses scheduled for durations other than the standard ten-week quarter, this policy applies with the phrase "fifth week of the quarter" replaced by the phrase "midpoint of the quarter.")

Prerequisites

You must complete all prerequisites prior to taking a course. Exceptions may be made only by the permission of the instructor. Prerequisites are indicated in the course description.

Some courses have recommended prerequisites. While you are not required to complete the recommended prerequisites prior to taking a course, you are encouraged to do so in order to maximize your learning experience in the course.

Corequisites

You must take all corequisites concurrently with a course. Exceptions may be made only by the permission of the instructor. Corequisites are indicated in the course description.

Some courses have recommended corequisites. While you are not required to take the recommended corequisites concurrently with a course, you are encouraged to do so in order to maximize your learning experience in the course.

Academic Information and Policies

Restriction on Lower-Level Courses After Upper-Level Courses

You may not take lower-level courses after you have earned credit in a more advanced course in the same area. Each department will identify those advanced courses that preempt lower-level courses in its area.

Class Attendance

You are responsible for all material and assignments presented in class, and you are expected to maintain regular attendance at all class sessions of the courses in which you are enrolled. While there is no general college attendance requirement, each instructor has the right to establish specific policies best suited to a given course.

Audited Courses

If you wish to attend a course but do not wish to complete all regular assignments, you may, with the consent of the instructor, register on an audit basis. Applications to change registration from "Audit" to "Credit" or from "Credit" to "Audit" are not approved after the end of the first week of the quarter. Fees for audited courses are charged at half the regular tuition rate, except for private music lessons, ensembles, and other participation-type courses, which are charged at the full tuition rate. On the transcript, audited courses carry the notation "AU."

Course Load

The academic course load is described in terms of quarter hours (credits/units). One quarter hour represents one hour of class per week throughout the academic quarter or the equivalent for a non-lecture course. (See also "Credit Hours".)

If you have regular academic standing, a full course load is 12-17.5 quarter hours per regular quarter and a half course load is 6-11.5 quarter hours per

regular quarter. During the summer session, a full course load is 9-12 quarter hours.

To enroll for a course load in excess of 17.5 quarter hours, you must complete a Request for Overload form (available at the Records Office) and obtain the approval of your academic advisor and the registrar. There is an extra charge per credit hour for overloads. For further information, see the section entitled "Financial Information" in this catalog.

If you are on Academic Probation, your maximum course load is reduced to 15 quarter hours during the school year and 9 during the summer session.

Withdrawal from Courses

You may withdraw from a course through Lantern any time before the last day to withdraw. On the transcript, withdrawn courses carry the notation "W". A course from which you withdraw before the last day to delete courses (one week after instruction begins) will not appear on your transcript.

You may not withdraw from a course after the last day to withdraw except by petition to and approval by the Academic Standards and General Education Committee. To request late withdrawal from a course, you must complete a Late Withdraw Request form (available at the Records Office), ask both the course instructor and your academic advisor to endorse your request, and return it to the Records Office.

If withdrawal from a course will result in a credit load of less than 12 credit hours, consult with your financial counselor prior to withdrawing in order to determine how your financial package will be affected. International students should not drop below 12 credit hours without consulting with the international student advisor in the Student Services Office.

Withdrawal from the College

To withdraw from the college, complete a Notice of Withdrawal form (available at the Records Office). The completed form must be signed by your residence-hall dean (for residence-hall students) or the vice president for student services, your financial counselor, and the retention coordinator. Withdrawal is official when the form with the signatures has been submitted to the Records Office.

The date of official withdrawal from the college will appear on your transcript. *If you choose to withdraw after the eighth week of the quarter, a grade of "F" will be recorded for all courses in which you are registered.*

Study-Work Program

If you are employed either on or off campus, you are expected to adjust your course load in harmony with the following schedule to achieve a reasonable balance in study and work:

<i>Course Load (Quarter Hours)</i>	<i>Maximum Work Load per Week</i>
16	16 hours
14	20 hours
12	26 hours
10	32 hours

If you have a record of average scholastic achievement, you should plan a study-work program involving less than the maximum labor load suggested. It is recommended that you work with your advisor to determine an appropriate work load for your individual situation.

Cancellation of Scheduled Courses

The college administration, in consultation with the respective department chair, reserves the right to cancel any course listed in the course schedule if enrollment is four students or fewer or if a qualified instructor is not available because of unavoidable changes in personnel.

Advisory Services

As a new student, you will work with an enrollment counselor, a departmental advisor, and/or a transfer credit analyst in order to plan your first quarter schedule and complete your initial registration.

Your academic advisor(s) will be assigned based on your declared academic program; assignment occurs directly prior to the start of your first quarter. Thereafter, you should plan to meet with your academic advisor(s) regularly for consultation and support. In April, an advising restriction is placed on each student's registration account. You are required to clear this restriction prior to registration for the next academic year; clearance will be granted by your academic advisor(s) once you have met for a satisfactory advisory session.

In planning your studies, you should carefully follow the degree requirements outlined in this catalog. At any time during your enrollment at Pacific Union College you may run a Degree Audit as a tool to make sure all the degree requirements are being met. Such planning helps to ensure that you meet all graduation requirements in an orderly, logical, and timely sequence.

Undeclared Students

Students who are not ready to declare a major are assigned to an advisor who will help them structure their course schedules in a way that provides an appropriate foundation for their future major course work. The advisor also assists students in looking at course options that will be helpful in making a decision about the major.

Teaching Credential Advising

If you have chosen a career in teaching, you should consult with the chair of the Education Department as early as possible in your curriculum planning.

Academic Integrity

Academic integrity is highly valued and is expected. Academic dishonesty is an extremely serious offense and is cause for disciplinary action. *Students involved in cheating, plagiarizing, fabrication, multiple submissions, abuse of academic materials, deception, misrepresentation, electronic dishonesty, and other types of academic dishonesty, including production of materials for other students, are ordinarily subject to dismissal from the course with a failing grade.*

Situations involving academic dishonesty are dealt with by the instructor of the course in consultation with the department chair. A record of any verified instance of dishonesty is forwarded to the academic dean and is kept in the student's personal file. Whenever such filing occurs, the student involved is notified. Established appeal and grievance procedures provide the student with the opportunity to respond to the situation. A pattern of serious or habitual dishonesty is dealt with by the academic dean and may result in failing grades or dismissal from the college. (For further details, see "Appendix A: Code of Academic Integrity" in this catalog.)

Ownership of Written Work

Written work you present in fulfillment of course requirements becomes the property of the college. The teacher or the college, however, may not publish the written work for any reason without your permission. The original copy is returned to you at the discretion of the teacher. When it is not returned, you have the right to request and be given a copy of work turned in. You should request a copy not later than the end of the quarter following that during which you took the course.

Final Examinations

You must take the final examination in each course in which you are enrolled at the time listed in the official examination schedule or you will receive the grade earned without the final examination. All travel, work, medical appointments and other plans must be arranged early to avoid an examination conflict.

Exceptions to the schedule will be granted by the academic dean for the following circumstances:

1. A death in the immediate family;
2. A documented medical emergency demanding immediate attention; or
3. An examination schedule with four examinations in one day or three consecutive examinations in one day (a request for an examination schedule change must be filed with the academic dean before the end of the ninth week of the quarter).

You should expect no other exceptions to the published schedule unless you can provide proof to the academic dean of an emergency situation beyond your control. If exceptions are granted for other reasons, you will be charged a fee of \$100 for each rescheduled examination.

Pre-Examination Week

No off-campus field trips, major examinations, or extracurricular activities requiring student participation may be scheduled during the week prior to the first day of final examinations ("dead week") in order that you may devote full time to completing course projects and preparing for final examinations. Exceptions are made for laboratory courses and for those courses meeting once a week only and for which there is no contact during the normal final exam week. Additional exceptions include take-home exams, skills tests in activity courses, and quizzes.

Grading System

Grades are posted on Lantern at the end of each quarter. These reports are not valid for transfer or certification purposes.

Once grades have been posted on Lantern, grade changes are permitted only if the teacher can establish the fact that a clerical error was made, resulting in an inaccurate grade submission on your official record.

To raise a grade once it has been recorded, you must repeat the course at Pacific Union College. *Late work is not accepted after the end of the term.*

Grades

Grades are recorded by letters and are assigned point values as follows:

A	4.0	D	1.0
A-	3.7	D-	0.7
B+	3.3	F	0.0
B	3.0	I	Not computed
B-	2.7	IP	Not computed
C+	2.3	NR	Not computed
C	2.0	S	Not computed
C-	1.7	W	Not computed
D+	1.3	AU	Not computed

Grade Point Average (GPA)

The GPA is computed by dividing the total number of points earned by the total number of hours attempted. Grades earned for remedial coursework are not included in the GPA.

Failure

A grade of “F” is assigned to a course for which you do not meet the minimum standards set for a passing grade. An “F” carries 0 grade points and is computed in the GPA.

Incomplete

A grade of “I” is assigned in exceptional situations when unavoidable circumstances prevent completion of a course. An “I” carries no grade points and is not computed in your GPA.

If you are granted a grade of “I”, you must complete the missing coursework by the time your instructor specifies, but no later than six calendar weeks from the beginning of the following quarter. An “I” not completed before this deadline reverts to a grade of “F” unless the instructor submits a different grade computed without the missing coursework.

When the final grade is recorded, it will appear on your transcript behind the notation “I” to indicate that the grade was originally incomplete. The grade will be computed in the GPA in the same way as a standard letter grade.

At least six weeks before graduation, prospective graduates must have completed all outstanding “I” grades.

In Progress

The “IP” grade is available when the requirements of a course extend beyond the quarter for which you are registered. For such courses, the course description notes that the course “Qualifies for IP grading”. If you are granted a grade of “IP”, you must complete the missing coursework by the time your instructor specifies, but no later than one calendar year from the end of the quarter (one quarter for all AVIA courses).

Not Reported

The grade “NR” is administratively assigned to a course for which the teacher does not report a grade. The grade “NR” carries no grade points and is not computed in the GPA. An “NR” not removed by the end of the second week of the following quarter becomes an “F.”

Satisfactory

A grade of “S” signifies that you earned the equivalent of “C-” or higher for a course graded on a Satisfactory/Fail (S/F) basis. The “S” grade is used only when a course is “Graded S/F” as specified in the course description. An “S” is not computed in the GPA.

Withdrawal

Courses from which you withdraw before the end of the first week of the quarter are deleted from the transcript. A grade of “W” is assigned to a course from which you officially withdraw between the beginning of the second week and the end of the eighth week. A “W” is not computed in the GPA. You may not withdraw from a course after the eighth week.

Audit

The grade “AU” is assigned to a course taken on an audit basis. You may change registration from audit to credit, or from credit to audit, before the end of the first week of instruction. A course for which you register for audit but do not attend regularly is assigned a “W.”

Repeating Courses to Improve the Grade

The following regulations govern course repeats to improve the grade:

1. If you wish to repeat a course to improve your grade, *you must repeat the course in residence at Pacific Union College* in order for your Pacific Union College GPA to be recomputed.
2. You may repeat a course to improve your grade only if you have not taken a more advanced course in the same subject.
3. If you take a course at Pacific Union College and then repeat the course in residence in order to improve your grade, *both instances of the*

course with grades will still appear on your official Pacific Union College transcript. However, the course with the lower grade will be marked clearly as a repeated course on the transcript, and only the course with the higher grade is included in the grade-point calculation and the total credits earned.

4. If you transfer a course to Pacific Union College and then repeat the course while in residence to improve the grade, the transfer course will no longer apply at Pacific Union College.
5. When repeating a course to improve the grade, you must repeat all the class work. If the course includes a laboratory, you may be required to repeat all laboratory requirements at the discretion of the instructor.
6. If you earned an unsatisfactory grade in a course required for your major or minor and you have taken a more advanced course in the same subject, you may, on the advice of your major advisor, take another course in the same general area to meet graduation requirements.

Dean's List

When you complete a minimum of 12 college-level credits with a GPA of at least 3.85 during a term at Pacific Union College, you are honored as a member of the Dean's List for that term.

Academic Renewal

Option 1: Under certain circumstances, the college may disregard up to three quarters or two semesters of previous undergraduate course work, taken at any college or university, from all considerations associated with degree

requirements. These circumstances are the following:

1. You have formally requested the action on a Special Request form; and
2. You have demonstrated that work completed in the terms under consideration is substandard and not representative of your current academic ability and level of performance.

The final decision to disregard one or more terms of coursework is based upon careful review of evidence by the registrar and is made when:

1. at least one year has elapsed since the most recent work to be disregarded was completed; and
2. you have completed at Pacific Union College at least 15 quarter units with at least a 3.0 GPA.

When such action is taken, your permanent record is annotated so that it is readily evident to all users of the record that no work taken during the disregarded terms, even if satisfactory, may apply toward degree requirements. All work will remain legible on the record, ensuring a true and complete academic history.

Option 2: If your GPA is lower than 2.0, you may petition the registrar to have excluded from your record all *prior* college credit and to have no GPA. To qualify, you must

1. be at least 25 years of age;
2. have been out of a degree program of college studies for at least four years; and
3. demonstrate ability to progress in college work.

If the petition is approved, all prior college courses and grades are retained on the transcript and the notation "admitted without credits or grades by administrative action" is recorded. When implemented, this policy waives all previous credits and grades.

Veteran Student Enrollment and Satisfactory Progress

The veterans certifying official in the Records Office submits official certifications of enrollment to the Veterans Administration so that educational benefits can be awarded.

If you are a veteran or the dependent of a veteran, you must apply for certification by contacting the certifying official at the Records Office. The certifying official will supply the necessary forms and advise you of the procedures you must complete in order to receive the benefits to which you are entitled. It is recommended that you submit your paperwork at least two months prior to the date you expect to enroll.

The Department of Veterans Affairs (VA) determines eligibility for benefits. Monthly payments are made by the VA directly to you, the student, with the following exception: the school receives payments for tuition and fees directly from the VA if you are receiving benefits under the Post-9/11 G.I. Bill. These payments will be placed directly on your student accounts.

To qualify for maximum benefits, you must enroll for a full course load (See "Course Load"). If you enroll for less than a full course load, your benefit payments will be adjusted accordingly by the VA.

According to VA policy, veterans' educational benefits are discontinued for a veteran (or eligible person) who remains on academic probation for more than three quarters. If you should come into this category, the VA will be notified that your certification has been terminated for "Unsatisfactory Attendance, Conduct, Or Progress". There will be no further certification for benefits until your academic standing reflects improvement to a cumulative 2.0 GPA.

Academic Standing

Academic standing is determined at the end of each quarter based on academic performance. When evaluating “consecutive” or “subsequent” quarters to determine academic standing, the quarters to be considered are your most recent quarters at Pacific Union College. This applies whether or not that period of quarters was interrupted for any reason by one or more breaks in enrollment.

For the purposes of determining academic standing, the GPA is computed including grades earned for remedial coursework.

Academic standing for a particular term is not retroactively changed if that term GPA is impacted by repeating a course for a better grade in a later term.

First Quarter Academic Probation

You will be placed on *first quarter academic probation* at the end of any quarter when your GPA for that quarter or your Pacific Union College cumulative GPA falls below 2.0. Occasionally, a new student may be admitted on first quarter academic probation.

While on first quarter academic probation, you may enroll in a maximum of 15 quarter hours of course work. You will not be eligible for any office in student activities, and you will be required to meet regularly with an assigned Academic Mentor in the Teaching and Learning Center. If you are placed on first quarter academic probation as a freshman, you will be required to register for and successfully complete the student seminar sequence (GNST 104-105).

At the end of the quarter, your academic performance will be evaluated. Your quarter GPA and your Pacific Union College cumulative GPA *each* must be at least 2.0 to achieve regular standing, otherwise you will be placed on second quarter academic probation.

Second Quarter Academic Probation

You will be placed on *second quarter academic probation* at the end of the second consecutive quarter when either your GPA for that quarter or your Pacific Union College cumulative GPA is below 2.0.

While on second quarter academic probation, you are subject to the same guidelines for students on first quarter academic probation (as described above).

At the end of the quarter, your academic performance will be evaluated. Your quarter GPA and your Pacific Union College cumulative GPA *each* must be at least 2.0 to achieve regular standing, otherwise you will be placed on academic suspension.

Academic Suspension

You will be placed on *academic suspension* at the end of the third consecutive quarter when either your GPA for that quarter or your Pacific Union College cumulative GPA is below 2.0. *Academic suspension is recorded on the transcript.*

While on academic suspension, you may not continue your studies at Pacific Union College. You may apply for readmission after you complete at least ten quarter hours of transferable coursework at another accredited college or university for which you earn a GPA of at least 2.25.

If you are readmitted to Pacific Union College following academic suspension, your academic performance will be evaluated after each successive quarter:

1. If you have a Pacific Union College cumulative GPA below 2.0 upon readmission after suspension: You must achieve a minimum GPA of 2.25 for each successive quarter until you have completed at least 2 successful quarters *and* your Pacific Union College cumulative GPA has reached 2.0. You will achieve regular standing after at least two quarters have been successfully

completed *and* your cumulative GPA has reached 2.0, otherwise you will be placed on Academic Dismissal.

2. If you have a Pacific Union College cumulative GPA of 2.0 or above upon readmission after suspension: You must achieve a minimum GPA of 2.0 for each of your next two quarters. You will achieve regular standing after these two quarters have been successfully completed, otherwise you will be placed on academic dismissal.

Academic Dismissal

You will be placed on *academic dismissal* if you are readmitted to Pacific Union College following academic suspension and then fail to earn a satisfactory GPA (as described above) during any subsequent quarter. *Academic dismissal is recorded on the transcript.*

While on academic dismissal, you may not continue your studies at Pacific Union College. You may reapply for readmission after you complete at least 45 quarter hours of transferable coursework at another accredited college or university for which you earn a GPA of at least 2.25.

If you are readmitted to Pacific Union College following academic dismissal, your academic performance will be evaluated after each subsequent quarter. You must earn a GPA of at least 2.0 each quarter of your enrollment at Pacific Union College, otherwise you will be placed on permanent academic dismissal.

Permanent Academic Dismissal

You will be placed on *permanent academic dismissal* if you are readmitted to Pacific Union College following academic dismissal and then your GPA falls below 2.0 in any quarter. *Permanent academic dismissal is recorded on the transcript.*

Students on permanent academic dismissal are ineligible for readmission to Pacific Union College.

Academic Credit

Pacific Union College operates on the quarter system. One quarter credit normally represents one fifty-minute class per week throughout an academic quarter and approximately two hours of preparation for each fifty-minute session. One laboratory period of approximately three hours is considered equal in credit value to one lecture/discussion period and the expected preparation.

When evaluating credit, Pacific Union College considers 1 semester credit to be equivalent to 1.5 quarter credits.

Armed Forces Credit

Although “blanket” credit is not awarded for military service, some training courses provided by the armed forces may be the equivalent of college courses. Pacific Union College awards credit for military training in accordance with the American Council on Education’s *Guide to the Evaluation of Education Experiences in the Armed Services*.

Transfer Credit

If you have attended other institutions of higher education, you must provide complete official transcripts from each college or university attended, even where you earned no credit. Such transcripts should be filed before you register for the quarter following the completion of the work. This policy applies also if you are regularly enrolled at Pacific Union College but take summer work, correspondence, or other work elsewhere. Failure to file all transcripts may result in delay of registration until the transcripts are received.

Transcripts from institutions accredited by regional accrediting associations are evaluated to allow equivalent courses from the transfer institution to satisfy specific course requirements at Pacific Union College. Transfer credit is accept-

ed only for courses with a grade of C- or higher. The college reserves the right to require repetition of courses that have become outdated.

If you have transcripts from an institution without regional accreditation, you may request a transcript evaluation after you have completed a minimum of 16 quarter hours in residence at Pacific Union College with a GPA of at least 2.0. The transcript from the unaccredited institution will be analyzed on a course-by-course basis; occasionally credit is established for those courses that appropriately apply to your program at Pacific Union College. *In most instances you will be asked to validate courses taken at an institution without regional accreditation by passing challenge examinations before credit will be granted.*

Credit is allowed for college course work completed before secondary-school graduation if such work has been taken in a regionally-accredited college and is shown by transcript as college credit.

The maximum credit transferable from a recognized junior (community) college is 108 quarter hours (72 semester hours). Upper-division credit is not allowed for junior college courses or for courses numbered as lower-division credit at another senior college or university.

Pacific Union College reserves the right to accept or reject credit earned at other institutions. Prior to taking courses at other institutions, you should obtain approval from the Records Office at Pacific Union College in order to ensure that the credit will be accepted. Pacific Union College normally accepts a maximum of 18 semester hours per semester or 18 quarter hours per quarter for all transfer credit for both traditional and non-traditional students. Any exception to this policy must be approved by the appropriate department chair and by the registrar.

Pacific Union College is regionally accredited. However, other institutions re-

serve the right to accept or reject credit earned at Pacific Union College. Prior to taking courses at Pacific Union College for the purpose of transferring credit to another institution, you should obtain approval from the other institution in order to ensure that the credit will be accepted.

Repeating Courses for Duplicate Credit

The following regulations govern course repeats for duplicate credit:

1. In general, courses may not be repeated for duplicate credit. However, some courses have been determined to be repeatable for credit due to the nature of the material covered. If a course is repeatable for credit, this information will be indicated within the course description, along with any special regulations governing the repeats for the particular course.
2. You may repeat a course for credit only if you have not taken a more advanced course in the same subject.
3. When repeating a course for credit, you must repeat all the class work and all laboratory requirements.

Reserving Courses for Post-Degree or Graduate Credit for Education

If you have taken upper-division courses that were not needed to fulfill graduation requirements, you may request that specific ones be reserved for post-baccalaureate or graduate credit by making arrangements with the Education Department and the Records Office. To be fully credentialed by California and the SDA denomination, students must complete an approved fifth year or master’s degree of 45 quarter hours beyond a bachelor’s degree.

Academic Information and Policies

Independent Study

Independent Study refers to advanced study or research you may do on an individual basis under the direction of a faculty member with regular appointment. You may use Independent Study for your major, minor, free electives or cognates, but not to meet general-education requirements. You may earn up to twelve hours in Independent Study.

To be eligible for Independent Study in any department, you must have reached junior or senior standing, have met all departmental prerequisites, and have earned a minimum GPA of 3.0 in the proposed area of study. In order to register for an independent study, you must complete and submit a Request for Independent Study form (available at the Records Office). In order to complete the form, you will negotiate a contract with the instructor and the chair of the supervising department specifying the number of hours of credit to be earned, the detailed requirements of the course, the grading criteria, and a schedule of meetings.

Independent Study should not take the place of courses regularly available. It should not be confused with courses offered through Directed Study.

Credit for Student Missionaries and Taskforce Volunteers

You may earn academic credit in connection with field experience (GNRL 350) during appointment as a Student Missionary or Task Force volunteer. To qualify, you must have previously taken courses at Pacific Union College, and you must register for the class *before the experience begins*. Credit—elective only—is available on a Satisfactory/Fail basis. You may earn 6 hours per quarter to a maximum of 12 hours.

More information about credit for field experience is available from the Campus Ministries Office or the registrar.

Regulations Governing Credit by Examination

You may earn academic credit by successfully writing certain AP (Advanced Placement), IB (International Baccalaureate), CLEP (College Level Examination Program), DSST (DANTES Subject Standardized Tests), Excelsior, and college-prepared examinations. The following regulations apply to all credit earned through examinations:

1. No credit by examination is available for remedial (0-level) courses.
2. The maximum credit applicable to a four-year degree is 45 hours of AP, IB, CLEP, DSST, and/or Excelsior examination credit and 18 hours of college-prepared examination credit.
3. The maximum credit applicable to a two-year degree is 24 hours of AP, IB, CLEP, DSST, and/or Excelsior examination credit and 9 hours of college-prepared examination credit.
4. Pacific Union College awards credit for selected examinations only. You may get further information at the Records Office regarding which examinations are accepted for credit by Pacific Union College.
5. Credit earned by examination will be placed on your transcript with the credit hours earned and a grade of “S” (satisfactory).
6. You may not earn credit by examination if the course in questions is a prerequisite to one in which you have already earned credit.
7. If you have taken or attempted a course, you may not raise the grade for that course through credit by examination.

AP and IB Examinations

AP and IB examinations are taken in high school after completion of an AP or IB course in a particular subject.

The following regulations govern credit earned through AP and IB examinations:

1. The credit is subject to the *Regulations Governing Credit by Examination* listed above.
2. In order to earn credit through the AP program, you must pass the examination with a score of 3, 4, or 5. To earn credit through the IB program, you must pass the Higher Level examination with a score of 4, 5, 6, or 7. No credit is awarded AP or IB courses taken in high school or for Standard Level IB examinations.
3. You will be granted 4 or 8 quarter hours of General Education or elective credit for each passed AP examination. You will be granted 8 quarter hours of General Education or elective credit for each passed IB Higher Level examination. Information regarding exact credit amounts and equivalencies for each test may be obtained from the Records Office.
4. GE and elective credits granted for AP and IB examinations do not necessarily apply to major requirements. Some professional or graduate schools may not accept AP and IB credit. Check with your advisor to determine the applicability of AP and IB credit to your major or pre-professional program.

CLEP, DSST, and Excelsior Examinations

CLEP, DSST, and Excelsior examinations are intended as a means of establishing academic credit for persons who, through extensive independent study, specialized training, etc., have gained knowledge equivalent to that gained by regular study in formal college courses.

The following regulations govern credit earned through CLEP, DSST, and Excelsior examinations:

1. The credit is subject to the *Regula-*

tions Governing Credit by Examination listed above.

2. The CLEP, DSST, and Excelsior examinations are open to all classifications of students, but are directed towards freshmen and sophomores.
3. CLEP, DSST, and Excelsior examinations are prepared and administered by outside testing agencies. The Pacific Union College Counseling Center is an official testing site; you may get further information regarding examination procedures at the Counseling Center.
4. To earn credit for a CLEP, DSST, or Excelsior examination, you must achieve the credit granting score recommended by the American Council on Education.

College-Prepared Examinations

College-prepared examinations are prepared and administered by Pacific Union College faculty members. They are intended as a means of establishing academic credit for persons who have gained knowledge to that equivalent to that gained by regular study in formal college courses through activities such as independent study, work experience, and specialized training.

The following special regulations govern credit earned through college-prepared examinations:

1. The credit is subject to the *Regulations Governing Credit by Examination* listed above.
2. No college-prepared examination may be taken until a completed Request for Credit Examination form is on file at the Records Office. The form can be obtained from the Records Office and requires the signatures of the course instructor, the department chair, and the registrar as well as proof of payment for examination fees. For examination fees, see the section entitled “Financial

Information” in this catalog.

3. A course for which credit may be earned by examination is normally a lower-division course in a four-year curriculum or a first-year course in a two-year curriculum. Its content is such that it can be measured by a written, oral, or manipulative test.
4. To be eligible for credit by examination, you must demonstrate superior competence by such evidence as the following:
 - a) a GPA of at least 3.0 in similar courses;
 - b) a percentile score of at least 75 on an ACT test in the same area;
 - c) similar course work in a non-academic institution; or
 - d) work experience sufficient to develop course competencies.
5. To earn credit for a college-prepared examination, you must score a C+ or better on the graded examination.
6. If you have audited a course, you may earn credit by examination for the course by paying one half the regular tuition fee.
7. Examinations for credit cannot be repeated.

Waiver Examinations

You may waive certain course requirements provided that you fulfill one of the following conditions:

1. Present credit in courses substantially equivalent in purpose, scope, context, and credit value to the required course from which you request exemption.
2. Pass a proficiency examination. The examination is administered by the department concerned and approved by the Records Office.

Qualifying for course exemption through waiver examination does not involve the awarding of credit, nor does it reduce the total number of hours to be earned for a degree. Its only effect is to increase the

number of elective hours available as part of your degree program. For examination fees, see the section entitled “Financial Information” in this catalog.

Credit by Life-Learning Portfolio Assessment

You may earn up to 18 hours of credit through assessment of documentation provided in a Life-Learning Portfolio. The Academic Standards and General Education Committee administers this program in harmony with established Pacific Union College guidelines and standards. Additional information is available at the Records Office.

Class Standing

Class standing is calculated based on quarter hours of credit completed. New transfer students will have their official class standing calculated within one quarter after all official transfer transcripts have been submitted to Pacific Union College.

Freshman: A beginning first-year student or one who has completed fewer than 45 quarter hours of credit.

Sophomore: A student who has completed at least 45 quarter hours.

Junior: A student who has completed at least 90 quarter hours of credit.

Senior: A student who has completed at least 135 quarter hours of credit.

Graduated: A student who has completed an undergraduate degree at Pacific Union College and is pursuing a second undergraduate degree.

M.Ed. Degree Student: A student who holds a baccalaureate degree from an accredited college or university and has been accepted into the Master of Education degree program.

Graduation Information

At the end of spring quarter, commencement is held for all students who have completed all requirements for a degree. If you complete your requirements during a summer, fall or winter quarter, you are eligible to participate in the following spring commencement.

Graduation In Absentia

You are expected to participate in the commencement service for which you are eligible unless you notify the Records Office *in advance* that you plan to graduate *in absentia*. You should make written application for exemption not later than one week prior to commencement. A fee of \$25 is assessed if you are absent from graduation without having given prior notice.

Graduation Recognition for Nurses

All nursing students are expected to participate in the recognition (pinning) service. Requests for exemption may be submitted to the Nursing Department.

Graduation with Academic Distinction

Students who have earned both a Pacific Union College and an over-all GPA of 3.5-3.749 will be graduated *cum laude*; those with 3.75-3.899, *magna cum laude*; and those with 3.9-4.0, *summa cum laude*. For the spring commencement program, academic distinction status is calculated based on all coursework completed up through the winter quarter. However, your academic distinction status may change based on your academic performance during your final quarter. Therefore the official academic distinction which appears on your academic records will be calculated based on all coursework completed for the degree.

Honors Program Graduation

The Honors Program is designed to enrich the studies of exceptionally well-prepared students. Only students fulfilling all requirements of the Honors Program will graduate “With Honors,” a designation that appears on the graduation program and on the student’s transcript and diploma. (See “The Honors Program.”)

Official Degree Conferral Date

As described above, commencement is held only once each year. However, the official date of degree conferral appearing on your academic records is that of the last day of the quarter during which you actually completed the degree requirements.

For the 2010-2012 academic years, the official degree conferral dates are as follows:

2010-2011

<i>Requirements Completed</i>	<i>Degree Conferred</i>
Summer 2010	August 12, 2010
Fall 2010	December 9, 2010
Winter 2011	March 17, 2011
Spring 2011	June 12, 2011

2011-2012

<i>Requirements Completed</i>	<i>Degree Conferred</i>
Summer 2011	August 11, 2011
Fall 2011	December 15, 2011
Winter 2012	March 22, 2012
Spring 2012	June 17, 2012

Transcripts and Diplomas

No transcripts or diplomas are issued until all of your financial obligations have been met. The college reserves the right to withhold all information concerning your record if you are in arrears in payment of accounts or other charges, including student loans.

Transcripts

At your written and signed request, the Records Office will provide transcripts of your credits. For transcript fees, see the section entitled “Financial Information” in this catalog. You should allow two weeks for processing your request and mailing the transcript.

Diplomas

Diplomas for graduates will be mailed approximately one month after:

1. The commencement ceremony has been completed;
2. Final grades have been recorded;
3. Final academic evaluations have been completed; and
4. Financial clearance has been obtained.

One diploma is provided free of charge for each degree earned. If a replacement diploma is requested, a fee of \$25 per diploma is assessed. The phrase “Reissued on *date*” is recorded on the replacement diploma.

Documents from other Institutions

Documents (including transcripts) from other institutions which have been presented for admission and evaluation of credit become the property of the college and are not reissued or copied for release.

Quarter System 1

Each quarter has approximately 11 weeks. Quarters are designated as Fall **F**; Winter, **W**; Spring, **S**; and Summer, **Su**.

Credit Hours 2

One quarter hour normally represents one fifty-minute class per week throughout an academic quarter and approximately two hours of preparation for each fifty-minute session. One laboratory period of approximately three hours is considered equal in credit value to one lecture/discussion period and the expected preparation.

Variations may include independent study, directed study, research courses, individualized studio instruction, music lessons, special workshops, and other “nontraditional” academic events.

Prefix 3

The three- or four-letter prefix to each course number indicates the subject area.

Numbering and Classification of Courses 4

Courses are numbered and classified as follows:

001-099 Remedial Courses

For students with inadequate academic skills. Credit earned through remedial courses may not apply towards any degree or towards the GPA.

100-299 Lower-division Courses

Normally taken by freshmen and sophomores.

300-499 Upper-division Courses

Normally taken by juniors and seniors. Freshmen may register for these courses only with special permission of the registrar and with the approval of the academic advisor and the course instructor.

500-599 Graduate Courses

Primarily for graduate students. With the approval of the major

professor, a senior whose preparation is adequate may take graduate courses for undergraduate credit.

Special Course Information 5

Any special information for a course is designated at the end of the course description as follows:

1. Laboratories- Three hours in length unless specified otherwise.
2. Prerequisites*
3. Corequisites*
4. Repeatability for Credit*
5. Special Grading*
6. Alternate Year Courses- Odd/even designation based on the end of the academic year.
Odd year 2010-2011
Even year 2011-2012

Hyphenated Courses 6

Course numbers separated by hyphens indicate an integrated sequence. Though they are generally taken consecutively, a student may receive credit for any quarter or quarters without the others provided that any prerequisites have been met.

Directed Group Study

A course is offered as a Directed Group Study when a department chooses to

1. experiment with a course before it is listed in the catalog, or
2. offer the course, on a one-time basis, for enrichment purposes when sufficient student interest is indicated.

A specific title is assigned when the course is offered and the course is listed as follows:

1. Alpha prefix of the course
2. Course number 296 or 496
3. The title *Directed Group Study*
4. The name of the course as subtitle

* See the section entitled “Academic Information and Policies” for more information.

Directed Study

You may take a catalog-listed course on an individual basis only under the most unusual circumstances and at the discretion of the instructor and department chair. Any such course will be offered only for the number of hours listed in the catalog and will adhere to the catalog description and standard course syllabus. Consult with the Records Office for request forms and applicable criteria.

When Directed Study is approved, the course will be listed as follows:

1. Alpha prefix of the course
2. Course number 097, 297 or 497
3. The title *Directed Study*
4. The name of the course as subtitle

Business Administration & Economics		6
Accounting		1
LOWER-DIVISION COURSES:		2
ACCT 314	Small Business Accounting	3 S
	The accounting procedures and practices necessary for efficient and effective small business operation. Not applicable toward a baccalaureate major in the department. Credit may not be earned in both ACCT 114 and ACCT 391.	
ACCT 121	Financial Accounting I	3 F, W
	Accounting practices and procedures needed in various types of ownership entities for financial reporting. No prior accounting knowledge necessary.	
ACCT 122	Financial Accounting II	4 W, S
	A continuation of ACCT 121 with particular emphasis on the partnership and the corporate form of organization; income statement and balance sheet analysis. Three lectures and one laboratory per week. Prerequisite: ACCT 121.	
ACCT 123	Managerial Accounting	3 S
	Use of accounting data for managerial planning, control, and decision-making. Particular emphasis on entities which produce a product. Prerequisite: ACCT 121.	
UPPER-DIVISION COURSES:		
ACCT 307	Government and Nonprofit Accounting	3 W
	Accounting principles and practices unique to state and local units, educational, health care, charity, religious, and other not-for-profit organizations. Financial reporting and record keeping. Prerequisite: ACCT 121, 122. Even years.	
ACCT 311-312-313	Intermediate Accounting	3-3-3 F-W-S
	Accounting theory and practice relating to the valuation and presentation of assets, liabilities, net worth, revenue, and expense accounts. Prerequisites: ACCT 121, 122.	
ACCT 321	Cost Accounting I	3 F
	Key concepts of cost planning and control. Includes c-v-p analysis, job costing, activity-based costing, budgeting and variances, cost behavior, strategic decision-making, and pricing. Prerequisites: ACCT 121, 122, 123; Recommended prerequisite: STAT 222.	
ACCT 322	Cost Accounting II	3 W
	Key concepts of cost planning and control. Includes balanced scorecard, cost allocation, joint products, process costing, inventory, capital budgeting, transfer pricing, and performance measurement. Prerequisite: ACCT 321, 122, 123.	
ACCT 341	Taxation for Individuals	4 W
	Federal income taxation and tax planning for individuals. Designed for non-majors as well as for business majors and minors.	
ACCT 343	Taxation for Corporations and Partnerships	4 S
	Federal taxation and tax planning in relationship to corporations and partnerships. Even years.	
ACCT 345	Estate Planning, Gifts and Trust Taxation	3 F
	Federal taxation and tax planning for gifts, estates, and trusts. Odd years.	
ACCT 391	Accounting Systems and Business	
	Setting up and maintaining records for a variety of rated businesses. Practice single-entry, double-entry and hybrid cash-accrual systems; periodic financial statements; payroll, sales, and inventory. Prerequisites: ACCT 121, 122.	
ACCT 451	Advanced Accounting	
	Specialized topics in partnerships, branches, consolidation reporting. Prerequisites: ACCT 311-313.	
ACCT 453	Auditing	
	The internal independent functions; pronouncement of the Institute of Certified Accountants. Prerequisites: ACCT 311-313, 322.	
ACCT 461	Accounting Theory	
	Survey of contemporary accounting theory. Emphasis on current literature and research. Prerequisites: ACCT 311-313.	
ACCT 495	Independent Study	
	Designed for students to undertake an advanced project. The project must be approved by the chair of the department to a maximum of 3 credit hours.	

Course Information

Prefix

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

Prefix	Subject	Department	Page
ACCT	Accounting	Business Administration & Economics	66
AGRI	Agriculture	Biology	54
ANTH	Anthropology	Psychology & Social Work	167
ARTD	Graphic Design	Visual Arts	185
ARTF	Fine Art	Visual Arts	187
ARTH	History of Art	Visual Arts	189
ARTP	Photography	Visual Arts	189
ASTR	Astronomy	Physics & Engineering	161
AVIA	Aviation	Aviation	48
BIOL	Biology	Biology	54
BUAD	Business Administration	Business Administration & Economics	67
CHEM	Chemistry	Chemistry	77
CHIN	Chinese	Modern Languages	137
COMM	Communication	Communication	82
CPTR	Computer Science	Computer Science	87
DRMA	Dramatic Arts	English	113
ECE	Early Childhood Education (DCP)	Education (Degree Completion Program)	105
ECED	Early Childhood Education	Education	97
ECON	Economics	Business Administration & Economics	68
EDUC	Education	Education	99
ELEC	Electronics	Aviation	50
EMER	Emergency Services	Emergency Services	110
ENGL	English	English	114
ENGR	Engineering	Physics & Engineering	161
ENSL	English as a Second Language	English	116
ENVR	Environmental Studies	Biology	57
ESAC	Physical Education Activity	Exercise Science, Health, & Nutrition	119
ESTH	Physical Education Theory	Exercise Science, Health, & Nutrition.....	120
FDNT	Foods and Nutrition	Exercise Science, Health, & Nutrition	122
FIN	Finance	Business Administration & Economics	68
FREN	French	Modern Languages	137
GEOG	Geography	History & Social Studies	125
GEOL	Geology	Biology	57
GNRL	General	Non-departmental Courses	44
GNST	General Studies	Academic Administration	44
GRMN	German	Modern Languages	137
GSCI	General Science	Biology	58
HIST	History	History & Social Studies	125
HLED	Health Education	Exercise Science, Health and Nutrition	122
HNRS	Honors	Honors Program	44
INFS	Information Systems	Business Administration & Economics	69
ITAL	Italian	Modern Languages	138
JOUR	Journalism	Communication	83
MATH	Mathematics	Mathematics	131
MDIA	Film & Television Production	Visual Arts	190

Prefix	Subject	Department	Page
MGMT	Management	Business Administration & Economics	70
MGT	Management (DCP)	Business Administration & Economics (Degree Completion Program)	72
MICR	Microbiology	Biology	58
MKTG	Marketing	Business Administration & Economics	71
MUED	Music Education	Music	143
MUEN	Music Ensemble	Music	144
MUHL	Music History and Literature	Music	146
MUSP	Music Performance	Music	146
MUTH	Music Composition and Theory	Music	147
NURS	Nursing	Nursing	153, 157
OFAD	Office Administration	Business Administration & Economics	71
PHIL	Philosophical Studies	Religion	176
PHYS	Physics	Physics & Engineering	162
PLSC	Political Science	History & Social Studies	127
PREL	Public Relations	Communication	84
PSYC	Psychology	Psychology & Social Work	167
RELB	Religion, Biblical Studies	Religion	176 (73, 107)
RELH	Religion, Historical Studies	Religion	177
RELL	Religion, Biblical Languages	Religion	178
RELP	Religion, Applied Theology	Religion	178
RELT	Religion, Theological Studies	Religion	179 (73, 107)
SOCI	Sociology	Psychology & Social Work	170
SOWK	Social Work	Psychology & Social Work	170
SPAN	Spanish	Modern Languages	138
SPPA	Speech Pathology and Audiology	Communication	84
STAT	Statistics	Mathematics	133

General Courses

General Courses

(Nondepartmental Courses)

LOWER-DIVISION COURSES:

GNRL 100 .1 F, W, S **Campus Colloquy**

A weekly gathering of the Pacific Union College community. Students, faculty, and staff meet to worship, learn and exchange ideas and information. Required for all full-time undergraduate students each quarter in residence. To pass, a student must attend a minimum of six meetings each quarter. Repeatable for credit. Graded S/F.

GNRL 104 1 Su **Pacific Quest**

A week-long program of course work, projects, and investigations in science, mathematics, humanities and the arts. Prerequisite: Admission to the Pacific-Quest summer program for talented and gifted students. Repeatable for credit. Graded S/F.

GNRL 204 2 S **Introduction to Dentistry**

Dental anatomy, morphology, and related aspects of dentistry as a career. One lecture and one laboratory per week.

UPPER-DIVISION COURSE:

GNRL 350 6 F, S **Field Experience**

Enrollment limited to students in the Pacific Union College Student Missionary and Task Force programs. Consists of academic work that is done in connection with the service appointment, including a weekly journal, a reflective paper, and a public presentation. Registration qualifies students to maintain part-time enrollment status at the college during the fall and spring quarters. Further

information is available at the Campus Ministries Office or from the registrar. Repeatable to a maximum of 12 credits. Qualifies for IP grading. Graded S/F.

General Studies

LOWER-DIVISION COURSES:

GNST 104-105 2-1 F, W, S **Student Seminar I-II**

GNST 104 examines the college learning process in academic areas and encourages skill development in strengths exploration, goal setting, learning styles, note taking and test-taking strategies. These and other topics related to learning and retaining college material are explored.

GNST 105 is designed to immediately follow GNST 104. Academic progress is tracked on a weekly, one-on-one basis, although one or more group sessions and tutorials may be required.

Registration for and successful completion of the sequence is required for freshmen who are admitted to Pacific Union College on academic probation and for current freshmen as soon as they are placed on academic probation.

UPPER-DIVISION COURSE:

GNST 401 1 F, W, S **Senior Assessment Seminar**

Designed for baccalaureate seniors only. Assesses student learning outcomes in general education and in the field of study so that the college may determine how well it is reaching its educational goals. May include a major field examination, other standardized examinations, and various Pacific Union College-developed tests and surveys. Required for, and restricted to, students during their final quarter of residency for the B.A., B.S., B.B.A., B.Mus., and B.S.W. programs. Qualifies for IP grading.

Honors Courses

The honors courses are interdisciplinary; several are team-taught. Enrollment is open to students in the honors program. For a description of the honors program, see the section entitled "The Honors Program" in this catalog.

Note: For each of the following courses, core texts are listed. Some seminars also list supplemental texts. The core lists tend to be stable from year to year. Occasionally, texts not currently listed will be used. Texts for Beauty, in particular, will vary depending on where the course is being taught.

FRESHMAN SEMINARS:

HNRS 110 5 F **Foundations**

Examines various foundational texts of western culture in that it looks at ancient texts that still inform our views of the world.

Core texts:

The David Story
Gilgamesh
Hesiod, Theogony and Works and Days
Homer, The Odyssey
Ovid, Metamorphoses (Selections)
Plato, The Last Days of Socrates
Sophocles, Antigone

HNRS 120 5 W **Liberty and America**

Explores themes of intellectual history, liberty and the roles and responsibilities of citizens in their communities with emphasis on the American experience and questions of democracy.

Core texts:

Atwood, The Handmaid's Tale
The Constitution of the United States of America
The Declaration of Independence

Lincoln, *Speeches and Letters*
 Locke, *Second Treatise on Government*
 Mill, *On Liberty*
 Plato, *The Republic*
 Toqueville, *Democracy in America*

HNRS 130 **5 S**
Scripture I

Includes history, art, music, and literature in an interdisciplinary approach to six Old Testament books. Also looks at an Eastern sacred text. There is focus on themes, their relationships to various disciplines, and their modern applications to contemporary life.

Core texts:

Bhagavad Gita
 Blake, engravings of Job and Genesis
 Genesis
 Hosea
 Job
 Jonah
 Mendelssohn, *Elijah* (oratorio)
 Micah
 Michelangelo, Sistine Chapel paintings
 Ruth

Supplemental texts:

Additional Old Testament Books
 C.S. Lewis, *Perelandra*

SOPHOMORE SEMINARS:

HNRS 210 **4 F**
Cosmos

Provides for a study of western philosophical approaches to science and the scientific method, with a particular emphasis on the investigation of physical and biological origins. Examines the metaphysical and epistemological underpinnings of science, as well as the relationship of science to religion and other fields which make claims about origins.

Core texts:

Bacon, *Novum Organum*
 Galileo, *Dialogue Concerning the Two Chief World Systems*

Hawking, *A Brief History of Time*
 Kuhn, *The Structure of Scientific Revolutions*
 Lewis, *The Discarded Image*

Supplemental texts:

2001: *A Space Odyssey* (film)
 Dawkins, *The Blind Watchmaker*
 Holst, *The Planets* (audio)
 Johnson, *Darwin on Trial* (audio)

HNRS 220 **4 W**
Self and Society

Probes the questions that come from asking, “Who am I?” Looks at the idea of the self and how the individual is shaped by and relates to society as a whole.

Core texts:

St. Augustine, *Confessions*
 Austen, *Persuasion*
 Durkheim, *The Elementary Forms of Religious Life*
 James, *Varieties of Religious Experience*
 White, *Spiritual Gifts, Volume II*
 Woolf, *A Room of One’s Own*

HNRS 230 **4 S**
Scripture II

Examines how the New Testament canon was developed and explores the historical and cultural context out of which the New Testament was formed. Also looks at the literary qualities of New Testament texts and how those texts have influenced art and music.

Core texts:

Acts
 Bach, *St. John Passion* (music)
Mark
 Pasolini, *Il Vangelo di Matteo* (film)
Revelation
Romans
 Synoptic Nativity texts

Supplemental texts:

Colossians and/or *I John*

Godspell (film)
Jesus of Montreal (film)
 Selected art on Gospel themes
 Selected Gnostic texts
 Selected NT Apocryphal texts
 Selected texts from the Apostolic Fathers

SUMMER TERM ABROAD:

HNRS 300 **5 Su**
Beauty

Explores questions of aesthetics as developed within western culture. Explores how beauty shapes views of us and our views of the world. The class is specifically designed to explore such questions in another country while exposing students to great works of art.

Core texts:

Aristotle, *Poetics*
 Burke, *A Philosophical Inquiry into the Origins of Our Ideas of the Sublime and the Beautiful*
 De Bottom, *The Art of Travel* (selection)
 Greenberg, *Modernist Painting* (essay)
 Plato, *Ion and The Republic* (selection)
 Scruton, *Beauty*
 Vasari, *Lives of the Artists*
 Winterson, *Art Objects* (selection)

JUNIOR SEMINARS:

HNRS 310 **4 F**
Virtue

Deals with the moral calculus of human virtue. The subject of God and the Divine, the role of the individual and of the group, and the miasma of moral reckoning in the modern and post-modern world are explored through classical, non-Western, mystical and expressionist texts. Rather than a course on formal ethics, the seminar approaches a broader field of meaning, righteousness and judgement, cross-culturally, diachronically, and from a variety of genres.

Honors Courses

Core texts:

Aristotle, *Nicomachean Ethics*
Confucius, *Analects*
Conrad, *The Heart of Darkness*
Fletcher, *Situation Ethics*
Nietzsche, *The Genealogy of Morals*

HNRS 320 **4 F** **Christianity**

An exploration of the historical origins, core beliefs and modern relevance of Christianity through the study of core texts, ranging from ancient apologetics and epics to modern theology.

Core texts:

Athanasius, *On the Incarnation*
Bull & Lockhart, *Seeking a Sanctuary*
Dante, *The Divine Comedy*
Dostoevsky, *The Brothers Karamazov*
Milton, *Paradise Lost*
Requiem Mass (selected musical score)

HNRS 349 **4 S** **Pattern**

Explores the pervasive quest for pattern often associated with mathematical thought and the idea that patterning is characteristic of thinking in general. Also looks at how humans contemplate and communicate abstract ideas and the creative process involved in that undertaking. Questions are asked about why metaphors and similes are such powerful thinking tools, and whether computers will ever truly be able to think.

Core texts:

Abbott, *Flatland*
Bach (selected works)
Dunham, *Journey through Genius*
Euclid, *Elements* (selections)
Hofstadter, *Godel, Escher, Bach*
Stoppard, *Arcadia*

Supplemental texts:

Seckel, *Masters of Deception*

SENIOR SEMINARS:

HNRS 410 **4 F** **Alterity**

An intense examination of challenging perspectives of the ways we structure “otherness” and being “different.” Examines the ways hatred, fear, race, gender, economics, religion and love are used to define, classify and claim an understanding of peoples and cultures who are other than what we in the west believe ourselves to be.

Core texts:

Berlin, *The Crooked Timber of Humanity*
DeBeauvoir, *The Second Sex*
Fanon, *Black Skin, White Masks*
Foster, *Passage to India*
Said, *Orientalism*
Sartre, *Anti-Semite and Jew: An Exploration of the Etiology of Hate*

HNRS 420 **4 S** **Progress**

This capstone seminar is an examination of ideas of progress on both external and internal levels. The seminar engages perspectives on ways of dealing with disparities in the world including ideas on the distribution of wealth. Personal progress is also explicitly examined and interrogated. The question is asked, “After taking Honors, how should one live one’s life?”

Core texts:

Huxley, *Brave New World*
Marx, *Capital*
McLuhan, *The Medium is the Message*
Tsu, *Tao Te Ching*
Vico, *A New Science*
Voltaire, *Candide*
Wright, *A Short History of Progress*

SENIOR PROJECT:

HNRS 498 **3 W** **Honors Project**

An individual research or creative project designed to explore issues, ideas, or art forms encountered in the Honors seminars. Qualifies for IP grading.



Faculty

Kaye Varney, director

Departmental Office: Flight Center; 965-6219

Degrees and Programs

Aviation, B.S.	47
Aviation, A.S.	48

The AVIATION PROGRAM prepares students for positions as private and commercial pilots, mission and medical pilots, and others. Training includes theory, ground and flight instruction leading to pilot certificates and ratings from Private Pilot through Commercial Pilot and Flight Instructor.

Students transferring into the aviation program with previously earned FAA certificates or ratings should apply to the Aviation Program director for course credit *at the time of initial registration*. Course credit for FAA certificates or ratings earned earlier at other locations is not available and will not be awarded after the student has begun aviation courses at Pacific Union College. A copy of FAA certificates must be presented to the departmental representative at the Flight Center. Grades issued in recognition of FAA certificate validations are recorded as “S” (Satisfactory). For complete aviation policies and procedures, consult the *Flight Policies and Procedures Handbook*, available at the Flight Center. For financial information about flight training, see the section entitled “Financial Information” in this catalog.

Additional Fees:

Aviation students should expect and plan for approximately \$6,000 per year in airplane rental fees. They are advised to identify themselves to the Student Financial Services Office as aviation students to explore the possibility of financial assistance with this expense.

Major in Aviation, B.S.

A minimum of 68 hours (33 upper-division hours)

► Required Core Courses (60 hours):

AVIA 172	Electronics and Fuel Systems	2
AVIA 173	Meteorology	3
AVIA 175	Private Pilot Theory	4
AVIA 176	Private Flight Training	2
AVIA 177	Intermediate Private Flight Training	2
AVIA 178	Advanced Private Flight Training	2
AVIA 275	Instrument Pilot Theory	4
AVIA 276	Instrument Flight Training	3
AVIA 278	Advanced Instrument Flight Training	4
AVIA 305	Aircraft Systems	4
AVIA 375	Commercial, ATP and CFI Theory	4
AVIA 376	Commercial Flight Training	2
AVIA 377	Intermediate Commercial Flight Training	2
AVIA 378	Advanced Commercial Flight Training	2
AVIA 379	Aerodynamics	2
AVIA 460	Professional Skills for Pilots	2
AVIA 470	Fundamentals of Flight Instruction	1
AVIA 471	Flight Instructor Flight Training	6
AVIA 476	Add-on Class Rating	2
AVIA 477	Human Factors in Aviation	2
AVIA 478	Add-on CFI Rating	2
ELEC 141	Applied Electronics	3

► Required Core Electives (8 hours):

<i>At least 8 hours from the following:</i>		8
AVIA 273	Practicum in Flight (1-6)	
AVIA 350	Mission Flying Theory and Practice (2)	
AVIA 450	Advanced Aircraft Systems (2)	
AVIA 472	Instrument Instructor Flight Training (3)	
AVIA 473	Advanced Practicum in Flight (1-6)	

Recommended Minor:

A minor in Business Administration is recommended for aviation majors.

Aviation

Recommended Courses:

For students with a given interest, the following courses are recommended:

Mission Aviation:

ANTH 124, AVIA 350, COMM 330, EMER 101, PREL 337, RELH 311, RELP 235, 319, SOWK 121

Commercial Aviation:

AVIA 450, COMM 223, 330, ECON 261, 332, MGMT 261, 361, 465

Recommended Field Experience:

It is recommended that all students majoring in Aviation should have completed, by the end of winter quarter of their senior year, 500 hours of flight time.

The objective of this program is to prepare graduates for such positions in the aviation industry as the following: mission pilots, company pilots, medical evacuation, teaching positions, pipeline patrol, border patrol, police, pilot training, forestry, fishing industry, air taxi operator, accident investigation, FAA specialist, major airline pilot, commuter airline pilot, cargo operations (FEDEX, UPS), fixed-base operator, traffic controller, and airport manager.

Major in Aviation, A.S.

A minimum of 44 hours

► Required Core Courses (44 hours):

AVIA 172	Electronics and Fuel Systems	3
AVIA 173	Meteorology	4
AVIA 175	Private Pilot Theory	4
AVIA 176	Private Flight Training	2
AVIA 177	Intermediate Private Flight Training	2
AVIA 178	Advanced Private Flight Training	2
AVIA 275	Instrument Pilot Theory	4
AVIA 276	Instrument Flight Training	3
AVIA 278	Advanced Instrument Flight Training	4
AVIA 305	Aircraft Systems	4
AVIA 376	Commercial Flight Training	2
AVIA 377	Intermediate Commercial Flight Training	2
AVIA 378	Advanced Commercial Flight Training	2
AVIA 379	Aerodynamics	2
AVIA 476	Add-on Class Rating	2
AVIA 477	Human Factors in Aviation	2

Minor in Aviation

A minimum of 30 hours (6 upper-division hours) to be selected, in consultation with the department chair, from the requirements listed for the major in Aviation.

Aviation

SERVICE COURSE:

(Not applicable to a major or minor in this department)

AVIA 101 1 F, W, S Introduction to Flight

An introduction to the elements and science of flight. Flight instruction on basic maneuvers of flight and landings. Survey of aircraft types, design considerations, and role applications. Brief history of aviation and its safety programs.

LOWER-DIVISION COURSES:

AVIA 172 2 W Electronics and Fuel Systems

The components of the charging

system, electrical storage, and starting systems. Battery-driven ignition systems, magnetos, engine combustion principles, and diagnosis of failures. Wiring, fuses, bus bar and grounding systems. Fuel systems section covers storage, fuel formulation, pumping, carburation, and electronic and mechanical fuel injection and turbo charging.

AVIA 173 3 F Meteorology

An introduction to the causes of weather phenomena and patterns. Meteorological theory, the best ways to obtain current weather reports and forecasts, how to interpret meteorological reports, how to predict changes in weather, how to recognize dangerous weather patterns, and how to react to difficult situations

caused by adverse weather. For both pilots and nonpilots. Recommended corequisite: AVIA 175.

AVIA 175 4 Su, F, S Private Pilot Theory

The theory necessary for safe flight in today's environment. Includes aerodynamics, the airspace system, aircraft performance and design, basic weather, maps, navigation, and aeromedical factors. Prepares the future private pilot for the FAA private pilot written exam. Corequisite: AVIA 176.

AVIA 176 2 Su, F, W, S Private Flight Training

Covers all flight training up through solo flight. Includes training in preflight, taxi, take-off, flight maneuvers, stalls,

emergency procedures, normal and cross-wind landings, federal regulations, traffic procedures, and communications. Qualifies for IP grading.*

AVIA 177 **2 Su, F, W, S**
Intermediate Private Flight Training

Includes five hours of solo practice of take-offs, air maneuvers, and landings. Special training in short-field and soft-field landings, emergency procedures, slips, diversions, and cross-country flying techniques with a certificated flight instructor completing a minimum of two dual cross-country flights. Prerequisite: AVIA 176. Qualifies for IP grading.*

AVIA 178 **2 Su, F, W, S**
Advanced Private Flight Training

Flight with reference to instruments, night flying, VOR navigation, filing flight plans, pilotage, dead reckoning, and solo practice in preparation for the FAA private pilot flight examination. Prerequisite: AVIA 177. Qualifies for IP grading.*

AVIA 273 **1-6 Su, F, W, S**
Practicum in Flight

A minimum of forty hours of practice in cross-country flying as pilot-in-command to assigned destinations in preparation for the instrument pilot rating. Practice with cockpit management skills and use of attitude instrument flying. Prerequisite: AVIA 178. Repeatable to a maximum of 6 credits. Qualifies for IP grading.*

AVIA 275 **4 F**
Instrument Pilot Theory

From basic attitude instrument flying to getting around in the modern airspace system on an IFR flight plan. Preparation for the FAA instrument written examination and the instrument instructor written examination. Prerequisite: AVIA 175.

AVIA 276 **3 Su, F, W, S**
Instrument Flight Training

Basic attitude instrument flying theory and skills. Developing proficiency in scan of the attitude instruments, interpretation of the instruments, and control of the aircraft with an additional work load that includes such factors as communications, copying clearances, using a timing device, and reading charts in flight. Also includes VOR and ADF navigation, DME arcs, and holding-patterns of all types. Prerequisite or corequisite: AVIA 175, 176, 177, 178. Qualifies for IP grading.*

AVIA 278 **4 Su, F, W, S**
Advanced Instrument Flight Training

Cross-country instrument flying making use of all former instrument training. Use of acquired instrument skills in cross-country flights to large airports. Includes a comprehensive review and preparation for the FAA instrument flight examination. Prerequisite: AVIA 276. Qualifies for IP grading.*

UPPER-DIVISION COURSES:

AVIA 305 **4 W**
Aircraft Systems

Major aircraft systems on both small and large aircraft, including theory and troubleshooting techniques. Includes engine theory, propellers, governors, hydraulics, pneumatics, anti-ice and de-ice systems, pressurization, flight controls and landing gear. Special emphasis on turbine engine theory and systems for transition to large transport category aircraft. Corequisite: AVIA 175.

AVIA 350 **2 S**
Mission Flying Theory and Practice

Advanced mountain flying, operations at small unimproved airports, high altitude operations, and advanced short field landing techniques. Prerequisite: AVIA 476. Qualifies for IP grading.*

AVIA 375 **4 S**
Commercial, ATP, and Certificated Flight Instructor Theory

Aircraft performance, weight and balance, theory of flight, the federal airspace system, air traffic control, and navigation. Prepares pilots for the Commercial, Fundamentals of Instruction, and Certificated Flight Instructor FAA written examinations. Prerequisites: AVIA 175, 275.

AVIA 376 **2 Su, F, W, S**
Commercial Flight Training

The systems, performance, and procedures necessary for operating a complex aircraft. Approximately fifty percent of the instruction treats flight competency in a complex aircraft. Includes high-performance flight experience in IFR and night operations. Prerequisite: AVIA 278. Qualifies for IP grading.*

AVIA 377 **2 Su, F, W, S**
Intermediate Commercial Flight Training

The maneuvers and skills required for the commercial certificate. Involves instruction and practice in all types of operations essential for an advanced commercial pilot. Special emphasis on in-flight emergencies. Prerequisite: AVIA 376. Qualifies for IP grading.*

AVIA 378 **2 Su, F, W, S**
Advanced Commercial Flight Training

How to work in remote areas and in foreign lands as a bush or mission pilot; operations in very cold weather; survival techniques. Conventional gear (tail-wheel) operations, mountain flying, off-airport procedures, very short field landings and take-offs. (Course offering depends on availability of aircraft.) Prerequisite: AVIA 377. Qualifies for IP grading.*

* IP grades in AVIA courses must be completed within one quarter.

Aviation

AVIA 379 **2 W** **Aerodynamics**

Aerodynamics and aerodynamic devices used on various types of modern aircraft. Encompasses the basic concepts of flight as well as more advanced studies than a pilot would normally receive in preparation for pilot certificates. Recommended prior to commercial and flight instructor flight classes. Prerequisite: AVIA 175. Even years.

AVIA 450 **2 S** **Advanced Aircraft Systems**

Transport aircraft systems specializing in the CRJ, automatic flight controls, auxiliary power units, environmental control systems, and high altitude operations. Prerequisite: AVIA 305. Odd years.

AVIA 460 **2 W** **Professional Skills for Pilots**

Essential elements of being an aviation professional. Emphasizes professional etiquette, resume writing, business writing, interviews, job search, time management, and organizational skills. Prerequisite: AVIA 378. Odd years.

AVIA 470 **1 S** **Fundamentals of Flight Instruction**

Basic principles of education that may be applied to flight instruction. Practice ground instruction covering various private and commercial maneuvers. Discussion of the best teaching techniques and how to avoid pitfalls common to many students and flight instructors during flight training. Required for instructor certification. Prerequisite: AVIA 278.

AVIA 471 **6 Su, F, W, S** **Flight Instructor Flight Training**

Flight training and practice teaching in preparation for flight-instructor certificate. Requires perfecting teaching techniques for the flight instructor. Includes comprehensive review of private and commercial aeronautical knowledge; flight maneuvering skill from the right-hand seat. Awareness of obligations and privileges of a certificated flight instructor. Mastery of FAA documentation and certification procedures. Prerequisites: AVIA 378. Qualifies for IP grading.*

AVIA 472 **3 Su, F, W, S** **Instrument Instructor Flight Training**

Preparation for the instrument flight instructor oral and practical examination. Review of skills and procedures required for instrument rating. Develops instrument flight proficiency from the right-hand seat and instructional skills necessary for teaching an instrument student in flight and on the ground. Prerequisites: AVIA 471. Qualifies for IP grading.*

AVIA 473 **1-6 Su, F, W, S** **Advanced Practicum in Flight**

Additional involvement in instruction or advanced flight operations into high-density traffic areas under instrument conditions. Special reports or research projects may be required in conjunction with these assignments. Prerequisite: AVIA 273. Repeatable to a maximum of 6 credits. Qualifies for IP grading.*

AVIA 476 **2 Su, F, W, S** **Add-on Class Rating**

Dual instruction in aircraft systems, maneuvers, and emergency procedures toward developing proficiency in multi-engine aircraft. Prepares student for the multi-engine private or multi-engine com-

mercial practical test. (Course offering depends on availability of aircraft.) Prerequisites: AVIA 378; private pilot certificate. Recommended prerequisite: commercial certificate. Qualifies for IP grading.*

AVIA 477 **2 S** **Human Factors in Aviation**

The pilot's thought processes enabling detection and prevention of potentially hazardous aeronautical decision-making. Emergency procedure planning and crew resource management are role-played to promote teamwork and redundancy for multi-crew cockpits.

AVIA 478 **2 Su, F, W, S** **Add-on CFI Rating**

Prepares the applicant to meet the experience requirements and give flight instruction in a multi-engine aircraft. Directed toward acquiring teaching skills and safety procedures to meet the demanding multi-engine training environment. Prerequisites: instrument rating, commercial certificate. (Course offering depends on availability of aircraft.) Prerequisite: AVIA 471. Qualifies for IP grading.*

Electronics

LOWER-DIVISION COURSE:

ELEC 141 **3 W** **Applied Electronics**

A non-mathematical approach to electronics. Electronic components and component combinations to make useful equipment. Experiments include building and testing burglar alarms, photo strobes, power supplies, light dimmers, intercom systems, electronic doorbells, timers, clocks, and other circuits. For the general student. Two lectures and one three-hour laboratory per week. Odd years.

* IP grades in AVIA courses must be completed within one quarter.



Faculty

Robin Vance, chair; John Duncan, Floyd Hayes, Bryan Ness, Brian Yuen-Yau Wong, Aimee Wyrick

Departmental Office: 121 Clark Hall; 965-6635

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Biologists seek to understand the complexity of the living world through observation and experiment. By offering course work and laboratory experience concerning microorganisms, plants, animals (including humans), and the interrelationships among these living things, the BIOLOGY DEPARTMENT encourages the student to consider the study of life an exciting and continuing challenge, whether at the level of molecules, cells, organisms, populations, or ecosystems.

The biology major prepares students for careers in the practice or teaching of the life sciences, for graduate study, or for entering professional schools in dentistry, medicine, and veterinary medicine.

The biology curriculum may be enriched by research (BIOL 412) either on or off campus, and by the marine courses offered during the summer session at the Rosario Beach Marine Station in Washington.

Major in Biology, B.S.

A minimum of 99 hours (51 upper-division hours)

► Required Core Courses (39 hours):

BIOL 111-112-113	Biological Foundations	5-5-5
BIOL 222	Introduction to Research Methods	2
BIOL 233	Principles of Ecology	4
BIOL 320	Cellular and Molecular Biology	4
BIOL 348	Systems Physiology	5
BIOL 354	Genetics	4
BIOL 396	Seminar (4 quarters)	.5-.5-.5-.5
BIOL 450	Philosophy of Origins	3

► Required Core Electives (21 hours):

<i>At least 21 hours from the following:</i>		21
BIOL 323	Vertebrate Biology (4)	
BIOL 325	Flowering Plants (3)	
BIOL 328	Animal Behavior (4)	
BIOL 331	Marine Science (4)	
BIOL 366	Medical Microbiology (5)	
BIOL 400*	Topics in Biology (5)	
BIOL 403*	Ornithology (5)	
BIOL 412	Research in Biology (1-3)	
BIOL 417*	Behavior of Marine Organisms (5)	
BIOL 419	Developmental Biology (3)	
BIOL 422	Advanced Human Anatomy (4)	
BIOL 426	Histology (5)	
BIOL 430	Neurobiology (4)	
BIOL 445	Biotechnology (3)	
BIOL 458*	Marine Biology (5)	
BIOL 460*	Marine Ecology (5)	
BIOL 463*	Marine Phycology (5)	
BIOL 469	Immunology (4)	
BIOL 475*	Marine Invertebrates (5)	
ENVR 360/L	Conservation Biology & Lab (4)	

**Only offered during the summer at the Rosario Beach Marine Station.*

Biology

► Required Cognate Courses (39 hours):

CHEM 111-112-113	General Chemistry	5-5-5
CHEM 371-372-373	Organic Chemistry	4-4-4
PHYS 111-112-113	General Physics	4-4-4

Recommended Cognate Courses:

CHEM 381	Biochemistry I (4)
MATH 131	Calculus I (4)

Pre-medical and pre-dental students:

The B.S. degree curriculum, including recommended cognates, exceeds all undergraduate science requirements for pre-medical and pre-dental students applying to Loma Linda University and many other schools.

Major in Biology, B.A.

A minimum of 87 hours (24 upper-division hours)

Required core courses and cognate courses are the same as those for the B.S. degree. Core electives: Select 9 hours in biology from the core electives listed above for the B.S. degree. BIOL 412 is not applicable toward the B.A. degree.

Major in Environmental Studies, B.S.

A minimum of 90 hours (30 upper-division hours)

► Required Core Courses (60 hours):

BIOL 111-112-113	Biological Foundations	5-5-5
BIOL 222	Introduction to Research Methods	2
BIOL 233	Principles of Ecology	4
BIOL 450	Philosophy of Origins	3
CHEM 111-112-113	General Chemistry	5-5-5
ENVR 360	Conservation Biology	3
ENVR 360L	Conservation Biology Laboratory	1
ENVR 361	Energy and Climate Change	3
ENVR 361L	Energy and Climate Change Laboratory	1
ENVR 362	Pollution and Environmental Quality	3
ENVR 362L	Pollution and Environmental Quality Laboratory	1
ENVR 396	Seminar (4 quarters)	.5-.5-.5-.5
ENVR 450	Internship	4
RELT 240	Eco-theology	3

► Required Core Electives (30 hours):

At least 30 hours from the following:		30
AGRI 212	Home Greenhouse Gardening (2)	
AGRI 213	Home Vegetable Gardening (2)	
BIOL 227	Natural History of California (4)	
BIOL 323	Vertebrate Biology (4)	
BIOL 325	Flowering Plants (3)	

BIOL 328	Animal Behavior (4)
BIOL 331	Marine Science (4)
BIOL 366	Medical Microbiology (5)
BIOL 400*	Topics in Biology (5)
BIOL 403*	Ornithology (5)
BIOL 417*	Behavior of Marine Organisms (5)
BIOL 458*	Marine Biology (5)
BIOL 460*	Marine Ecology (5)
BIOL 463*	Marine Phycology (5)
BIOL 475*	Marine Invertebrates (5)
CHEM 324-325	Analytical Chemistry I-II (3-3)
CHEM 324L-325L	Analytical Chemistry I-II Laboratory (2-2)
CHEM 371-372-373	Organic Chemistry (4-4-4)
CHEM 451-452	Physical Chemistry (3-3)
CHEM 450L	Physical Chemistry Laboratory (1)
ENVR 412	Research in Environmental Studies (1-3)
GEOL 233	Geology (4)
MATH 131-132	Calculus I-II (4-4)
PHYS 111-112-113	General Physics (4-4-4)

Recommended courses for students interested in specific areas:

The following courses are recommended to help students become better prepared for a job or for graduate school in more specialized areas of environmental studies. These courses are not intended to provide students with the specific skills required for a job.

Air Quality:

CHEM 324, 324L, 325, 325L, 371-372-373, 450L, 451-452, MATH 131-132, PHYS 111-112-113

Conservation Biology:

BIOL 227, 323, 325, 328

Energy:

CHEM 324, 324L, 325, 325L, 371-372-373, 450L, 451-452, GEOL 233, MATH 131-132, PHYS 111-112-113

Environmental Economics:

ACCT 121-122-123, ECON 261, 265, MATH 131-132

Environmental Policy:

PLSC 124, 274, SOWK 232

Marine Resources:

BIOL 331 or 458, 417, 460, 463, 475

Solid Waste Management:

CHEM 324, 324L, 325, 325L, 371-372-373, 450L, 451-452, PHYS 111-112-113

*Only offered during the summer at the Rosario Beach Marine Station.

Water Management:

BIOL 366, CHEM 324, 324L, 325, 325L, 371-372-373, 450L, 451-452-453, MATH 131-132, MICR 134, PHYS 111-112-113

Wildlife Management:

BIOL 227, 323, 328, 403

Major in Natural Science, B.S. Biology Emphasis

A minimum of 100 hours (26 upper-division hours)

This major provides appropriate preparation for teaching science at the secondary level. The core requirement of 65 quarter hours of course work corresponds to science subjects commonly taught in California public schools, and the emphasis treats the subject matter at a depth more than adequate for teaching the higher secondary science courses in biology. Emphases may also be obtained in chemistry or physics. For further information, see the sections entitled “Chemistry” and “Physics” in this catalog.

► *Required Core Courses (65 hours):*

ASTR 115	Astronomy	5
ASTR 173	Meteorology	1
BIOL 111-112-113	Biological Foundations	5-5-5
BIOL 331	Marine Science	4
BIOL 450	Philosophy of Origins	3
CHEM 111-112-113	General Chemistry	5-5-5
GEOL 233	Geology	4
PHYS 390	History and Philosophy of Science	3

At least one of the following courses:

ENVR 360	Conservation Biology (3)	3
ENVR 361	Energy and Climate Change (3)	
ENVR 362	Pollution and Environmental Quality (3)	

One of the following sequences: 4-4-4

PHYS 111-112-113	General Physics (4-4-4)
PHYS 211-212-213	Physics with Calculus (4-4-4)

Biology Emphasis (35-36 hours)

► *Required Core Courses: (27-28 hours):*

BIOL 233	Principles of Ecology	4
BIOL 320	Cellular and Molecular Biology	4
BIOL 354	Genetics	4
BIOL 396	Seminar (4 quarters)	.5-.5-.5-.5
MICR 134	General Microbiology	5

At least one of the following courses: 5

BIOL 102	Human Physiology (5)
BIOL 348	Systems Physiology (5)

At least one of the following courses: 3-4

BIOL 323	Vertebrate Biology (4)
BIOL 325	Flowering Plants (3)

► *Required Cognate Courses (8 hours):*

CHEM 102	Survey of Organic Chemistry	4
CHEM 103	Survey of Biochemistry	4

Teaching Credential

Students desiring to enter a program of studies leading to a California teaching credential in science with a concentration in biology should take the B.S. degree in Natural Science, Biology Emphasis. Students will need to pass the science (biology concentration) portion of the CSET exam one quarter prior to doing full-time student teaching. Students are invited to discuss the program with their major advisor in the Biology Department.

Those who plan to teach on the secondary level should consult with the credential analyst in the Education Department and should become acquainted with the specific requirements for admission to and successful completion of the Teacher Education Program as outlined in the section entitled “Education” in this catalog.

Minor in Biology

A minimum of 30 hours (12 upper-division hours)

► *Required Courses (18 hours):*

BIOL 111-112-113	Biological Foundations	5-5-5
BIOL 450	Philosophy of Origins	3

► *Required Electives (12 hours):*

At least 12 hours from the following (9 upper-division): 12
Additional non-service BIOL courses

Minor in Environmental Studies

A minimum of 31 hours (12 upper-division hours)

► *Required Courses (31 hours):*

BIOL 233	Principles of Ecology	4
ENVR 360	Conservation Biology	3
ENVR 360L	Conservation Biology Laboratory	1
ENVR 361	Energy and Climate Change	3
ENVR 361L	Energy and Climate Change Laboratory	1
ENVR 362	Pollution and Environmental Quality	3
ENVR 362L	Pollution and Environmental Quality Laboratory	1

At least one of the following sequences: 15

BIOL 111-112-113	Biological Foundations (5-5-5)
CHEM 111-112-113	General Chemistry (5-5-5)

Biology

Agriculture

LOWER-DIVISION COURSES:

AGRI 212 **2 W** **Home Greenhouse Gardening**

The greenhouse as a solar energy source for the home. Growth and multiplication of plants for food and home beautification. One lecture and one laboratory per week.

AGRI 213 **2 S** **Organic Vegetable Gardening**

Developing a home vegetable garden using all-natural methods for preparing, growing, maintaining, protecting, and harvesting garden crops. One lecture and one laboratory per week.

Biology

SERVICE COURSES:

*(Not applicable to a major or minor in this department)**

BIOL 101 **5 F, W** **Human Anatomy**

Human structure as the expression of basic principles of morphology. Each functional system considered in terms of its cell, tissue, and organ types. Four lectures and one laboratory per week.

BIOL 102 **5 W, S** **Human Physiology**

The function of human body systems, emphasizing the relationships among these systems; the role of each system in normal body function and health. Four lectures and one laboratory per week. Prerequisite: BIOL 101.

* *Exceptions: BIOL 102 is applicable to the B.S. in Natural Science, emphasis in Biology, and BIOL 227 is applicable to the B.S. in Environmental Studies.*

BIOL 105 **5 W** **Introduction to Biology**

The organization and complexity of living organisms. The central questions of biology: the relationship between form and function, acquisition and use of energy, continuity between generations, and biodiversity. Enrollment limited to non-science majors; not available to students who have had a college biology course. Four lectures and one laboratory per week.

BIOL 223 **2 S** **Medical Terminology**

The terminology of science and medicine.

BIOL 227 **4 S** **Natural History of California**

Plants and animals of California as they relate to its diverse topography and geography. Three lectures and one laboratory per week.

BIOL 355 **3 F** **Issues on Origins**

Scientific and biblical models regarding the origin and history of life. Special reference to the impact of origins philosophy on the interpretation of biological, geological, and paleontological evidence. Intended for the general student.

LOWER-DIVISION COURSES:

BIOL 111-112-113 **5-5-5 F-W-S** **Biological Foundations**

An integrated foundation in life science principles for biology majors and preprofessional students in the biomedical sciences. Prerequisite to most biology courses with higher numbers. Should be taken in sequence. Four lectures and one laboratory per week.

BIOL 111: The cell as the structural and functional unit of life; organelles and their functions; structure and function of essential biomolecules; and an introduction to molecular genetics. Prerequisite: CHEM 101 or CHEM 111

BIOL 112: Mendelian genetics, biodiversity, ecology, and evolution.

BIOL 113: The form and function of plants and animals.

BIOL 222 **2 W** **Introduction to Research Methods**

The tools of biological research, including the choice of a model system, statistical tests, data recording and analysis, interpretation and presentation of experimental results, and the writing of research proposals. One lecture and one laboratory per week. Prerequisites: BIOL 111-112-113. Prerequisite or corequisite: STAT 222.

BIOL 233 **4 F** **Ecology**

The interaction of physical and biological factors in maintaining balance within the ecosystem. Survey of world biomes and aquatic ecosystems. Laboratories examine and compare biotic communities and their structure. Three lectures and one laboratory per week. Prerequisite: BIOL 111-112-113.

UPPER-DIVISION COURSES:

BIOL 320 **4 W**
Cellular and Molecular Biology

Composition, structure, and function of the cell and its organelles; emphasis on intracellular and intercellular communication and control principles. Prerequisites: BIOL 111-112-113; CHEM 371.

BIOL 323 **4 W**
Vertebrate Biology

Biology of the vertebrates, including their relationship to the physical environment and to other species and their social and reproductive patterns. The laboratory emphasizes the vertebrates in northern California. Three lectures and one laboratory per week. Prerequisite: BIOL 111-112-113.

BIOL 325 **3 S**
Flowering Plants

Structure of typical flowers; methods of analyzing, collecting, identifying, and preserving representative specimens. Two lectures and one laboratory per week. Prerequisite: BIOL 113 or BIOL 227.

BIOL 328 **4 S**
Animal Behavior

Diversity of animal behavior including instinct, learning, communication, sociology, and the genetic, physiological, and ecological aspects of behavior. Three lectures and one laboratory per week. Prerequisite: BIOL 111-112-113 or consent of the instructor.

BIOL 331 **4 F**
Marine Science

Introduction to oceanography, marine life, and humanity's impact on the marine environment. Three lectures and one laboratory per week. Prerequisites: BIOL 111-112-113 or consent of the instructor.

BIOL 348 **5 F**
Systems Physiology

Functions of the nervous, muscular, endocrine, cardiovascular, respiratory, renal, and reproductive systems with emphasis on regulatory mechanisms and integration. Examines processes used by animals in adjusting to their external environment and controlling their internal environment. Laboratories involve firsthand analysis of selected aspects of the major functional systems. Four lectures and one laboratory per week. Prerequisites: BIOL 111-112-113 or BIOL 101-102.

BIOL 354 **4 S**
Genetics

Genetics of bacteria, plants, and animals. Chromosome mapping, population and evolutionary genetics, prokaryotic and eukaryotic genetic control, and molecular genetics. Emphasis on the study of modern molecular genetic techniques and concepts. Three lectures and one laboratory per week. Prerequisites: BIOL 111-112-113, 320.

BIOL 366 **5 W**
Medical Microbiology

Major groups of bacteria, viruses, and fungi that are pathogens or normal flora of humans. Laboratory work emphasizes the culture, characterization, and identification of unknown bacteria of medical importance. Four lectures and one laboratory per week. Prerequisite: BIOL 111-112-113 or MICR 134.

BIOL 395 **1-3 F, W, S, Su**
Special Topics in Biology

Additional laboratory or library studies correlated with biology courses.

BIOL 396 **.5 F, W, S**
Seminar

(See also CHEM 396, CPTR 396, ENVR 396, PHYS 396)

Single topics of current interest in the natural sciences are presented by guest lecturers. To pass, a student must be on time and attend five course appointments. Biology majors are required to enroll in the course two out of three quarters in each of their junior and senior years. Credit earned only during the junior and senior years counts toward the Seminar requirement for a degree in biology. Repeatable to a maximum of 2 credits. Graded S/F.

BIOL 412 **1-3 F, W, S**
Research in Biology

Original investigation in selected areas of biology. The research topic is selected and the work done under direction of a faculty advisor. Scholarly presentation of research results is encouraged. Prerequisites: BIOL 111-112-113, 222 and approval of the Biology faculty. Repeatable to a maximum of 6 credits applied to the Biology major. Qualifies for IP grading.

BIOL 419 **3 F**
Developmental Biology

Principles of animal development and its molecular basis in selected model organisms. Cell communication and differentiation, embryonic induction, pattern formation, morphogenesis, and the genetic control of development. Prerequisites: BIOL 111-112-113, 320, 354.

BIOL 422 **4 S**
Advanced Human Anatomy

Intensive study of the structure of the human body. The laboratory requires extensive cadaver dissection. Two lectures and two laboratories per week. Prerequisite: BIOL 101 with a grade of B or better.

Biology

BIOL 426 **5 W** **Histology**

Microscopic structure of the fundamental tissues and organs of humans and other mammals with functional correlations. Three lectures and two laboratories per week. Prerequisite: BIOL 111, 112, 113. Recommended prerequisite: BIOL 320.

BIOL 430 **4 F** **Neurobiology**

The neural basis of behavior with emphasis on the human nervous system. Includes cellular approaches to neural function, neuroanatomy, development of neurons and circuits, and neuroendocrine mechanisms. Three lectures and one laboratory per week. Prerequisite: BIOL 348.

BIOL 445 **3 F** **Biotechnology**

Advanced molecular genetics techniques, including isolation of DNA, cloning, PCR and DNA sequencing. Ethics and politics of genetic testing, cloning, gene therapy, stem cell research, and transgenic organisms. Two lectures and one laboratory per week. Prerequisite: BIOL 354.

BIOL 450 **3 W** **Philosophy of Origins**

Historical and current issues relating to special creation and evolution models of origins. Biological, geological, and paleontological evidence and potential explanations along with the theological and scientific implications of various interpretations. Limited to upper-division students and intended for science majors and preprofessional students. Prerequisite: BIOL 111-112-113.

BIOL 469 **4 S** **Immunology**

The lymphoid system and its response to foreign substances by humoral or cellular mechanisms that may protect or injure the host. Immunogens, immunoglobulins, complement, antigen-antibody reactions, phagocytosis, inflammation, immediate and delayed allergy, autoimmunity, and the immunology of transplantation, cancer and tolerance. Three lectures and one laboratory per week. Prerequisites: BIOL 111-112-113, 320

BIOL 495 **1-3 F, W, S, Su** **Independent Study**

Properly qualified students in biology whose scholarship is of outstanding quality may undertake a limited amount of individual investigation. Repeatable to a maximum of 6 credits.

Courses offered at the Rosario Beach Marine Station

LOWER-DIVISION COURSES:

BIOL 115-116-117 **4-4-4 Su** **General Biology**

Study of the basic principles of biology including animals, plants, and microorganisms. Topics include the cell, physiology, genetics, development, taxonomy, and ecology. Must be taken in sequence. Includes laboratory. High school or college chemistry strongly recommended. Completion of BIOL 115-116-117 satisfies the requirement for BIOL 111-112-113.

Each summer, four upper-division courses are taught at the Rosario Beach Marine Station, chosen from courses such as the ones listed below.

BIOL 111-112-113 or a full sequence General Biology equivalent is the prerequisite for all courses. Courses are 5 credits and include credit for a research problem.

UPPER-DIVISION COURSES:

BIOL 400 **5 Su** **Topics in Biology**

Investigation of various specialties in Biology. Repeatable for credit in different content areas. Examples of recent content areas include Limnology, Plant Ecology and Entomology.

BIOL 403 **5 Su** **Ornithology**

Study of native birds of North America, with emphasis on physiology, identification, migration, and life histories.

BIOL 417 **5 Su** **Behavior of Marine Organisms**

Study of inter- and intraspecific behaviors of marine animals and their behavioral responses to the physical environment. Involves laboratory experiences, field observations, and a research project. Prerequisite: a course in animal behavior, organismal biology, deep-sea biology, and shallow-water marine communities.

BIOL 458 **5 Su** **Marine Biology**

Understanding the marine environment primarily from an ecological perspective. Included are principles of basic oceanography, plankton biology, deep-sea biology, and shallow-water communities.

BIOL 460 **5 Su**
Marine Ecology

Interspecific, intraspecific, and community relationships demonstrated by marine organisms.

BIOL 463 **5 Su**
Marine Phycology

Marine algae, covering the principles of their classification, natural history, ecology, physiology, and practical use.

BIOL 475 **5 Su**
Marine Invertebrates

The biology of selected groups of marine invertebrates.

Environmental Studies

UPPER-DIVISION COURSES:

ENVR 360 **3 F**
Conservation Biology

Conservation ethics, population biology, biodiversity, threats to biodiversity, conserving biodiversity, and the interplay of human populations, economics, and politics. Required corequisite for biology majors and for environmental studies majors and minors: ENVR 360L.

ENVR 360L **1 F**
Conservation Biology Laboratory

Laboratory activities coordinated with ENVR 360. Prerequisite: BIOL 111-112-113.

ENVR 361 **3 W**
Energy and Climate Change

Fossil fuels, alternative energy sources, energy conservation, energy politics, atmosphere and climate, natural climate changes, and global warming. Required corequisite for environmental studies majors and minors: ENVR 361L.

ENVR 361L **1 W**
Energy and Climate Change Laboratory

Laboratory activities coordinated with ENVR 361. Prerequisite: BIOL 111-112-113.

ENVR 362 **3 S**
Pollution and Environmental Quality

Air pollution, ozone depletion, acid rain, water quality, water pollution, wastewater treatment, solid waste management, food production, pest control, and various environmental hazards. Required corequisite for environmental studies majors and minors: ENVR 362L.

ENVR 362L **1 S**
Pollution and Environmental Quality Laboratory

Laboratory activities coordinated with ENVR 362. Prerequisite: BIOL 111-112-113.

ENVR 396 **.5 F, W, S**
Seminar

(See also BIOL 396, CHEM 396, CPTR 396, PHYS 396)

Single topics of current interest in the natural sciences are presented by guest lecturers. To pass, a student must be on time and attend five course appointments. Environmental studies majors are required to enroll in the course two out of three quarters in each of their junior and senior years. Credit earned only during the junior and senior years counts toward the Seminar requirement for a degree in environmental studies. Repeatable to a maximum of 2 credits. Graded S/F.

ENVR 412 **1-3 F, W, S**
Research in Environmental Studies

Original investigation in selected areas of environmental studies. The research topic is selected and the work done under direction of a faculty advisor. Scholarly presentation of research results is encouraged. Prerequisite: BIOL 222. Repeatable to a maximum of 6 credits.

ENVR 450 **1-4 F, W, S**
Internship

Volunteer service or employment with an environmental government agency or non-government organization. Intended to provide students with experience relevant to future employment or graduate studies. A report must be submitted summarizing duties performed and skills learned. Repeatable to a maximum of 4 credits.

Geology

LOWER-DIVISION COURSE:

GEOL 233 **4 F**
Geology

The materials, structure, and internal conditions of the earth; the physical and chemical processes at work upon it. Three lectures and one laboratory per week.

Biology

General Science

SERVICE COURSE:

(Not applicable to a major or minor in this department)

GSCI 205 **3 F, W** **Scientific Discoveries**

Major developments in biology, chemistry, and physics that have led to new ways of thinking in the sciences, with a synthesis of modern scientific thought and methods. Prerequisites: MATH 019 or equivalent; a full year of biology at the secondary level or BIOL 105; a full year of chemistry at the secondary level or CHEM 101; and a full year of physics at the secondary level or PHYS 105.

Microbiology

SERVICE COURSE:

*(Not applicable to a major or minor in this department)**

MICR 134 **5 F, S** **General Microbiology**

An introduction to microorganisms—the bacteria, viruses, and fungi; the usefulness of microorganisms in nature and manufacturing; pathogenesis and immunity. Consideration of each major infectious disease with respect to its causative agent, characteristics, diagnosis, transmission, and prevention. Four lectures and one laboratory per week.

* *Exception: MICR 134 is applicable to the B.S. in Natural Science, emphasis in Biology.*



Faculty

Wally Lighthouse, chair; David Bell, Rodney Hardcastle, Keith Neergaard, Lary Taylor, Marcia Toledo
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The degree programs offered by the BUSINESS ADMINISTRATION & ECONOMICS DEPARTMENT are fully accredited by the International Assembly for Collegiate Business Education (IACBE). As part of a Seventh-day Adventist college, the department intends not only to prepare students to successfully meet the everyday challenges of a career in business, but also to prepare its graduates to give effective Christian influence in their communities. To meet these goals, the department offers several programs of study:

The B.B.A. (Bachelor of Business Administration) is a professional degree designed for the student who intends to enter the job market upon completing the four-year program or to be well prepared for graduate studies. This program offers the following emphases: Accounting, Finance, General Business, Information Systems, International Business, Management, and Marketing.

The B.A. (Bachelor of Arts) degree program in Business Ad-

ministration is a traditional curriculum for those interested in taking a program that includes the study of a foreign language. This major affords more flexibility than do the B.B.A. and the B.S.

The B.S. (Bachelor of Science) in Business Administration is a degree designed for those who plan to enter a postgraduate or graduate program, specifically, in medicine, law, dentistry, or business. Since most graduates of such professional programs will ultimately have their own business, this degree is particularly useful for them.

The department also offers a two-year A.S. (Associate of Science) degree in Office Administration. The A.S. curriculum is structured so that a student may continue to complete any bachelor's program in Business Administration.

The preparation offered in the four-year programs (B.B.A., B.S., and B.A.) differs considerably. However, the first two years are similar enough so that in the process of choosing a field for concentration students have ample time to explore a variety of professions in consultation with departmental faculty and others. Many opportunities and avenues for service are thus available to students majoring in business.

Degree Completion Program

The BUSINESS ADMINISTRATION & ECONOMICS DEPARTMENT also offers an off-campus degree-completion program leading to the Bachelor of Science in Management (B.S.M.). This program is designed for the working adult and is offered in the evening.

Bachelor of Business Administration, B.B.A.

A minimum of 106 hours (58 upper-division hours)

► Required Core Courses (66-68 hours):

ACCT 121	Financial Accounting I	3
ACCT 122	Financial Accounting II	4
ACCT 123	Managerial Accounting	3
ACCT 391	Accounting Systems in Small Businesses	2
BUAD 279	Business Communication/Data Presentation	3
BUAD 295/395	Colloquium/Distinguished Speaker Srs	2**
BUAD 325	Business Law I	3
BUAD 326	Business Law II	3
BUAD 490	Seminar in Business	1
ECON 261	Macroeconomics	4
ECON 265	Microeconomics	4
FIN 341	Finance	5
MGMT 361	Management	4
MGMT 465	Organizational Behavior	3
MGMT 491	Strategic Management	3
MKTG 351	Marketing	4
OFAD 111	Personal/Beginning Keyboarding	0-2***
STAT 222	Introduction to Statistics	4
STAT 322	Statistical Methods	3

At least one of the following courses: 4

MATH 106	College Algebra (4)
MATH 131	Calculus I (4)

At least three courses and 4 hours from the following: 4

(Only one OFAD course may be applied)

INFS 144	PC Operating Systems (1)
INFS 148	PC Spreadsheets (1)
INFS 149	PC Databases (1)
OFAD 201	Word Processing (2)
OFAD 203	Word Perfect (2)

Recommended Supporting Courses:

BUAD 118	Personal Money Management (3)
BUAD 223	Personal Law (2)
OFAD 116	Calculating Machines (1)

* Courses used to fulfill requirements in these sections may not also fulfill requirements in another emphasis or business program.

** This course is required each year/quarter when registered as a business major, up to a maximum of 2 credits. The requirement may be reduced for transfer students.

*** This requirement may be met by completion of course or satisfactory performance on departmental waiver examination. The waiver option is available only to students with fewer than 75 credit hours or to transfer students if taken within their first year at Pacific Union College.

► Emphases (choose one):

1. Accounting Emphasis (39-40 hours)

ACCT 307	Government & Nonprofit Accounting	3
ACCT 311-312-313	Intermediate Accounting	3-3-3
ACCT 321-322	Cost Accounting I-II	3-3
ACCT 341	Taxation for Individuals	4
ACCT 461	Accounting Theory	4

At least 10 hours from the following: 10*

ACCT 343	Taxation for Corporations/Partnerships (4)
ACCT 345	Estate Planning, Gifts & Trust Taxation (3)
ACCT 451	Advanced Accounting (3)
ACCT 453	Auditing (5)
MGMT 328	Management Information Systems (3)

Additional hours from the following: 3-4*

Additional hours (at least 3 upper-division hours) from ACCT, BUAD, ECON, FIN, INFS, MGMT, and MKTG courses to total at least 106 hours in the major (core courses and emphasis).

Recommended Courses:

BUAD 434	Entrepreneurship (3)
INFS 377	Electronic Commerce (3)

2. Finance Emphasis (39-40 hours)

ACCT 311-312-313	Intermediate Accounting	3-3-3
FIN 380	Capital Markets & Financial Institutions	3
FIN 444	Investments	3
FIN 463	Financial Planning and Forecasting	3
FIN 488	Problems in Finance	3
MGMT 466	Business and Society	3

At least 12 hours from the following: 12*

BUAD 335	Real Estate (4)
BUAD 371	Insurance and Risk Management (3)
ECON 371	Money and Banking (3)
ECON 457	International Economics (3)
FIN 419	Personal Financial Planning (3)
FIN 436	Real Estate Finance (3)
FIN 457	International Finance (3)

Additional hours from the following: 3-4*

Additional hours (at least 3 upper-division hours) from ACCT, BUAD, ECON, FIN, INFS, MGMT, and MKTG courses to total at least 106 hours in the major (core courses and emphasis).

3. General Business Emphasis (38-40 hours)

MGMT 466	Business and Society	3
BUAD 434	Entrepreneurship	3
INFS 377	Electronic Commerce	3

At least 9 hours from the following: 9

ACCT 311-312-313	Intermediate Accounting (3-3-3)
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ACCT 321-322	Cost Accounting I-II (3-3)	
ACCT 341	Taxation for Individuals (4)	
ACCT 343	Taxation for Corporations/Partnerships (4)	
ACCT 345	Estate Planning, Gifts & Trust Taxation (3)	

Additional hours from the following: 22*

A minimum of 22 hours (at least 9 upper-division hours) from the following areas with at least 6 hours in at least three of the areas: ACCT, BUAD, ECON, FIN, INFS, MGMT, and MKTG.

4. Information Systems Emphasis (40 hours)

ACCT 322	Cost Accounting II	3
INFS 149	PC Databases	1
INFS 229	Business Programming	3
INFS 377	Electronic Commerce	3
INFS 380	Database Analysis and Design	3
INFS 465	Fundamentals of Data Communication	3
INFS 470	Management Science	4
INFS 482	Systems Analysis and Design	4
MGMT 328	Management Information Systems	3
MKTG 371	Marketing Research	3

At least 6 hours from the following: 6

ACCT 311-312	Intermediate Accounting (3-3)	
CPTR 115	Introduction to Computer Programming (4)	
CPTR 131	Computer Science (4)	

Additional hours from the following: 4*

Additional hours (at least 4 upper-division hours) from ACCT, BUAD, ECON, FIN, INFS, MGMT, MKTG, and CPTR courses to total at least 106 hours in the major (core courses and emphasis).

Recommended Course:

ACCT 313	Intermediate Accounting (3)	
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5. International Business Emphasis (38-50 hours)

ECON 457	International Economics	3
FIN 457	International Finance	3
MGMT 457	International Management	3
MGMT 466	Business and Society	3
MKTG 371	Marketing Research	3
MKTG 458	International Marketing	3

At least 9 hours from the following: 9

ACCT 311-312-313	Intermediate Accounting (3-3-3)	
ACCT 321-322	Cost Accounting I-II (3-3)	
ACCT 341	Taxation for Individuals (4)	
ACCT 343	Taxation for Corporations/Partnerships (4)	
ACCT 345	Estate Planning, Gifts & Trust Taxation (3)	
ACCT 451	Advanced Accounting (3)	

*Note: Courses used to fulfill requirements in these sections may not also fulfill requirements in another emphasis or business program.

Competence at the intermediate level in a language other than English. 0-12

This requirement may be met by one of the following options:

1. One-year sequence in college intermediate language course.
2. Study for a minimum of one quarter in a college abroad where classes are conducted in a foreign language. Successful completion of at least 12 quarter units with a grade equal to or higher than C.
3. Passing a competency test in a foreign language.
4. Graduation from a high school in a non-English-speaking country in which classes were conducted in the language of that country.

At least two courses from the following that complement, where possible, the foreign language: 6-8

ANTH 124	Cultural Anthropology (4)	
COMM 330	Intercultural Communication (3)	
GEOG 210	World Regional Geography (3)	
HIST 332	Europe Since Napoleon (4)	
HIST 358	Recent America (4)	
HIST 412	Seminar in Asian History (4)	

Additional hours from the following: 3-5*

Additional hours (at least 3 upper-division hours) from ACCT, BUAD, FIN, ECON, INFS, MGMT, MKTG, and Modern Languages to total at least 106 hours in the major (core courses, emphasis and modern language courses).

6. Management Emphasis (38-40 hours)

MGMT 457	International Management	3
MGMT 466	Business and Society	3
MGMT 481	Operations Management	3

At least 12 hours from the following: 12*

INFS 470	Management Science (4)	
INFS 482	Systems Analysis and Design (4)	
MGMT 328	Management Information Systems (3)	
MGMT 472	Human Resources Management (3)	
MGMT 473	Labor Law and Legislation (3)	
MGMT 486	Supply Chain Management (3)	

At least 9 hours from the following: 9

ACCT 311-312-313	Intermediate Accounting (3-3-3)	
ACCT 321-322	Cost Accounting I-II (3-3)	
ACCT 341	Taxation for Individuals (4)	
ACCT 343	Taxation for Corporations/Partnerships (4)	
ACCT 345	Estate Planning, Gifts & Trust Taxation (3)	

Additional hours from the following: 8-10*

Additional hours (at least 6 upper-division hours) selected from ACCT, BUAD, ECON, FIN, INFS, MGMT, and MKTG courses to total at least 106 hours in the major (core courses and emphasis).

7. Marketing Emphasis (38-40 hours)

MGMT 466	Business and Society	3
MKTG 360	Consumer Behavior	3
MKTG 371	Marketing Research	3
MKTG 374	Advertising	3
MKTG 481	Marketing Problems	3

At least 9 hours from the following: 9*

INFS 377	Electronic Commerce (3)	
MKTG 372	Retailing Management (3)	
MKTG 377	Sales Management (3)	
MKTG 417	Services Marketing (3)	
MKTG 458	International Marketing (3)	

At least 6 hours from the following: 6

ACCT 311-312-313	Intermediate Accounting (3-3-3)	
ACCT 321-322	Cost Accounting I-II (3-3)	
ACCT 341	Taxation for Individuals (4)	
ACCT 343	Taxation for Corporations/Partnerships (4)	
ACCT 345	Estate Planning, Gifts & Trust Taxation (3)	

Additional hours from the following: 8-10*

Additional hours (at least 4 upper-division hours) from ACCT, BUAD, ECON, FIN, INFS, MGMT, and MKTG courses to total at least 106 hours in the major (core courses and emphasis).

► General-Education Requirements:

The general-education requirements for the B.B.A. are the same as for the B.S. degree except for the changes described below:

1. In III.B, only one course is required, to be chosen from either III.B.1 (Visual Arts) or III.B.2 (Music).
2. Either IV.A.3 (Prerequisite Science- Chemistry) or IV.A.4 (Prerequisite Science- Physics) may be waived.
3. IV.B.1 (Scientific Inquiry) is not required.
4. IV.B.3 (Science and Society) is not required.

* Courses used to fulfill requirements in these sections may not also fulfill requirements in another emphasis or business program.

** This course is required each year/quarter when registered as a business major, up to a maximum of 2 credits. The requirement may be reduced for transfer students.

*** This requirement may be met by completion of course or satisfactory performance on departmental waiver examination. The waiver option is available only to students with fewer than 75 credit hours or to transfer students if taken within their first year at Pacific Union College.

Major in Business Administration, B.A.

A minimum of 69 hours (34 upper-division hours)

► Required Core Courses (69-71 hours):

ACCT 121	Financial Accounting I	3
ACCT 122	Financial Accounting II	4
ACCT 123	Managerial Accounting	3
ACCT 391	Accounting Systems in Small Business	2
BUAD 279	Business Comm/Data Presentation	3
BUAD 295/395	Colloquium/Distinguished Speaker Srs	2**
BUAD 325	Business Law I	3
BUAD 326	Business Law II	3
BUAD 490	Seminar in Business I	1
ECON 261	Macroeconomics	4
ECON 265	Microeconomics	4
FIN 341	Finance	5
MGMT 361	Management	4
MGMT 465	Organizational Behavior	3
MGMT 491	Strategic Management	3
MKTG 351	Marketing	4
OFAD 111	Personal/Beginning Keyboarding	0-2***
STAT 222	Introduction to Statistics	4
STAT 322	Statistical Methods	3

At least 3 hours from the following: 3*

ACCT 307	Government and Nonprofit Accounting (3)	
ACCT 311	Intermediate Accounting (3)	
ACCT 321	Cost Accounting I (3)	
ACCT 341	Taxation for Individuals (4)	

At least three courses and 4 hours from the following: 4

(Only one OFAD course may be applied)

INFS 144	PC Operating Systems (1)	
INFS 148	PC Spreadsheets (1)	
INFS 149	PC Databases (1)	
OFAD 201	Word Processing (2)	
OFAD 203	Word Perfect (2)	

At least one of the following courses: 4

MATH 106	College Algebra (4)	
MATH 131	Calculus I (4)	

Recommended Supporting Courses:

BUAD 118	Personal Money Management (3)
BUAD 223	Personal Law (2)
OFAD 116	Calculating Machines (1)

Major in Business Administration, B.S.

A minimum of 76 hours (40 upper-division hours)

► **Required Core Courses (72-75 hours):**

ACCT 121	Financial Accounting I	3
ACCT 122	Financial Accounting II	4
ACCT 123	Managerial Accounting	3
ACCT 391	Acct. Systems in Small Businesses	2
BUAD 295/395	Colloquium/Distinguished Speaker Srs	2**
BUAD 325	Business Law I	3
BUAD 326	Business Law II	3
BUAD 490	Seminar in Business	1
ECON 261	Macroeconomics	4
ECON 265	Microeconomics	4
FIN 341	Finance	5
MGMT 361	Management	4
MGMT 465	Organizational Behavior	3
MGMT 491	Strategic Management	3
MKTG 351	Marketing	4
OFAD 111	Personal/Beginning Keyboarding	0-2***
STAT 222	Introduction to Statistics	4
STAT 322	Statistical Methods	3

At least one of the following courses: 3-4

BUAD 335	Real Estate (4)
BUAD 434	Entrepreneurship (3)
FIN 419	Personal Financial Planning (3)
FIN 444	Investments (3)
INFS 470	Management Science (4)
MGMT 457	International Management (3)
MKTG 417	Services Marketing (3)
MKTG 458	International Marketing (4)

At least 6 hours from the following: 6

ACCT 311-312-313	Intermediate Accounting (3-3-3)
ACCT 321-322	Cost Accounting I-I (3-3)
ACCT 341	Taxation for Individuals (4)
ACCT 343	Taxation for Corporations/Partnerships (4)
ACCT 345	Estate Planning, Gifts & Trust Taxation (3)

* Courses used to fulfill requirements in these sections may not also fulfill requirements in another emphasis or business program.

** This course is required each year/quarter when registered as a business major, up to a maximum of 2 credits (1 credit for the AS degree). The requirement may be lessened for transfer students.

*** This requirement may be met by completion of course or satisfactory performance on departmental waiver examination. The waiver option is available only to students with fewer than 75 credit hours or to transfer students if taken within their first year at Pacific Union College.

At least three courses and 4 hours from the following: 4
(Only one OFAD course may be applied)

INFS 144	PC Operating Systems (1)
INFS 148	PC Spreadsheets (1)
INFS 149	PC Databases (1)
OFAD 201	Word Processing (2)
OFAD 203	Word Perfect (2)

At least one of the following options: 4

MATH 131	Calculus I (4)
MATH 106	College Algebra (4) may be substituted for Calculus I if the student completes at least six additional hours from the following (only one COMM course may be applied):
COMM 328	Small Group Communication (3)
COMM 426	Argumentation (3)
PSYC 368	Principles of Counseling (4)
SOCI 232	American Social Problems (4)

► **Required Core Electives (1-4 hours):** 1-4*

Additional hours selected from ACCT, BUAD, ECON, FIN, INFS, MGMT, and MKTG courses to total at least 76 hours in the major.

Recommended Supporting Courses:

BUAD 118	Personal Money Management (3)
BUAD 223	Personal Law (2)
OFAD 116	Calculating Machines (1)

Major in Office Administration, A.S.

A minimum of 57 hours

► **Required Core Courses (50 hours):**

ACCT 114	Small Business Accounting	3
ACCT 121	Financial Accounting I	3
ACCT 122	Financial Accounting II	4
ACCT 123	Managerial Accounting	3
ARTD 253	Publication Technology	3
BUAD 223	Personal Law	2
BUAD 279	Business Communication/Data Presentation	3
BUAD 295/395	Colloquium/Distinguished Speaker Srs	1**
ECON 261	Macroeconomics	4
ECON 265	Microeconomics	4
ENGL 134	Review of English Syntax	1
INFS 144	PC Operating Systems	1
INFS 148	PC Spreadsheets	1
INFS 149	PC Databases	1
MATH 096	Intermediate Algebra (or equivalent)	0
MGMT 160	Small Business Management	3
MGMT 261	Introduction to Management	3
MGMT 328	Management Information Systems	3

Business Administration & Economics

OFAD 116	Calculating Machines	1
OFAD 121	Intermediate Keyboarding	2
OFAD 201	Word Processing	2
OFAD 203	Word Perfect	2

► **Required Core Electives (7 hours):**

Courses selected from ACCT, BUAD, ECON, FIN, INFS, MGMT, MKTG, and OFAD to total at least 57 hours in the major.

► **General-Education Requirements:**

The general-education requirements for the A.S. degree are listed in the section entitled “The Academic Program” in this catalog. ENGL 101 (College English), COMM 105 (Speech Communication), and PSYC 121 (General Psychology) are required for this A.S. degree and fulfill applicable general-education requirements.

Teaching Credential

Students interested in teaching business-related subjects at the secondary level should consult with their advisor in the Business Administration & Economics Department and with the credential analyst in the Education Department. They may generally take any bachelor’s degree program in business and the specific education courses required. They will then need to pass the PRAXIS and SSAT competency examinations to obtain the secondary teaching credential.

Minor in Business Administration

A minimum of 30 hours (9 upper-division hours)

► **Required Courses (18 hours):**

ACCT 121	Financial Accounting I	3
ACCT 122	Financial Accounting II	4
ACCT 123	Managerial Accounting	3
ECON 261	Macroeconomics	4
ECON 265	Microeconomics	4

► **Required Electives (12 hours):**

At least 12 hours (9 upper-division) from the following: 12
Additional ACCT, BUAD, ECON, FIN, INFS, MGMT, and MKTG courses.

Bachelor of Science in Management, B.S.M.

In harmony with its mission of excellence in Christian education, the Business Administration & Economics Department offers a quality academic program accessible to an adult student population through non-traditional formats, times, and locations in the region surrounding the college. The department cur-

rently offers the B.S.M. program in Napa and at the Clearlake campus of Yuba College.

The Bachelor of Science degree in Management builds on personal experience and previous college credit. The program is especially designed for working adult students. Classes meet one evening a week for four hours and are tailored for a mature, interactive learning style. The curriculum is a series of upper-division courses that take approximately 23 months to complete.

A minimum of 192 quarter credits, including 61 hours of upper-division credit, is required for obtaining a degree. Students enrolled in this program must maintain a cumulative GPA of 2.0 (C) or above.

Additional information about the Bachelor of Science in Management degree is available by contacting the Business Administration & Economics Department’s Degree Completion Program Office at (888) 311-4782 (toll free), (707) 965-6505, www.finishcollege.org, or by e-mail bsm@puc.edu.

To be admitted into the program, a student will typically have completed 60 transferable semester credits (90 quarter credits) of college work, will have at least two years of work experience, and will be at least 23 years old.

This major and these courses are available only through the Business Administration & Economics Department Degree Completion Program held off campus.

► **Core Requirements (61 hours)**

MGT 320	The Legal Environment of Business	4
MGT 330	Economics	4
MGT 340	Marketing	4
MGT 350	Data Presentation	2
MGT 375	Organizational Behavior	3
MGT 390	Organizations and Environments	3
MGT 410	Accounting	5
MGT 420	Management	4
MGT 430	Human Resource Management	4
MGT 450	Financial Management	5
MGT 480	International Business	4
MGT 491	Strategic Management	4
RELB 305	Biblical Perspectives	4
RELT 310	Ethics and Personal Values	4

At least 7 hours from the following:

MGT 434	Entrepreneurship (3)
MGT 456	Urban Planning (3)
MGT 460	Fiscal Administration (4)
MGT 477	Electronic Commerce (4)

General Education Program for Degree Completion

Since the majority of adult students in the degree completion program will be transferring nearly two thirds of their credits from other institutions, Pacific Union College has a modified general education program for these students. A total of 68 quarter hours of general education credit in seven different areas is required. 17 of these hours are met by core major requirements, and the remaining 51 hours are to be distributed as described below. Students must satisfy the minimum general education requirements prior to graduating.

All courses that are applied to the general education requirements must be approved by Pacific Union College. Articulation agreements with local community colleges define acceptable courses in other institutions that will meet Pacific Union College's general education requirements.

A description of the intents and purposes of each general education requirement area can be found in the section entitled "The Academic Program" in this catalog.

I. Foundations Of Learning (15 hours)

- A. *Rhetoric and College Writing (11):*
 - Two-course college English sequence 4-4
 - One public speaking course 3
- B. *Reasoning from Data (4):*
 - One introductory statistics course 4

II. History and Social Sciences (11 hours)

- A. *History (8):*
 - Two history courses 4-4
- B. *Social Sciences (3):*
 - Met by the core major requirements

III. Arts and Humanities (6 hours)

- A. *Literature*
- B. *Visual Arts History/Appreciation*
- C. *Music History/Appreciation*
 - One course each from two different areas listed above 3-3

IV. The Natural World (4 hours)

- A. *Intermediate Algebra (0):* 0
 - A full year of high school Algebra II (with grades of C- or higher) or an intermediate algebra course
 - This is a non-credit requirement
- B. *Science with Laboratory (4):* 4
 - One laboratory course in natural science
 - May be in astronomy, biology, chemistry, geology, physics, or a comparable area

V. Revelation, Belief, and Action (8 hours)

- A. *Studies in Religion (8):*
 - Met by the core major requirements

VI. Health and Fitness (2 hours)

- A. *Health (2):*
 - One course in nutrition or health education 2

VII. Practical and Applied Arts (0 hours)

The students in the B.S.M. program are independent working adults who have demonstrated their ability to succeed in the work world. Therefore this requirement is automatically met.

General Education Electives (22 hours) 16

Students must complete 22 quarter hours of general education electives (in addition to the specific requirements described above) in order to earn a total of 68 hours of general education coursework.

Six of these hours are met by core major requirements. The remaining 16 hours must be earned as described below:

- The electives must be distributed over at least four of the seven general education areas listed above and may not include more than ten quarter hours in any one area.
- The general education electives are to be chosen from the requirements for the Pacific Union College B.S./B.A. general education program. Options for each of the seven areas are listed in the section entitled "The Academic Program" in this catalog.

Accounting

LOWER-DIVISION COURSES:

ACCT 114 **3 S** **Small Business Accounting**

The accounting procedures and practices necessary for efficient and effective small business operation. Not applicable toward a baccalaureate major in the department. Credit may not be earned in both ACCT 114 and ACCT 391.

ACCT 121 **3 F, W** **Financial Accounting I**

Accounting practices and procedures needed in various types of ownership entities for financial reporting. No prior accounting knowledge necessary.

ACCT 122 **4 W, S** **Financial Accounting II**

A continuation of ACCT 121 with particular emphasis on the partnership and the corporate form of organization; income statement and balance sheet analysis. Three lectures and one laboratory per week. Prerequisite: ACCT 121.

ACCT 123 **3 S** **Managerial Accounting**

Use of accounting data for managerial planning, control, and decision-making. Particular emphasis on entities which produce a product. Prerequisite: ACCT 121.

UPPER-DIVISION COURSES:

ACCT 307 **3 W** **Government and Nonprofit Accounting**

Accounting principles and practices unique to state and local units, educational, health care, charity, religious, and other not-for-profit organizations. Financial reporting and record keeping. Prerequisite: ACCT 121, 122. Even years.

ACCT 311-312-313 **3-3-3 F-W-S** **Intermediate Accounting**

Accounting theory and practice relating to the valuation and presentation of assets, liabilities, net worth, revenue, and expense accounts. Prerequisites: ACCT 121, 122.

ACCT 321 **3 F** **Cost Accounting I**

Key concepts of cost planning and control. Includes c-v-p analysis, job costing, activity-based costing, budgeting and variances, cost behavior, strategic decision-making, and pricing. Prerequisites: ACCT 121, 122, 123; Recommended prerequisite: STAT 222.

ACCT 322 **3 W** **Cost Accounting II**

Key concepts of cost planning and control. Includes balanced scorecard, cost allocation, joint products, process costing, inventory, capital budgeting, transfer pricing, and performance measurement. Prerequisite: ACCT 121, 122, 123.

ACCT 341 **4 W** **Taxation for Individuals**

Federal income taxation and tax planning for individuals. Designed for non-majors as well as for business majors and minors.

ACCT 343 **4 S** **Taxation for Corporations and Partnerships**

Federal taxation and tax planning in relationship to corporations and partnerships. Even years.

ACCT 345 **3 F** **Estate Planning, Gifts and Trust Taxation**

Federal taxation and tax planning for gifts, estates, and trusts. Odd years.

ACCT 391 **2 S** **Accounting Systems in Small Businesses**

Setting up and maintaining accounting records for a variety of unincorporated businesses. Practice sets illustrate single-entry, double-entry, cash-basis, and hybrid cash-accrual-basis accounting systems; periodic financial statements, payroll, sales, and income-tax returns. Prerequisites: ACCT 121, 122.

ACCT 451 **3 S** **Advanced Accounting**

Specialized topics including partnerships, branches, consolidated statements, segment reporting. Recommended prerequisites: ACCT 311-312. Odd years.

ACCT 453 **5 W** **Auditing**

The internal independent auditor's functions; pronouncements of the American Institute of Certified Public Accountants. Prerequisites: ACCT 311-312-313; STAT 222, 322.

ACCT 461 **4 S** **Accounting Theory**

Survey of contemporary financial accounting theory. Emphasis on both current literature and official pronouncements. Prerequisites: ACCT 311-312-313.

ACCT 495 **1-3 F, W, S** **Independent Study**

Designed for students qualified to undertake an advanced and independent project. The project must be approved by the chair of the department. Repeatable to a maximum of 3 credits.

Business Administration

LOWER-DIVISION COURSES:

BUAD 118 3 F, W, S
Personal Money Management

Financial decisions facing individuals in society, including installment buying and borrowing, insurance, home ownership, saving, budgeting expenditures, investments, and trusts. Not available to business majors for business credit during the junior or senior year.

BUAD 200 0-1 F, W, S
Internship

Contract arrangement between student, faculty, and a cooperating organization or business that provides practical experience to tie in with the student's major. The internship may be taken for credit or no credit. Repeatable to a maximum of 2 credits towards a business major.

BUAD 223 2 F, S
Personal Law

Topics include dealing with an attorney, the court systems, crimes, torts, minors and the law, consumer law, landlord/tenant relationships, the legal responsibilities of owning a motor vehicle, employment relationships, and planning an estate. Not available to business majors for business credit during the junior or senior year.

BUAD 279 3 S
Business Communication and Data Presentation

Integrates presentation software with written and oral techniques for ethical communication in the business setting. Emphasis on effective presentation of a variety of documents. Recommended prerequisites: ENGL 102, COMM 105.

BUAD 295 0-.5 F, W, S
**Colloquium/
Distinguished Speaker Series**

Topics of current interest to business majors. Guest speakers and others will give presentations relating to their experiences, current business issues, and academic considerations. Issues relating to advising, research, and other Business Department activities will be part of the course. Meets a maximum of three times per quarter. Each business major must register for this course each quarter while enrolled at Pacific Union College. No grade or credit is given during the fall and winter quarters; the grade and credit for the year is given in the spring quarter. A total of .5 credits may be earned each year. Repeatable to a maximum of 2 credits towards a baccalaureate degree in business.

UPPER-DIVISION COURSES:

BUAD 300 0-1 F, W, S
Internship
(See description of BUAD 200.)

BUAD 325 3 F
Business Law I

A study of the legal system, with emphasis on common-law contracts, sales under Article II of the Uniform Commercial Code and negotiable instruments.

BUAD 326 3 W
Business Law II

The legal system in the United States, emphasizing agency relationships, business entities, government regulation and property.

BUAD 329 3 S
Fraud Examination

The principles of fraud detection and deterrence. Topics include the nature of fraud and the types of people who commit fraud, fraud investigation and types of fraudulent schemes, including a discussion of skimming, cash larceny, check tampering, register disbursement schemes, billing schemes, payroll and expense reimbursement schemes, non-cash misappropriations, corruption, and fraudulent financial statements. Odd years.

BUAD 335 4 F
Real Estate

The various aspects of real-estate principles, practices, and ownership. Preparation for the California licensing examination. Designed for the general student.

BUAD 371 3 F
Insurance and Risk Management

Recognition and evaluation of property, liability, and personal insurable risks facing a business firm, family, or other economic unit. Basic tools of risk management, loss prevention, selecting and dealing with an insurer and fire, marine, casualty, liability, life, and health insurance. Odd years.

BUAD 395 0-.5 F, W, S
**Colloquium/
Distinguished Speaker Series**
(See description of BUAD 295.)

BUAD 434 3 S
Entrepreneurship

A survey of what it takes to start and operate a business. Legal, managerial, accounting, marketing and financial aspects of getting a business up and running. Development of a business plan for startup. Even years.

Business Administration & Economics

BUAD 490 **1 F** **Seminar in Business**

A discussion of topics relating to the transition from student to worker, including personality typing, career choice, interviewing techniques, resume preparation, and interpersonal relations among supervisors, peers and subordinates. May be taken by sophomores with the permission of the instructor.

BUAD 493 **1-3 F, W, S** **Special Topics**

An enrichment course treating specific topics not normally covered in the department's Accounting, Business Administration, Economics, Finance, Information Systems, Management, Marketing, and Office Administration courses. A specific title is given to the course when it is taught. Repeatable for credit under different titles.

BUAD 495 **1-3 F, W, S** **Independent Study**

Designed for students who are qualified to undertake an advanced and independent project. The project must be approved by the chair of the department. Repeatable to a maximum of 3 credits.

Economics

LOWER-DIVISION COURSES:

ECON 261 **4 F, S** **Macroeconomics**

An analysis of the structure and functioning of the economy in the United States. Concepts and tools of economics are used to study how decisions of individuals, businesses, and governments relate to growth, income, employment, and inflation.

ECON 265 **4 W, S** **Microeconomics**

An economic analysis of the workings of the market system in the United States. The factors that determine prices, costs, elasticity, utility, demand, supply, and the factors of production (land, labor, capital) when monopoly and pure competition exist and when conditions between these two models of competition exist.

UPPER-DIVISION COURSES:

ECON 321 **3 S** **Managerial Economics**

Uses of primarily microeconomic theory in managerial decision-making. Prerequisite: ECON 265. Odd years.

ECON 332 **3 S** **Government and Business**

Government policies, regulations, and legislation that attempt to maintain competition in the economy and that affect the decisions and the operations of business organizations. Even years.

ECON 371 **3 W** **Money and Banking**

Money and the way it affects and is affected by central and commercial banking. Emphasis on the monetary policy of the Federal Reserve System. Prerequisite: ECON 261. Odd years.

ECON 457 **3 F** **International Economics**

Theory and principles of international trade and monetary and fiscal policies. Topics include comparative advantage, standard theory, H-O theory, imperfect competition, tariff and nontariff barriers, protectionism, and economic integration. Prerequisites: ECON 261, 265. Even years.

ECON 495 **1-3 F, W, S** **Independent Study**

Designed for students who are qualified to undertake an advanced and independent project. The project must be approved by the chair of the department. Repeatable to a maximum of 3 credits.

Finance

UPPER-DIVISION COURSES:

FIN 341 **5 F** **Finance**

Financial policies of corporations in the management of assets, liabilities, and owners' equity. Major topics include risk and return, time value of money, present value, capital budgeting, cost of capital, valuation, leverage, long-term financing, and working capital management. Prerequisites: ACCT 121, 122, 123; ECON 261, 265; INFS 148; STAT 222.

FIN 380 **3 S** **Capital Markets and Financial Institutions**

Evolution, structure, role, regulation and deregulation of financial institutions in the U.S. economy. Prerequisites: ECON 261, 265; FIN 341. Even years.

FIN 419 **3 W** **Personal Financial Planning**

Introduction to personal financial planning and its role in the financial services industry. Emphasis on developing, implementing, and monitoring personal financial plans. Credit may not be earned in BUAD 118 after FIN 419 is taken. Prerequisites: ACCT 341. Recommended prerequisite: FIN 341. Odd years.

FIN 436 **3 W**
Real Estate Finance

Principles and methods of investing and financing in real estate. Sources of funds, qualifications of investors, property analysis, and settlement procedures. Prerequisites: ECON 261. Odd years.

FIN 444 **3 S**
Investments

Investment alternatives and the development of rational objectives and investment philosophies. Topics include risks, returns, evaluation concepts, technical approaches, portfolio development, the efficient market hypothesis, and decisions relating to different types of investments. Recommended prerequisites: ECON 261, FIN 241 or 341. Even years.

FIN 457 **3 S**
International Finance

Financial management in the international environment. Includes coverage of the IMS, foreign exchange, futures and options markets, managing exposure, banking, direct foreign investment, political risk, import/export operations, and working capital management. Recommended prerequisite: FIN 341. Odd years.

FIN 463 **3 W**
Financial Planning and Forecasting

Planning and forecasting in financial management for business, government, and nonprofit organizations. Construction, analysis, and interpretation of financial plans. Prerequisite: FIN 341. Even years.

FIN 488 **3 W**
Problems in Finance

Study and discussion of selected topics in finance through readings and case studies. Topics include working capital management, capital budgeting, financing decisions, dividend policy, cost of capital, and capital structure decisions. Prerequisite: FIN 341. Even years.

FIN 495 **1-3 F, W, S**
Independent Study

Designed for students qualified to undertake an advanced and independent project. The project must be approved by the chair of the department. Repeatable to a maximum of 3 credits.

Information Systems

LOWER-DIVISION COURSES:

INFS 144 **1 W**
PC Operating Systems

An introduction to the Microsoft Windows family of operating systems for PC's. File and folder manipulation, terminology, disaster prevention and recovery, performance optimization, network commands, and other routine computer work functions.

INFS 148 **1 F, S**
PC Spreadsheets

Class/laboratory instruction in Microsoft Excel software for microcomputers, combining an electronic spreadsheet with graphics and a database system. Creating and modifying worksheets, graphs and macros.

INFS 149 **1 F, W**
PC Databases

Class/laboratory instruction in Microsoft Access database management software for microcomputers. Topics include creating, maintaining, modifying and querying a database, and generating reports and labels.

INFS 229 **3 W**
Business Programming

An introduction to event-driven programming in the Windows environment using Visual Basic .NET. Emphasis on building applications relevant to business. Odd years.

UPPER-DIVISION COURSES:

INFS 377 **3 F**
Electronic Commerce

Tools and technologies needed for participating in electronic commerce. Business opportunities, challenges, and strategies for leveraging the emerging national and global information infrastructure. Security, privacy, ethics, and business practices. Odd years.

INFS 380 **3 W**
Database Analysis and Design

Analysis and design of databases for business. File systems, database management functions, hierarchical, network, relational, and object-oriented data models. Normalization, SQL queries, entity-relationship diagramming. Issues in distributed databases and simultaneous access. Use of Corporate DBMS software. Prerequisite: INFS 149. Even years.

Business Administration & Economics

INFS 465 **3 F**

Fundamentals of Data Communication

Various methods of data communication: networking, telephony, communications hardware and software. Even years.

INFS 470 **4 S**

Management Science

Formal modeling approaches in managerial decision-making. Topics include linear programming, integer programming, decision-making under uncertainty, utility theory, queuing theory, Markov processes, network diagrams, and inventory models. Prerequisites: MATH 106, 130, or 131. Odd years.

INFS 482 **4 S**

Systems Analysis and Design

Concepts, skills, methodologies, techniques, tools, and perspectives essential for systems analysts to successfully develop information systems. Even years.

Management

LOWER-DIVISION COURSES:

MGMT 160 **3 W**

Small Business Management

Managerial considerations in owning and operating a small business. Not applicable toward a baccalaureate major or minor in the department.

MGMT 261 **3 S**

Introduction to Management

Introduction to management in profit and nonprofit institutions. Emphasis on the role of the manager. Not applicable toward a baccalaureate major or minor in the department.

UPPER-DIVISION COURSES:

MGMT 328 **3 S**

Management Information Systems

Basic concepts of using information systems in organizations; the role of data processing; fundamental design considerations. Odd years.

MGMT 361 **4 F, S**

Management

The basic concepts and theory of management with particular emphasis on planning, organizing, leading, and controlling.

MGMT 457 **3 S**

International Management

An analysis of problems encountered in operating businesses across national boundaries. Odd years.

MGMT 465 **3 W**

Organizational Behavior

Emphasis on the human aspects in organizations, including motivation, power, job enrichment, interpersonal and intergroup processes and relationships, perception, leadership, and organizational change and design.

MGMT 466 **3 F**

Business and Society

The environmental setting of business and its interdependence with other elements of the social order. An assessment of business involvement in urban, community, consumer, and environmental affairs.

MGMT 472 **3 F**

Human Resources Management

Contemporary objectives and problems relating to personnel management in organizations. Recruitment, selection, performance appraisal, training and development, supervision, compensation, pensions, grievances, and disciplinary actions. Odd years.

MGMT 473 **3 S**

Labor Law and Legislation

History and development of labor legislation, including analysis of leading court decisions. Historical background of labor-management relations, unfair labor practices of management and unions, collective bargaining, strikes and lockouts, the National Labor Relations Board, and labor legislation. Even years.

MGMT 481 **3 F**

Operations Management

Optimal approaches to the production of goods and services. Planning, scheduling, plant layout, production standards, quality, and cost controls. Even years.

MGMT 486 **3 S**

Supply Chain Management

Practices, problems and approaches related to purchasing in profit and nonprofit institutions. Sources of supply, market information, product specifications, inspection, control records, legal aspects of purchasing, and the interrelationships among purchasing, prices, quality control, and inventory control. Even years.

MGMT 491 **3 S**

Strategic Management

A capstone course integrating various functional areas of business and applying this knowledge to a study of business and institutional problems primarily through the case method. Should be taken during the senior year. Prerequisites: FIN 341; STAT 322; MGMT 361; MKTG 351.

MGMT 495 **1-3 F, W, S**

Independent Study

Designed for students qualified to undertake an advanced and independent project. The project must be approved by the chair of the department. Repeatable to a maximum of 3 credits.

Marketing

UPPER-DIVISION COURSES:

MKTG 351 Marketing 4 F, S

Marketing institutions and marketing decisions in relationship to the achievement of institutional goals. Management issues relating to product, price, promotion, and distribution; effects of marketing decisions on the environment and of the environment on marketing decisions.

MKTG 360 Consumer Behavior 3 W

The application of research findings and concepts from such academic disciplines as psychology, anthropology, sociology, economics, and marketing to consumer buying behavior. Even years.

MKTG 371 Marketing Research 3 S

Introduction to basic research concepts and techniques useful for determining information needs, conducting research, and making appropriate reports of research findings. Prerequisites: STAT 222, 322. Odd years.

MKTG 372 Retailing Management 3 S

The structure and environment in which retailing management occurs. Areas of special emphasis include operation of stores, merchandise decisions, layout, pricing, and promotion decisions. Even years.

MKTG 374 Advertising 3 F

The advertising function in profit and nonprofit enterprises from management's point of view. The purpose of advertising, media planning, budgeting for advertising, and an evaluation of the effectiveness of advertising.

MKTG 377 Sales Management 3 W

The role of the sales manager in planning, organizing, developing, directing, controlling, and evaluating the sales force. Personal selling is also emphasized. Odd years.

MKTG 417 Services Marketing 3 F

Application of marketing concepts and principles in service and nonprofit institutions. Identification and study of various constraints, clients, and publics; the special requirements, needs, and desires of those associated with and affected by the organization. Prerequisite: MKTG 351. Odd years.

MKTG 458 International Marketing 3 S

Problems and perspectives when marketing across national boundaries. Differences caused by cultural, social, institutional, political, and economic factors. Managerial emphasis on market entry strategies, monitoring and controlling marketing management functions in the international arena. Even years.

MKTG 481 Marketing Problems 3 W

Selected areas in marketing, illustrating practical solutions to situations likely to confront marketing managers. Emphasis on developing an understanding of marketing problems and developing approaches to effective decision-making in marketing. Should be taken during the senior year. Prerequisite: MKTG 351.

MKTG 495 Independent Study 1-3 F, W, S

Designed for students qualified to undertake an advanced and independent project. The project must be approved by the chair of the department. Repeatable to a maximum of 3 credits.

Office Administration

LOWER-DIVISION COURSES:

OFAD 111 Personal/Beginning Keyboarding 2 F, W

For beginners and reviewers. For beginners: touch-typing on the keyboard and document processing. For reviewers: emphasis on development of speed in both straight-copy and production work. Placement by waiver examination or first-week testing in class.

OFAD 116 Calculating Machines 1 F

Instruction and practice in improving speed and accuracy in the use of electronic display and printing calculators for business applications.

OFAD 121 Intermediate Keyboarding 2 W

Develops and enhances the typewriting skills of speed, accuracy and proof-reading for personal and vocational uses. Prerequisite: Keyboarding placement test with a speed of at least forty words per minute or OFAD 111. Offered on sufficient demand.

OFAD 201 Word Processing 2 F, S

Applications designed to increase knowledge of word processing concepts and working skills with the Microsoft Word software. One lecture and one laboratory per week.

OFAD 203 Word Perfect 2 W

Applications designed to increase knowledge of word processing concepts and working skills with the Word Perfect software. One lecture and one laboratory per week.

Business Administration & Economics

UPPER-DIVISION COURSE:

OFAD 495 **1-3 F, W, S** **Independent Study**

Designed for students qualified to undertake an advanced and independent project. Projects must be approved by the department chair. Repeatable to a maximum of 3 credits.

Degree Completion Courses: Management

The following courses are available only in the Bachelor of Science in Management (B.S.M.) curriculum, an off-campus degree-completion program.

UPPER-DIVISION COURSES:

MGT 320 **4** **The Legal Environment of Business**

Laws regulating business activities, principles governing contracts, negotiable instruments, sales of goods, agencies, partnerships, and corporations.

MGT 330 **4** **Economics**

The market system and the structure and functioning of the economy in the United States. Macroeconomics concepts, including growth, inflation, employment, interest rates, fiscal policy and monetary policy, supply, demand, and opportunity costs. Microeconomic concepts and tools are used to study market power (perfect competition, monopoly, monopolistic competition, and oligopoly), elasticity, income distribution, environment and other social areas.

MGT 340 **4** **Marketing**

Markets, consumer behavior, pricing, promotion, and distribution of products and services. Management issues related to enabling an organization profitably to acquire and satisfy customers and matching the wishes and desires of the customers with those of the organization.

MGT 350 **2** **Data Presentation**

Integrates preparation of charts, graphs, font selection, and computer-presentation software. Emphasis on effective presentation of documents.

MGT 375 **3** **Organizational Behavior**

Emphasis on group and individual behavior and their influence on each other and on an organization's effectiveness. Focus on human aspects in organizations, including leadership, groups, conflict, and decision-making.

MGT 390 **3** **Organizations and Environments**

The organization as an open system. Organizational diagnosis, using a systems approach, examines organizational structure, design, governing regulations that shape business operations, contingency theory, and the impact of the environment on organizational effectiveness.

MGT 410 **5** **Accounting**

How managers use accounting data in financial decision-making and in delineating alternative courses of action. Emphasis on both financial and managerial data and on preparing and using financial statements and reports.

MGT 420 **4** **Management**

Concepts and theory of management with emphasis on planning, organizing, staffing, motivation, and control. Within these areas, vision, mission and objectives of organizations are covered. Also included: motivational theories and their application to individual and group functioning in organizations.

MGT 430 **4** **Human Resource Management**

Objectives and problems relating to human resources management in public and private organizations. Includes recruitment, selection, performance appraisal, training and development, compensation, grievances, and discipline.

MGT 434 **3** **Entrepreneurship**

A survey of what it takes to start and operate a business. Legal, managerial, accounting, marketing, and financial aspects of getting a business up and running. Development of a business plan for startup. Prerequisites: MGT 320, 330, 340, 375, 390, 410, 420, 450,

MGT 450 **5** **Financial Management**

Principles of managing and controlling the finances of corporate enterprises. Includes financial institutions and markets, financial statement analysis, the time value of money, risk and return, cost of capital, valuation, capital budgeting, management of working capital, and financial planning. Prerequisites: MGT 330, 410.

MGT 456 **3**
Urban Planning

Ideological, political, legal, economic, social factors, and interest groups and how they interact with and effect planning for primality urban environments. Underlying forces for growth and change; who benefits and who loses. Includes legal and social issues in planning, housing, homelessness, traffic, zoning, urban renewal, economic development, energy planning, and land-use planning.

MGT 460 **4**
Fiscal Administration

Financial administration and activities of public agencies. Includes principles of public finance, budgeting, revenue sources (including tax structures), revenue forecasting, debt administration, and fund management. Prerequisite: MGT 450.

MGT 477 **4**
Electronic Commerce

Tools and technologies needed for participating in electronic commerce. Business opportunities, challenges, and strategies for leveraging the emerging national and global information infrastructure. Security, privacy, ethics, and business practices.

MGT 480 **4**
International Business

Introduction to and summary of doing business in the international marketplace. Includes globalization, political economy, trade theory, investment in foreign countries, and global monetary systems; and entry, organizational strategies and business operations in the global environment.

MGT 491 **4**
Strategic Management

A capstone course integrating knowledge and theories from a variety of business disciplines; applications to a study of organizational problems, primarily through the case study method. Prerequisites: MGT 320, 330, 340, 350, 375, 390, 410, 420, 430, 450.

The following required courses are general education courses and are taught by members of the Religion Department faculty.

RELB 305 **4**
Biblical Perspectives

Designed to foster knowledge and understanding of those historical concepts and themes of the Bible that relate most directly to effectiveness in business practices and public life.

RELT 310 **4**
Ethics and Personal Values

Examination of how personal values in business and public life are shaped by world views, ethics, and spiritual formation.

The following four Management Information Systems courses may be offered as option courses. These courses will only be offered if there is sufficient demand from students who have a prior working knowledge of computer operations and systems, and who have completed courses in both accounting and economics.

MGT 380 **3**
Database Analysis and Design

Analysis and design of databases for business. File systems; database management functions; hierarchical, network, relational, and object-oriented data models; normalization; SQL queries, entity-relationship diagramming. Explores issues in distributed databases and simultaneous access. Use of Oracle DBMS software.

MGT 482 **4**
Systems Analysis and Design

Concepts, skills, methodologies, techniques, tools, and perspectives essential for systems analysts to successfully develop information systems. Includes project identification and selection, project initiation and planning, analysis, logical design, physical design, implementation, and maintenance.

MGT 486 **3-5**
Information Systems Management

An overview of information systems in organizations. Strategic issues, organizational structure for information systems (IS), ethical and societal issues. Also included: hardware and software for business, data organization, telecommunications and networking, internet and intranet, and IS system types in various organizations. Variable credit depends on needs of a given class, not of an individual student.

MGT 487 **4**
Management Science

Quantitative methods for managerial decision-making. Includes linear programming, integer programming, decision-making under uncertainty, utility theory, waiting line and inventory models, simulation, transportation and assignment problems.



Faculty

Marie Pak, chair; Richard Clark, Kent Davis, Ray Rajagukguk
 Departmental Office: 355 Chan Shun Hall; 965-7597

Degrees and Programs

Chemistry, B.S.	75
Chemistry, B.A.	76
Chemistry, with an Emphasis in Biochemistry, B.S.	76
Natural Science, B.S.	76
Teaching Credential	77

The CHEMISTRY DEPARTMENT serves students with a primary interest in chemical science as well as students in other fields for which chemistry is an important foundation. The department has the following objectives:

- To give a thorough grounding in the principles of chemistry, both in theory and in practical experience with instrumentation currently in use.
- To help the student develop problem-solving abilities through a careful analysis of problems and the application of chemical principles.
- To provide an atmosphere where Christian values are integrated into the learning experience.

The department offers several degree options. For students intending to enter a graduate chemistry program or directly enter the profession, both the B.S. in Chemistry and the B.S. in Chemistry with a Biochemistry emphasis are suitable programs. Students who intend to enter a professional program in one of the medical sciences will find the B.S. in Chemistry with a Biochemistry emphasis provides a very good preparation. Students are encouraged to work closely with their major advisor to select suitable electives regardless of their career choice.

Students whose interests include the liberal arts and languages as well as chemistry may choose the B.A. in Chemistry. Those interested in a primary or secondary school teaching career may choose the B.S. in Natural Science.

Major in Chemistry, B.S.

A minimum of 88 hours (45 upper-division hours)

► Required Core Courses (53-54 hours):

CHEM 111-112-113	General Chemistry	5-5-5
CHEM 324	Analytical Chemistry I	3
CHEM 324L	Analytical Chemistry I Laboratory	2
CHEM 325	Analytical Chemistry II	3
CHEM 371-372-373	Organic Chemistry	4-4-4
CHEM 373L	Adv. Organic Chemistry Laboratory	1
CHEM 396	Seminar (4 quarters)	.5-.5-.5-.5
CHEM 414	Inorganic Chemistry	3
CHEM 451-452-453	Physical Chemistry	3-3-3
CHEM 499	Introduction to Research	1

At least two of the following courses: 2-3

CHEM 325L	Analytical Chemistry II Laboratory (1)
CHEM 450L	Physical Chemistry Laboratory (1)
CHEM 482L	Biochemistry II Laboratory (2)

► Required Core Electives (6-7 hours):

At least 6-7 hours from the following: 6-7

(To be selected in consultation with the major advisor.)

Additional upper-division CHEM courses

► Required Cognate Courses (28 hours):

MATH 131-132-133	Calculus I-II-III	4-4-4
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One of the following sequences: 4-4-4

PHYS 111-112-113	General Physics (4-4-4)
PHYS 211-212-213	Physics with Calculus (4-4-4)

At least one of the following courses: 4

MATH 265	Elementary Linear Algebra (4)
MATH 267	Multivariable Calculus (4)
MATH 269	Elementary Differential Equations (4)
MATH 375	Numerical Analysis (4)

Recommended Cognate Courses:

CPTR 115	Intro. to Computer Programming (4)
PHYS 314	Elementary Modern Physics (4)

Chemistry

Major in Chemistry, B.A.

A minimum of 69 hours (34 upper-division hours)

► Required Core Courses (49-50 hours):

CHEM 111-112-113	General Chemistry	5-5-5
CHEM 324	Analytical Chemistry I	3
CHEM 324L	Analytical Chemistry I Laboratory	2
CHEM 325	Analytical Chemistry II	3
CHEM 371-372-373	Organic Chemistry	4-4-4
CHEM 373L	Adv. Organic Chemistry Laboratory	1
CHEM 396	Seminar (4 quarters)	.5-.5-.5-.5
CHEM 414	Inorganic Chemistry	3
CHEM 451-452	Physical Chemistry	3-3

At least two of the following courses: 2-3

CHEM 325L	Analytical Chemistry II Laboratory (1)
CHEM 450L	Physical Chemistry Laboratory (1)
CHEM 482L	Biochemistry II Laboratory (2)

► Required Cognate Courses (20 hours):

MATH 131-132	Calculus I-II	4-4
PHYS 111-112-113	General Physics	4-4-4

Recommended Cognate Courses:

CPTR 115	Intro. to Computer Programming (4)
MATH 133	Calculus III (4)
PHYS 314	Elementary Modern Physics (4)

Major in Chemistry with an Emphasis in Biochemistry, B.S.

A minimum of 95 hours (45 upper-division hours)

► Required Core Courses (55 hours):

CHEM 111-112-113	General Chemistry	5-5-5
CHEM 324	Analytical Chemistry I	3
CHEM 324L	Analytical Chemistry I Laboratory	2
CHEM 371-372-373	Organic Chemistry	4-4-4
CHEM 373L	Adv. Organic Chemistry Laboratory	1
CHEM 381	Biochemistry I	4
CHEM 396	Seminar (4 quarters)	.5-.5-.5-.5
CHEM 451-452	Physical Chemistry	3-3
CHEM 480	Information Metabolism	3
CHEM 482	Biochemistry II	4
CHEM 482L	Biochemistry II Laboratory	2

At least one of the following courses: 1

CHEM 325L	Analytical Chemistry II Laboratory (1)
CHEM 450L	Physical Chemistry Laboratory (1)

► Required Core Electives (5 hours):

At least 5 hours from the following: 5

(To be selected in consultation with the major advisor.)

BIOL 320	Cellular and Molecular Biology (4)
Additional upper-division CHEM courses	

► Required Cognate Courses (35 hours):

BIOL 111-112-113	Biological Foundations	5-5-5
MATH 131-132	Calculus I-II	4-4
PHYS 111-112-113	General Physics	4-4-4

Pre-medical and pre-dental students:

See advisor for recommended cognates.

Major in Natural Science, B.S. Chemistry Emphasis

A minimum of 100 hours (40 upper-division hours)

This major provides appropriate preparation for teaching science at the secondary level. The core requirement of 65 quarter hours of course work corresponds to science subjects commonly taught in California public schools, and the emphasis treats the subject matter at a depth more than adequate for teaching the higher secondary science courses in chemistry. Emphases may also be obtained in biology or physics. For further information, see the sections entitled "Biology" and "Physics" in this catalog.

► Required Core Courses (65 hours):

ASTR 115	Astronomy	5
ASTR 173	Meteorology	1
BIOL 111-112-113	Biological Foundations	5-5-5
BIOL 331	Marine Science	4
BIOL 450	Philosophy of Origins	3
CHEM 111-112-113	General Chemistry	5-5-5
GEOL 233	Geology	4
PHYS 390	History and Philosophy of Science	3

At least one of the following courses: 3

ENVR 360	Conservation Biology (3)
ENVR 361	Energy and Climate Change (3)
ENVR 362	Pollution and Environmental Quality (3)

One of the following sequences: 4-4-4

PHYS 111-112-113	General Physics (4-4-4)
PHYS 211-212-213	Physics with Calculus (4-4-4)

Chemistry Emphasis (35 hours)

► Required Core Courses (27 hours):

CHEM 324	Analytical Chemistry	3
CHEM 324L	Analytical Chemistry Laboratory	2

CHEM 371-372-373	Organic Chemistry	4-4-4
CHEM 373L	Adv. Organic Chemistry Laboratory	1
CHEM 381	Biochemistry	4
CHEM 396	Seminar (4 quarters)	.5-.5-.5-.5
CHEM 451	Physical Chemistry	3

► **Required Cognate Courses (8 hours):**

MATH 131-132	Calculus I-II	4-4
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Teaching Credential

Students desiring to enter a program of studies leading to a California teaching credential in science with a concentration in chemistry may take the B.S. degree in Natural Science, Chemistry Emphasis. Students will need to pass the science (chemistry concentration) portion of the CSET exam one quarter prior to doing full-time student teaching. Students are invited to discuss the program with their major advisor in the Chemistry Department.

Those who plan to teach on the secondary level should consult with the credential analyst in the Education Department and should become acquainted with the specific requirements for admission to and successful completion of the Teacher Education Program as outlined in the section entitled "Education" in this catalog.

Minor in Chemistry

A minimum of 30 hours (15 upper-division hours)

► **Required Courses (20 hours):**

CHEM 111-112-113	General Chemistry	5-5-5
CHEM 324	Analytical Chemistry I	3
CHEM 324L	Analytical Chemistry I Laboratory	2

► **Required Electives (10 hours):**

<i>At least 10 hours from the following:</i>	10
Additional upper-division CHEM courses	

Chemistry

SERVICE COURSES:

(Not applicable to a major or minor in this department)

CHEM 101 **4 F**
Introductory Chemistry

An elementary introduction to fundamental principles of chemistry. Primarily for students preparing to enter an allied health or related field or to enroll in CHEM 102 and 111. Three lectures and one laboratory per week. Prerequisite: Secondary-school Algebra I or MATH 019.

CHEM 102 **4 W**
Survey of Organic Chemistry

The important classes of organic compounds. Emphasis is given to topics related to the health sciences and biochemistry. Three lectures and one laboratory per week. Prerequisite: Secondary-school chemistry or CHEM 101.

CHEM 103 **4 S**
Survey of Biochemistry

The chemistry of living organisms emphasizing the normal processes occurring in the human body. Three lectures and one laboratory per week. Prerequisite: CHEM 102.

LOWER-DIVISION COURSES:

CHEM 111-112-113 **5-5-5 F-W-S**
General Chemistry

A complete introduction to the fundamental principles of chemistry. Includes the following topics: atomic and molecular orbital theory, stoichiometry, gas laws, thermodynamics, kinetics, chemical equilibrium, acid-base theory, pH and introductions to nuclear, inorganic, and organic chemistry. Intended for chemistry majors and preprofessional students in medicine, dentistry and other technical fields. Must be taken in sequence. Four lectures and one laboratory per week. Prerequisites: Algebra II or MATH 106. A score of 19 on the mathematics section of the ACT (or 500 on the SAT)

is expected. High school chemistry (or CHEM 101) and physics are highly recommended. A grade of C- or above is required for continuing in general chemistry each quarter.

UPPER-DIVISION COURSES:

CHEM 324 **3 F**
Analytical Chemistry I

The quantitative study of chemical reactions occurring in the aqueous phase, including solubility, acid base equilibria and complex formation. Methods of data recording and manipulation, error analysis and statistical treatment of data are also included. Prerequisite: CHEM 113.

CHEM 324L **2 W**
Analytical Chemistry I Laboratory

A series of laboratory experiments to determine unknown quantities of selected chemical substances. The chemical principles in CHEM 324 are reiterated; emphasis, however, is on laboratory technique. Six hours laboratory per week. Prerequisite: CHEM 324.

Chemistry

CHEM 325 **3 S** **Analytical Chemistry II**

The theoretical basis of chemical analysis using electrochemical, spectrophotometric and chromatographic methods. Introduction to principles of operation of current analytical instrumentation. Prerequisites: CHEM 324L, 373, MATH 132. Strongly recommended corequisite: CHEM 325L. Odd years.

CHEM 325L **1 S** **Analytical Chemistry II Laboratory**

Laboratory coordinated with CHEM 325. Prerequisite or corequisite: CHEM 325. Odd years.

CHEM 344 **3 S** **Nuclear Physics and Chemistry**

Radioactivity, properties of radioactive nuclei, nuclear structure, nuclear reactions, and nuclear fission with applications to the cosmos. Prerequisites: CHEM 113, MATH 132, and PHYS 113.

CHEM 371-372 **4-4 F-W** **Organic Chemistry**

The physical and chemical properties of compounds of carbon. A mechanistic approach to the study of organic reactions with an emphasis on spectroscopic methods of analysis. Must be taken in sequence. Three lectures and one laboratory per week. Prerequisite: CHEM 113.

CHEM 373 **4 S** **Organic Chemistry**

A continuation of CHEM 372 and an introduction to biochemistry (carbohydrates, proteins, and lipids). Prerequisite: CHEM 372. Corequisite: 373L required of all chemistry majors.

CHEM 373L **1 S** **Adv. Organic Chemistry Laboratory**

Laboratory coordinated with CHEM 373. Required of all chemistry majors.

CHEM 381 **4 F** **Biochemistry I**

An introduction to the chemistry of

biologically-relevant molecules. Includes attention to biological oxidations, energy relationships, and enzyme kinetics. Prerequisite: CHEM 373.

CHEM 396 **.5 F, W, S** **Seminar**

(See also BIOL 396, CPTR 396, ENVR 396, PHYS 396)

Single topics of current interest in the natural sciences are presented by guest lecturers. Student must be on time and attend all five course sessions. Prerequisite: CHEM 373. Enrollment limited to upper-division students. Repeatable to a maximum of 2 credits. Graded S/F.

CHEM 414 **3 S** **Inorganic Chemistry**

A systematic study of inorganic chemistry with emphasis on chemical theory and bonding, the descriptive chemistry of the elements, and transition-metal chemistry. Prerequisite: CHEM 372, MATH 132. Even years.

CHEM 450L **1 W, S** **Physical Chemistry Laboratory**

Laboratory activities exploring aspects of thermodynamics, kinetics, quantum chemistry, and spectroscopy. Prerequisite or corequisite: CHEM 451, 452 or 453

CHEM 451 **3 F** **Physical Chemistry: Thermodynamics**

The laws of thermodynamics and their application to chemistry. Prerequisites: CHEM 113, MATH 131, and PHYS 113.

CHEM 452 **3 W** **Physical Chemistry: Dynamics**

Kinetic theory, chemical kinetics, including enzyme kinetics, transport properties. Introduction to the basic ideas of quantum mechanics. Prerequisites: CHEM 113, MATH 132, and PHYS 113.

CHEM 453 **3 S** **Physical Chemistry: Structure**

An introduction to the Schrödinger wave equation with applications to

chemical systems and spectroscopy. Prerequisite: CHEM 452.

CHEM 474 **3 W** **Organic Theory and Reaction Mechanisms**

A mechanistic approach to the study of selected topics in organic chemistry, such as orbital symmetry, molecular rearrangements, linear free energy relationships, and photochemistry. Prerequisite: CHEM 373. Even years.

CHEM 480 **3 W** **Information Metabolism**

The signaling processes of cells, including the structure and function of signaling molecules. Includes the mechanism of signal processing, coordination by information transducing pathways, and consequences of signaling pathway defects. Prerequisite: CHEM 381.

CHEM 482 **4 S** **Biochemistry II**

The intermediary metabolism of carbohydrates, lipids and proteins, and an introduction to the replication and transmission of genetic information. Prerequisite: CHEM 381. Corequisite: CHEM 482L required of students taking the biochemistry emphasis.

CHEM 482L **2 S** **Biochemistry II Laboratory**

Laboratory discussions and activities introducing the basic experimental techniques of biochemistry. One lecture and one laboratory per week.

CHEM 499 **1-2 F, W, S** **Introduction to Research**

A directed research project intended to acquaint students with research problems of current interest. A suitable problem is undertaken with the direction of the faculty. Open to upper-division majors in chemistry and, by permission, to other upper-division students. Repeatable to a maximum of 4 credits in Bachelor of Science curricula.



Faculty

Michelle Rai, chair; Rosemary Collins, Tammy McGuire, Lynne Thew, Patrick Vogelpohl

Departmental Office: 327 Irwin Hall; 965-6437

Degrees and Programs

Communication, B.S.....	79
Communication, B.A.....	80
Intercultural Communication, B.A.....	80
Speech Pathology (affiliated program)	82

The COMMUNICATION DEPARTMENT serves the communication needs of students in every department, offering instruction in a variety of communication skills and principles that apply in mass media, public speaking, small group, and interpersonal settings. The department provides curricula leading to a variety of communication-related careers, with specific preparation for careers in public relations, journalism, intercultural communication and speech pathology. Communication courses also provide valuable learning opportunities for those preparing for careers which incorporate public speaking, such as business, law, medicine, pastoral or evangelistic ministry, broadcasting, and others.

Major in Communication, B.S.

A minimum of 71 hours (39 upper-division hours)

► Required Core Courses (23 hours):

COMM 134	Mass Media Communication	3
COMM 223	Interpersonal Communication	3
COMM 226	Public Speaking	3
COMM 330	Intercultural Communication I	3
COMM 424	Communication Research I	2
COMM 425	Communication Research II	2
COMM 450	Senior Seminar in Communication Disciplines	2
JOUR 141	Newswriting and Reporting	3
JOUR 244	Copyediting	2

► Emphases (choose one):

1. Communication Studies Emphasis (48 hours)

► Required Emphasis Courses (26 hours):

COMM 225	Oral Interpretation	3
COMM 328	Small Group Communication	3
COMM 329	Organizational Communication	3
COMM 423	Communication Theory	2
COMM 426	Argumentation	3
COMM 427	Persuasive Communication	3
COMM 494	Communication Internship	3
JOUR 434	Media Law and Ethics	3
PREL 231	Public Relations I: Introduction	3

► Required Emphasis Electives (17 hours):

At least 17 hours from the following (8 upper-division):	17
Additional non-service COMM, PREL, or JOUR courses	
DRMA 229	Fundamentals of Dramatic Performance (3)

► Required Cognate Courses (5 hours):

ARTD 253	Publication Technology	3
RELT 330	The Christian and the Media	2

Communication

2. Journalism Emphasis (49 hours)

► Required Emphasis Courses (35 hours):

COMM 328	Small Group Communication	3
COMM 329	Organizational Communication	3
COMM 340	Visual Communication & Semiotics	3
COMM 423	Communication Theory	2
JOUR 242	Photojournalism	3
JOUR 341	Advanced Newswriting	3
JOUR 434	Media Law and Ethics	3
JOUR 443	Investigative Reporting	3
JOUR 494	Journalism Internship	3
PREL 231	Public Relations I: Introduction	3
PREL 350	Promotional Writing for the Media	3

At least one of the following courses:

COMM 426	Argumentation (3)	3
COMM 427	Persuasive Communication (3)	3

► Required Emphasis Electives (6 hours):

At least 6 hours from the following: 6
Additional upper-division COMM, PREL, or JOUR courses

► Required Cognate Courses (8 hours):

ARTD 253	Publication Technology	3
ARTP 241	Photography	3
RELT 330	The Christian and the Media	2

3. Public Relations Emphasis (49-50 hours)

► Required Emphasis Courses (35 hours):

COMM 328	Small Group Communication	3
COMM 329	Organizational Communication	3
COMM 340	Visual Communication & Semiotics	3
COMM 423	Communication Theory	2
JOUR 434	Media Law and Ethics	3
PREL 231	Public Relations I: Introduction	3
PREL 232	Public Relations II: Applications and Crises	3
PREL 337	Fundraising for Non-Profits	3
PREL 339	Public Relations III: Campaigns and Practices	3
PREL 350	Promotional Writing for the Media	3
PREL 494	Public Relations Internship	3

At least one of the following courses:

COMM 426	Argumentation (3)	3
COMM 427	Persuasive Communication (3)	3

► Required Emphasis Electives (6 hours):

At least 6 hours from the following: 6
Additional upper-division COMM, PREL, or JOUR courses

► Required Cognate Courses (8-9 hours):

ARTD 253	Publication Technology	3
RELT 330	The Christian and the Media	2
At least one of the following courses: 3-4		
MKTG 351	Marketing (4)	
MKTG 360	Consumer Behavior (3)	
MKTG 374	Advertising (3)	

Major in Communication, B.A.

A minimum of 60 hours (37 upper-division hours)

► Required Core Courses (23 hours):

COMM 134	Mass Media Communication	3
COMM 223	Interpersonal Communication	3
COMM 226	Public Speaking	3
COMM 330	Intercultural Communication I	3
COMM 424	Communication Research I	2
COMM 425	Communication Research II	2
COMM 450	Senior Seminar in Communication Disciplines	2
JOUR 141	Newswriting and Reporting	3
JOUR 244	Copyediting	2

► Required Major Courses (26 hours):

COMM 225	Oral Interpretation	3
COMM 328	Small Group Communication	3
COMM 329	Organizational Communication	3
COMM 423	Communication Theory	2
COMM 426	Argumentation	3
COMM 427	Persuasive Communication	3
COMM 494	Communication Internship	3
JOUR 434	Media Law and Ethics	3
PREL 231	Public Relations I: Introduction	3

► Required Major Electives (6 hours):

At least 6 hours from the following: 6
Additional upper-division COMM, PREL, or JOUR courses

► Required Cognate Courses (5 hours):

ARTD 253	Publication Technology	3
RELT 330	The Christian and the Media	2

Major in Intercultural Communication, B.A.

A minimum of 85 hours (44 upper-division hours)

► Required Core Courses (23 hours):

COMM 134	Mass Media Communication	3
COMM 223	Interpersonal Communication	3
COMM 226	Public Speaking	3

COMM 330	Intercultural Communication I	3
COMM 424	Communication Research I	2
COMM 425	Communication Research II	2
COMM 450	Senior Seminar in Communication Disciplines	2
JOUR 141	Newswriting and Reporting	3
JOUR 244	Copyediting	2

► **Required Major Courses (11 hours):**

COMM 430	Intercultural Communication II	2
PREL 337	Fundraising for Non-Profits	3

At least one of the following courses: 3

COMM 328	Small Group Communication (3)	
COMM 329	Organizational Communication (3)	

At least one of the following courses: 3

COMM 426	Argumentation (3)	
COMM 427	Persuasive Communication (3)	

► **Required Major Electives (3 hours):**

Additional upper-division COMM, JOUR, or PREL courses 3

► **Required Cognate Courses (24-25 hours):**

ANTH 124	Cultural Anthropology	4
HIST 101-102	History of World Civilizations	4-4
RELH 311	World Religions	3
SOCI 355	“Racial” and Ethnic Relations	3

At least one of the following courses: 3-4

MGMT 361	Management (4)	
MGMT 457	International Management (3)	

At least one of the following courses: 3

GEOG 210	World Regional Geography (3)	
GEOG 220	Geography of the Americas (3)	
PLSC 328	Critical World Issues (3)	
PLSC 485	Foreign Relations of the United States (3)	

► **Emphases (choose one):**

1. French Emphasis (24 hours)

At least 24 hours of intermediate- and advanced-level French (including at least 12 upper-division hours) at an approved international French-language institution (typically Séminaire Adventiste du Salève, Collonges, France).

2. German Emphasis (24 hours)

At least 24 hours of intermediate- and advanced-level German (including at least 12 upper-division hours) at an approved international German-language institution (typically Seminar Schloss Bogenhofen, Austria, or Friedensau Adventist University, Germany).

3. Italian Emphasis (24 hours)

At least 24 hours of intermediate- and advanced-level Italian (including at least 12 upper-division hours) at an approved international Italian language institution (typically Instituto Adventista Villa Aurora, Italy).

4. Spanish Emphasis (24 hours)

At least 12 hours from the following: 12

SPAN 367	Spanish and Latin American Culture & Civ. (4)	
SPAN 382	Applied Spanish Linguistics (4)	
SPAN 385	Business Spanish (4)	
SPAN 440	Spanish and Latin American Film (4)	
SPAN 441	Readings in Spanish Literature (4)	
SPAN 442	Readings in Latin American Literature (4)	

At least 12 hours from the following: 12

Upper-division Spanish courses at an approved international Spanish-language institution (typically Colegio Adventista de Sagunto, Spain; or at Universidad Adventista del Plata, Villa Libertador St. Martín, Argentina).

Minor in Communication

A minimum of 30 hours (12 upper-division hours)

► **Required Courses (17 hours):**

COMM 223	Interpersonal Communication	3
COMM 330	Intercultural Communication	3
COMM 423	Communication Theory	2

At least one of the following courses: 3

COMM 225	Oral Interpretation (3)	
COMM 226	Public Speaking (3)	

At least one of the following courses: 3

COMM 328	Small Group Communication (3)	
COMM 329	Organizational Communication (3)	

At least one of the following courses: 3

COMM 426	Argumentation (3)	
COMM 427	Persuasive Communication (3)	

► **Required Electives (13 hours):**

At least 13 hours from the following (1 upper-division): 13

Additional non-service COMM, JOUR or PREL courses	
DRMA 229	Fundamentals of Dramatic Performance (3)

Minor in Public Relations/Journalism

A minimum of 30 hours (12 upper-division hours)

► **Required Courses (11 hours):**

COMM 134	Mass Media Communication	3
JOUR 141	Newswriting and Reporting	3

Communication

JOUR 244	Copyediting	2
PREL 231	Public Relations I: Introduction	3
<p>► <i>Required Electives (19 hours):</i> <i>At least 19 hours from the following (12 upper-division):</i> 19</p>		
Any PREL or JOUR course		
ARTD 253	Publication Technology (3)	
ARTP 241	Photography (3)	
COMM 340	Visual Communication & Semiotics (3)	
COMM 427	Persuasive Communication (3)	
COMM 450	Senior Seminar in Comm. Disciplines (2)	

Speech Pathology

Pacific Union College offers a preprofessional program in Speech Pathology which is affiliated with the School of Allied Health at Loma Linda University. The Speech Pathology faculty at LLU provide regular assistance and counseling to students interested in this program.

The first two years of a baccalaureate degree in Speech Pathology, taken on the Pacific Union College campus, include the following course:

SPPA 164	Introduction to Speech Pathology	4
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Approved courses in general education complete the preprofessional curriculum.

Communication

SERVICE COURSE:

(Not applicable to a major or minor in this department)

COMM 105 3 F, W, S Speech Communication

Develops skills in oral communication, surveys the human communication process, and encourages responsible speaking and listening. Focuses on intrapersonal, interpersonal, small group, and public communication. Enrollment limited to freshmen who are not taking a major within the Communication Department. (All other students see COMM 226.)

LOWER-DIVISION COURSES:

COMM 134 3 F Mass Media Communication

The academic discipline and career opportunities currently available in the context of mass media. Based on the transactional model of communication. Includes the study of the ways in which advertising, public relations, and research contribute to the accurate transmission of mass media messages. Designed to be taken in the freshman year.

COMM 223 3 F Interpersonal Communication

Transactional nature of interpersonal communication, including the roles of both verbal and nonverbal communication, empathic listening, and self-disclosure as means of building trusting relationships and developing rhetorical sensitivities.

COMM 225 3 W Oral Interpretation

Skills in reading aloud from prose, poetry, plays, and expository material. Emphasis on developing the ability to create and sustain mood and on learning the various methods of creating meaning through vocal expression. Even years.

COMM 226 3 F, W, S Public Speaking

Composing speeches and delivering them before groups. Enrollment limited to sophomores, juniors, and seniors. Freshmen taking a major within the Communication Department may also enroll.

UPPER-DIVISION COURSES:

COMM 328 3 S Small Group Communication

Effective use of communication in

small groups; analysis of the nature of group productivity, cohesiveness, and leadership; group problem-solving within various contexts.

COMM 329 3 F Organizational Communication

Communication problems and variables unique to the organizational environment. Current and traditional theories are reviewed and applied to various communication studies.

COMM 330 3 W Intercultural Communication I

Variables and effects of both verbal and nonverbal communication between cultures. Practical applications for careers in all communication fields (domestic and international), business, international relations, international relief and development, language-translation, foreign affairs, social work, and education.

COMM 340 3 S Visual Communication and Semiotics

The visual, symbolic, classificatory, and meaning-making practices at the heart of all cultural production, consumption, and communication.

COMM 423 **2 W**
Communication Theory

Conceptual foundation for studying the human communication process. Includes types of theories and models used in communication research. Explores variables relevant to human communication behavior. Applies theory to the scientific method in communication research. Prerequisites: COMM 134, 223.

COMM 424 **2 W**
Communication Research I

Planning communication research, designing research instruments, and writing a research plan. Includes overview of ethical issues involved in research. Intended for graduating seniors.

COMM 425 **2 S**
Communication Research II

Implementing a communication research plan, survey techniques, tabulation procedures, and simple statistical tests. Includes interpreting survey results, as well as writing and presenting research in a professional, ethical, and credible fashion. Prerequisite: COMM 424, STAT 222.

COMM 426 **3 S**
Argumentation

Logical reasoning, fallacies in reasoning, the structure of arguments, and methods of analyzing and evaluating arguments for critical decision making. Emphasis includes both oral and written arguments.

COMM 427 **3 S**
Persuasive Communication

Rhetorical principles of ethical persuasion in public speaking, interpersonal relationships, public relations, and advertising. Development of skills in logical argument, emotive influence, and psychological appeal and in achieving source credibility. Odd years.

COMM 430 **2 S**
Intercultural Communication II

Moves beyond the survey of intercultural communication concepts to incorporate primary research and theory frameworks from the field of communication. Employs a case-study format to integrate political science, history, anthropology, world religions, and business management with communication theory and practice. Prerequisite: COMM 330.

COMM 450 **2 W**
Senior Seminar in Communication Disciplines

Capstone course emphasizing professional skills, ethics, creation of portfolio, and career planning.

COMM 490 **1-3 S**
Issues in Communication

Study of a specific issue in an area of communication such as rhetoric and public address, small group communication, interpersonal communication, intercultural communication, organizational communication, journalism, public relations, and the Christian and the media. Repeatable for credit under different subtitles.

COMM 494 **3 F, W, S, Su**
Communication Internship

Supervised work experience in a communication-related environment. Skills in the practice of communication are used. Enrollment limited to department majors. Advance approval of the department required. May not be taken before the end of the sophomore year. Prerequisites: COMM 134, 226; JOUR 141; PREL 231. Qualifies for IP grading.

COMM 495 **1-3 F, W, S, Su**
Independent Study

Opportunity for the advanced student to investigate special interests under the direction of departmental faculty.

Journalism

LOWER-DIVISION COURSES:

JOUR 141 **3 S**
Newswriting and Reporting

Gathering information and writing news stories for mass-media news audiences.

JOUR 242 **3 S**
Photojournalism

Application of photography to specific problems of the journalist or public relations officer; using images to give graphic impact to news and feature stories; processing and editing of pictures taken by the student. Prerequisite: ARTP 241.

JOUR 244 **2 W**
Copyediting

An overview of the basic tools and tasks of copyeditors, including rewriting, editing, correcting grammar, using *The Associated Press Stylebook*, creating style sheets, and methods of querying authors. Students learn to edit using conventional marks and symbols, apply the appropriate level of copyediting, eliminate bias, and ensure consistency.

UPPER-DIVISION COURSES:

JOUR 341 **3 W**
Advanced Newswriting

Instruction and experience in advanced reporting and nonfiction writing. Development of article ideas, query letters, writing styles, structure and organization of material, copyright, and databases. Honing of skills as interviewers and observers of daily life. The student is required to submit an article for publication. Prerequisites: JOUR 141, JOUR 242, JOUR 244. Even years.

Communication

JOUR 434 **3 S** **Media Law and Ethics**

Current issues involving personal rights and corporate responsibilities as related to concepts of free speech and responsible journalism.

JOUR 443 **3 F** **Investigative Reporting and Writing**

Tools, techniques, and skills for conducting journalistic investigations, with an emphasis on ethics, research development of sources, and interviews. Examines the use of public records and “the paper trail” to document complex issues. Assignments include developing and writing a significant, accurate, and comprehensive investigative news story. Prerequisites: JOUR 141, 242, 244. Odd years.

JOUR 494 **3 F, W, S, Su** **Journalism Internship**

Supervised opportunity for the student to accrue direct experience in a professional journalistic setting as approved by the department. Enrollment restricted to department majors. Prerequisites: JOUR 141, 244; PREL 231, 232; ARTD 253. Qualifies for IP grading.

JOUR 495 **1-3 F, W, S, Su** **Independent Study**

Offers the advanced student opportunity to pursue investigation in fields of special interest under the direction of departmental faculty.

Public Relations

LOWER-DIVISION COURSES:

PREL 231 **3 W** **Public Relations I: Introduction**

Fundamental values and procedures of the public-relations profession. Research techniques, communication theory,

public relations management, writing, and media relations.

PREL 232 **3 S** **Public Relations II: Applications and Crises**

Applications of public relations to specific publics including employees, multicultural communities, consumers, and government. Management of public relations in crises; exploiting public relations opportunities created by crisis situations. Prerequisite: PREL 231.

UPPER-DIVISION COURSES:

PREL 337 **3 S** **Fundraising for Non-Profits**

Philosophy of philanthropic giving and the techniques that lead to successful fundraising. Creation of a writing portfolio including: case statement, direct mail letter, brochure, grant proposal, and press release. Regular guest presentations from fundraising professionals.

PREL 339 **3 F** **Public Relations III: Campaigns and Practices**

The media of public relations and their incorporation into an integrated marketing communications plan, including the elements, development, and structuring of the plan. Prerequisite: PREL 232.

PREL 350 **3 W** **Promotional Writing for the Media**

Principles of and practice in journalistic writing for the electronic and printed media with emphasis on appropriate media selection and usage. Consideration given to media scheduling, marketing analysis, and demographic research. Development of writing skills for a variety of internal and external applications, including print, broadcast, and social media. Pre-requisites: JOUR 141, 244; PREL 231.

PREL 494 **3 F, W, S, Su** **Public Relations Internship**

Supervised experience in public relations. Under the direction of a public relations professional, the student accrues direct experience in a professional public relations setting as approved by the department. Enrollment restricted to department majors. Prerequisites: JOUR 141, 244; PREL 231, 232; ARTD 253. Qualifies for IP grading.

PREL 495 **1-3 F, W, S, Su** **Independent Study**

Offers the advanced student opportunity to pursue investigation in a field of special interest under the direction of department faculty.

Speech Pathology

LOWER-DIVISION COURSE:

SPPA 164 **4 S** **Introduction to Speech Pathology**

Introduction to speech and language disorders, their etiology and treatment. For students pursuing the preprofessional program in speech pathology and audiology and for those entering professions in education, behavioral science, social welfare, and related fields who may encounter persons with speech disorders.

UPPER-DIVISION COURSE:

SPPA 310 **3 S** **Speech and Language of Young Children** (See EDUC 310.)



Faculty

Lloyd Best, chair; Bruce Ivey, Roberto Ordonez
 Departmental Office: 238 Chan Shun Hall; 965-7269

Degrees and Programs

Computer Science, B.S.	85
Computer Science, B.A.	86

COMPUTER SCIENCE is the study of solving problems with the aid of computers. It deals with the design of algorithms (i.e., effective procedures) for the solution of problems, with the structures of languages for the efficient expression of these algorithms, and with computer systems, both hardware and software, for implementing these languages.

Two degree options are offered. The B.S. in Computer Science is designed to prepare the student for graduate study in computer science or for a career in scientific computation or software development. The B.A. in Computer Science prepares the student to be a knowledgeable user of computers in business or other applications. The department also offers a minor in computer science.

Major in Computer Science, B.S.

A minimum of 76 hours (40 upper-division hours)

► Required Core Courses (55 hours):

CPTR 115	Introduction to Computer Programming	4
CPTR 131	Survey of Computer Science	4
CPTR 132	Data Structures and Algorithms I	4
CPTR 224	Assembly Programming	4
CPTR 246	Object-Oriented Design	3
CPTR 326	Computer Languages	4
CPTR 346	Data Structures and Algorithms II	4
CPTR 347	Database Systems	4
CPTR 357	Computer Architecture	4
CPTR 367	Communications and Networking	4
CPTR 396	Seminar (2 quarters)	.5-.5
CPTR 398	Indiv. Programming Language Study	2
CPTR 426	Software Engineering	4
CPTR 447	Operating Systems	3
CPTR 455	Theory of Computing	3
CPTR 466	Senior Project	3

► Required Core Electives (5 hours):

At least 5 hours from the following: 5

Additional non-service CPTR courses		
MATH 265	Elementary Linear Algebra (4)	
MATH 331	Probability Theory (3)	
MATH 332	Mathematical Statistics (3)	
MATH 351-352	Introduction to Abstract Algebra I-II (3-3)	
MATH 354	Number Theory (3)	
MATH 375	Numerical Analysis (4)	

► Required Cognate Courses (16-18 hours):

MATH 131-132	Calculus I-II	4-4
MATH 275	Logic and Sets	4
MATH 355	Combinatorics and Graph Theory	4
OFAD 111	Personal/Beginning Keyboarding*	0-2

* See footnote, next page.

Computer Science

Recommended Cognate Courses:

MATH 133 Calculus III (4)
PHYS 211-212-213 Physics with Calculus (4-4-4)

This curriculum follows the guidelines of the ACM (Association for Computing Machinery).

Major in Computer Science, B.A.

A minimum of 57 hours (28 upper-division hours)

► Required Core Courses (43 hours):

CPTR 115	Introduction to Computer Programming	4
CPTR 131	Survey of Computer Science	4
CPTR 132	Data Structures and Algorithms I	4
CPTR 224	Assembly Programming	4
CPTR 246	Object-Oriented Design	3
CPTR 326	Computer Languages	4
CPTR 346	Data Structures and Algorithms II	4
CPTR 347	Database Systems	4
CPTR 367	Communications and Networking	4
CPTR 396	Seminar (2 quarters)	.5-.5
CPTR 426	Software Engineering	4
CPTR 447	Operating Systems	3

► Required Core Electives (2 hours):

At least 2 hours from the following: 2

Additional non-service CPTR or INFS courses
MATH 265 Elementary Linear Algebra (4)
MATH 331 Probability Theory (3)
MATH 351-352 Introduction to Abstract Algebra I-II (3-3)
MATH 354 Number Theory (3)
MATH 375 Numerical Analysis (4)

► Required Cognate Courses (12-14 hours):

MATH 131	Calculus I	4
MATH 275	Logic and Sets	4
MATH 355	Combinatorics and Graph Theory	4
OFAD 111	Personal/Beginning Keyboarding*	0-2

Recommended Cognate Courses:

MATH 132-133 Calculus II-III (4-4)
PHYS 111-112-113 General Physics (4-4-4)

Minor in Computer Science

A minimum of 30 hours (15 upper-division hours)

► Required Courses (12 hours):

CPTR 115	Introduction to Computer Programming	4
CPTR 131	Survey of Computer Science	4
CPTR 132	Data Structures and Algorithms I	4

► Required Electives (18 hours):

At least 18 hours from the following (15 upper-division): 18

Additional non-service CPTR or INFS courses
MATH 265 Elementary Linear Algebra (4)
MATH 275 Logic and Sets (4)
MATH 331 Probability Theory (3)
MATH 351-352 Introduction to Abstract Algebra I-II (3-3)
MATH 355 Combinatorics and Graph Theory (4)
MATH 375 Numerical Analysis (4)

► Required Cognate Course (0-2 hours):

OFAD 111	Personal/Beginning Keyboarding*	0-2
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Recommended Cognate Course:

MATH 131	Calculus I (4)
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* This requirement may be met by completion of a course or satisfactory performance on a departmental waiver examination. The waiver option is available only to students with fewer than 75 credit hours and to transfer students if taken during their first quarter at Pacific Union College.

Computer Science

SERVICE COURSE:

(Not applicable to a major or minor in this department)

CPTR 105 **3 F, S** **Introduction to Computers**

For the liberal arts student; introductory exploration of the principles of computing and the function, history, and use of computers. No prerequisites, but a knowledge of mathematics equivalent to high-school algebra is assumed. Two lectures and one laboratory per week.

LOWER-DIVISION COURSES:

CPTR 115 **4 F** **Introduction to Computer Programming**

Introduction to the principles necessary for writing clear, well-designed and efficient computer programs. Three lectures and one laboratory per week. No prerequisites, but a knowledge of mathematics equivalent to high-school algebra is assumed.

CPTR 131 **4 W** **Survey of Computer Science**

Overview of the main topics that make up the field of computer science, including computer architecture, operating systems, algorithms, programming languages, software engineering, data structures, databases, artificial intelligence, and theory of computation. Three lectures and one laboratory per week. Prerequisites: CPTR 115, MATH 106

CPTR 132 **4 S** **Data Structures and Algorithms I**

Topics include: Abstract data types, lists, stacks, queues, trees, sets, recursion, heaps, priority queues, graphs, and algorithms for sorting and searching.

Three lectures and one laboratory per week. Prerequisite: CPTR 131

CPTR 224 **4 F** **Assembly Programming**

Techniques of assembly language programming for both Intel and Motorola processors; low-level program interaction with embedded systems and with the operating system. Emphasis on low-level data manipulation and implementation of structured programming forms in assembly language. Three lectures and one laboratory per week. Prerequisite: CPTR 115

CPTR 234 **3 W** **Programming in C++**

Programming in the C++ computer language. Topics include control structures, basic input/output, classes, constructors and destructors, inheritance, polymorphism, operator overloading, and templates. Two lectures and one laboratory per week. Prerequisite: CPTR 115.

CPTR 246 **3 S** **Object-oriented Design**

Methodology of object-oriented analysis, design, and implementation. Includes basic UML. Two lectures and one laboratory per week. Prerequisite: CPTR 132.

UPPER-DIVISION COURSES:

CPTR 326 **4 F** **Computer Languages**

Principles underlying the design of programming languages using examples from different language paradigms. Topics include syntax, semantics, types, scope, and parameters. Prerequisites: CPTR 132, CPTR 224. Odd years.

CPTR 346 **4 W** **Data Structures and Algorithms II**

An advanced look at data structures and algorithms. Topics include asymptotic analysis, recurrences, sorts, balanced trees, dynamic programming, spanning trees, shortest-paths, networks, string matching, and NP-completeness. Prerequisites: CPTR 132, MATH 355. Even years.

CPTR 347 **4 W** **Database Systems**

Objectives and methods of organizing information into databases. Relationship modeling; normal forms and the relational model; data description, query processing, query optimization, and security. Three lectures and one laboratory per week. Prerequisites: CPTR 132, MATH 275. Odd years.

CPTR 348 **3 S** **Programming for the Internet**

Server-side and client-side programming for the Internet, including connecting to databases. The use of Perl, CGI scripts, Javascript, Java, HTML, DHTML, and XML. Prerequisite: CPTR 347. Odd years.

CPTR 357 **4 F** **Computer Architecture**

Elements of digital computer organization. Implementation of combinational logic, gates, decoding, and arithmetic functions. Storage of information, registers, and memory; addressing modes, the ALU, clocking, and control; input/output interrupts, and DMA. Three lectures and one laboratory per week. Prerequisite: CPTR 224. Even years.

Computer Science

CPTR 367 **4 F** **Communications and Networking**

Topics include: network topologies, routing, reliability, security, data transmission, communications protocols, error detection/correction, and the Internet. Three lectures and one laboratory per week. Prerequisite: CPTR 132. Even years.

CPTR 396 **.5 F, W, S** **Seminar**

(See also BIOL 396, CHEM 396, ENVR 396, PHYS 396)

Single topics of current interest in the natural sciences are presented by guest lecturers. To pass, a student must be on time and attend all five course sessions. Some quarters there is a computer science-specific seminar that is independent from the joint sciences seminar. Repeatable to a maximum of 2 credits. Graded S/F.

CPTR 398 **1-3 F, W, S** **Individual Programming Language Study**

Supervised individual study of a particular programming language not normally taught in an existing course. The study typically consists of developing solutions to a series of programming problems that are then implemented in the selected language. Languages suitable for this course include, but are not limited to, LISP, SCHEME, Ada, Smalltalk, Prolog, Perl, PHP, Turing, Visual Basic, and Python. A minimum of 30 hours of programming activity is expected for each unit of credit. Repeatable for credit. Prerequisites: CPTR 132, 224.

CPTR 426 **4 F** **Software Engineering**

Principles of organization and execution of a multiperson programming project, including issues in managing and organizing people. Tools and language features available to aid the development of large projects; classical and agile methods, including XP and scrum; ethics in the software area. A suitable project is undertaken by the class as a whole. The project varies from year to year depending upon class size, background, and interest. Two lectures and two laboratories per week. Prerequisite: CPTR 246. Odd years.

CPTR 437 **3 S** **Computer Graphics**

Covers the basic algorithms and techniques of displaying and manipulating three-dimensional graphics. Topics include: applied geometry, rotations, translations, scaling, perspective, hidden-face elimination, curves, and surfaces. Two lectures and one laboratory per week. Prerequisites: CPTR 132, MATH 265. Even years.

CPTR 447 **3 W** **Operating Systems**

Multiprogramming and time-sharing system-design principles. Topics include processes and process communication, control of input-output, memory management, scheduling, file systems, protection, and resource allocation. Prerequisites: CPTR 132, 224, MATH 131. Odd years.

CPTR 455 **3 W** **Theory of Computation**

Theoretical models of computation. Topics include: grammars, languages, automata, the Church-Turing thesis, and computability. Prerequisite: MATH 355. Even years.

CPTR 466 **3 S** **Senior Project**

An independent project arranged in consultation with the computer science faculty. Ideally there will be several students, perhaps from multiple departments, working on different aspects of the project. Designed to demonstrate competence in computer science. Requires a public presentation of the project.

CPTR 485 **1-4, Arr.** **Special Topics in Computer Science**

Computer science-related topics of interest to the general student. Format depends on the particular topic selected but usually consists of several lectures over approximately two or three weeks. With approval of the department chair, credit may apply toward a computer science major.

CPTR 494 **1-3 F, W, S, Su** **Computer Science Internship**

Supervised work experience in a computer science-related field. Skills in the application of computer science principles are used. Enrollment limited to department majors. Advanced approval of the department is required. May not be taken before the end of the sophomore year. Prerequisite: CPTR 246. Qualifies for IP grading. Graded S/F.

CPTR 495 **1-3 F, W, S** **Independent Study**

With the approval of the department chair, qualified students majoring in computer science may undertake independent study of a problem suited to their background and experience. Repeatable to a maximum of 3 credits.



Faculty

Thomas Lee, chair; Jean Buller, Marsha Crow (credential analyst), Margo Haskins, Jim Roy

Departmental Office: 203 Education Building; 965-7265

Degrees and Programs

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The Early Childhood Education major prepares individuals for teaching or directing in a center for children from infancy to six years of age. Combining this major with prescribed courses in education can qualify the candidate for a California State preliminary teaching credential.

The Liberal Studies degree is the recommended degree for individuals wishing to be elementary teachers. This degree provides a strong content base in a wide variety of disciplines to help prepare the individual for teaching and to pass the California Subject Exam for Teachers (CSET).

The Teacher Education Program is approved by the California Commission on Teacher Credentialing and by the Office of Education, General Conference of Seventh-day Adventists. An SDA Basic Certificate and a California Preliminary Credential may be earned by the completion of the credential requirements described on the following pages. The credential analyst can provide additional information.

The second stage of credentialing to earn professional credentials may be met by an approved 45-quarter-hour Clear Credential Program which is completed during the summers after employment in an SDA school as a full-time teacher of record.. A Master of Education is available to students who would like to earn a master's degree in the certification process. For further information, see the section entitled "Master of Education Degree" in this catalog. Students must make formal application to the program and consult the credential analyst in the Education Department prior to enrollment in either the Clear Credential Program or the M.Ed. program.

Degree Completion Program

The Education Department also offers an off-campus degree-completion program leading to the Bachelor of Science in Early Childhood Education (B.S.E.C.E.). This program is designed for the working adult and is offered in the evening.

Education

Major in Early Childhood Education, A.S.

A minimum of 50 hours

► **Required Core Courses (37 hours):**

ECED 181	Introduction to Early Childhood Education	2
ECED 184	Health, Safety and Nutrition	2
ECED 185	Art, Music, and Movement for Young Children	3
ECED 189	Constructive Guidance and Classroom Management I	2
ECED 215	Observation and Evaluation of Early Childhood Programs	2
ECED 216	Observation and Evaluation of Early Childhood Programs - Practicum*	1
ECED 220	Curriculum Planning, Play and Environments	4
ECED 221	Curriculum Planning, Play and Environments - Practicum*	1
ECED 230	Child, Family, and Community	4
ECED 251	Early Literacy	3
ECED 276	Student Teaching I*	8
ECED 277	Student Teaching Seminar	1
ECED 334	Child Development	3
ECED 335	Child Development - Practicum	1

► **Required Cognate Courses (13 hours):**

BIOL 227	Natural History of California	4
HLED 166	Health Education	2
PSYC 121	General Psychology	4
	<i>At least one of the following courses:</i>	3

COMM 105	Speech Communication (3)
COMM 226	Public Speaking (3)

► **Additional Requirements:**

A valid Red Cross Standard First Aid Certificate
 A valid certificate in Basic Life Support Cardiopulmonary Resuscitation

Major in Early Childhood Education, B.S.

A minimum of 91 hours (42 upper-division hours)

► **Required A.S. Courses (50 hours):**

All courses required for the A.S. degree as described above

► **Required Core Courses (38 hours):**

ECED 361	Administration and Supervision of Early Childhood Programs I	4
ECED 362	Administration and Supervision of Early Childhood Programs II	4

ECED 363	Administration and Supervision of Early Childhood Programs - Practicum	1
ECED 370	Math for the Young Child	3
ECED 371	Science for the Young Child	3
ECED 380	Program Planning for Infants and Toddlers	3
ECED 381	Program Planning for Infants and Toddlers - Practicum	1
ECED 482	Student Teaching II	3
ECED 483	Student Teaching Seminar II	1
ECED 489	Constructive Guidance and Classroom Management II	2
EDUC 310	Speech and Language of Young Children	3
EDUC 336	The Multicultural Classroom	3
EDUC 350	Exceptional Children in the Classroom	3
ENGL 330	Literature for Children	4

► **Required Cognate Course (3 hours):**

ACCT 114	Small Business Accounting	3
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General Requirements for both Elementary and Secondary Credentials

The Education Department at Pacific Union College offers a teacher education program which leads to the following credentials:

1. SDA Basic Elementary and/or Secondary certificate
2. California SB2042 Preliminary Multiple Subject and/or Single Subject Credential.

To be eligible for a teaching credential, candidates must hold a bachelor's degree from an accredited institution, and have completed all the course work, field work, and examinations required by the professional education program.

Steps to a Teaching Credential

1. Select a bachelor's degree in the content area of the desired credential.
 - a) For elementary credentials: It is highly recommended that candidates for the Multiple Subject credential complete the B.S. in Liberal Studies as this degree prepares the candidate to pass the CSET and gives the subject matter content needed to teach elementary school.
 - b) For secondary credentials: Complete a degree in a content area commonly taught at the secondary level. This will prepare the candidate to pass the CSET.
2. Complete EDUC 101—Introduction to Teaching and EDUC 101L—Classroom Observations prior to making application to the program. These courses should be completed during the freshman and sophomore years as they are prerequisites to program admission. They must be taken concurrently.

*Fulfills the work-experience requirement for the Permit Matrix.

Program admission by the end of the sophomore year is highly recommended.

3. Meet the Basic Skills Proficiency requirement for reading, writing, and math. This requirement must be met in order to be eligible for admission to the credential program, and before methods courses and field experiences may begin. Candidates should meet this requirement as soon as they make a decision to become a teacher. There are three options for meeting this requirement: CBEST, CSET plus writing, and submission of an approved out-of-state basic skills test.
4. Make formal application to the credential program once program prerequisites are completed. See “Requirements for Admission to the Credential Program” below. The application packet may be obtained from the Credential Office.
5. Meet the California subject matter competency requirement by passing the California Subject Exam for Teachers (CSET). The CSET must be passed one full quarter prior to doing student teaching. (Exception: If a single subject candidate is earning a bachelor’s degree in a content area different from the content area of the credential, then the CSET must be passed prior to taking EDUC 361 and the related first field experience.)
 - Elementary candidates must pass the CSET: Multiple Subjects, Tests 1,2,3.
 - Secondary candidates must pass the CSET in their content area.
6. Pass the California Teaching Performance Assessment (CALTPA), which assures that teacher candidates have the knowledge, skills, and abilities required of a beginning teacher. The CALTPA provides the candidate with a series of four performance tasks, each of which increases in complexity. The tasks are embedded within the teacher preparation program methods courses sequence and are administered and scored by the program. The four performance tasks are Subject-Specific Pedagogy, Designing Instruction, Assessing Learning, and Culminating Teaching Experience. All candidates admitted to the credential program on or after 07/01/2008 must pass the CALTPA in order to be eligible for a California Multiple or Single Subject Teaching credential.
7. Meet the following requirements for certification.

Requirements for both Multiple Subject/Elementary AND Single Subject/Secondary Candidates:

EDUC 101	Introduction to Teaching	1
EDUC 101L	Classroom Observations	1
EDUC 238	Computer Technology for Teachers	2
EDUC 238L	Computer Technology Laboratory	1

EDUC 333	Educational Psychology	3
EDUC 335	Ethical Dimensions of Teaching and Learning	2
EDUC 336	The Multicultural Classroom	3
EDUC 337	ELL Pedagogy	4
EDUC 350	Exceptional Children in the Classroom	3
EDUC 480	Classroom Management	3
EDUC 490	Student Teaching Seminar: Subject Specific	1
EDUC 491	Student Teaching Seminar: Designing Instruction	1
EDUC 492	Student Teaching Seminar: Assessing Learning	1
EDUC 498	Student Teaching Seminar: Culminating Teaching Experience	1
ENGL 335	Survey of Linguistics	4
HLED 166	Health Education	2

- U.S. Constitution requirement (Take HIST 134-135 or PLSC 124 or HIST 356 or pass constitution examination available in the Credential Office)
- CPR course (infant/child/adult) (Must be valid at time of application for credential)
- Passage of the California Teaching Performance Assessment

Additional Requirements for Multiple Subject/Elementary Candidates:

EDUC 345	Teaching Math and Science in the Elementary School	4
EDUC 353	Beginning Reading and Writing	4
EDUC 356	Intermediate Reading and Writing	3
EDUC 408	Social Studies and the Arts	2
ESTH 476	PE for Children	3
EDUC 493	Beginning Reading Field Experience	1
EDUC 493	Math Field Experience	1
	Pre-Session Student Teaching	0
EDUC 493	Full-Time Student Teaching	12
	Passage of the California Subject Exam for Teachers: Multiple Subjects	
	Passage of the Reading Instruction Competence Assessment (RICA)	

Additional Requirements for Single Subject/Secondary Candidates:

EDUC 358	Literacy in the Content Areas	3
EDUC 361	Middle School Teaching Strategies	3
EDUC 362	Secondary Content Area Teaching Strategies	3
EDUC 494	Middle School Field Experience	1
EDUC 494	High School Field Experience	1
	Pre-Session Student Teaching	0
EDUC 494	Full-Time Student Teaching	12
	Passage of the California Subject Exam for Teachers: Content Area	

Education

Additional Requirements for Candidates for a Seventh-day Adventist Certificate:

- 1) EDUC 390 & 390L, K-12 Bible & Practicum (required for Elementary, optional for Secondary)
- 2) 16 hours of religion coursework, including the following specific courses:
 - RELT 331 or 332 or 333 (choose one) 3
 - RELH 360 4
 - 6 hours of RELB religion coursework 6

Requirements for Admission to the Credential Program

1. A minimum GPA of 2.5
2. Completion of EDUC 101- Introduction to Teaching and EDUC 101L- Classroom Observations
3. Residence requirement: One successful quarter at Pacific Union College or acceptance from another teacher education program
4. CBEST verification card on file in Credential Office
5. Submission of complete application packet:
 - a) Application form
 - b) Advisor Interview
 - c) Personal Statement
 - d) Recommendation
 - e) Verification of Subject Matter Competency
 - f) Official transcripts from all high school and college work
 - g) Criminal Record Clearance Certificate
 - h) SDA church membership verification
6. Admission Interview

Candidates must be admitted to the credential program before they will be admitted to methods courses or field experiences.

Prerequisites for Student Teaching

1. Acceptance into the credential program
2. Minimum cumulative GPA of at least 2.5
3. Clearance from vice-president for student life
4. Satisfactory completion of subject matter competency requirement:
 - Multiple Subject/Elementary: Passage of CSET-Multiple Subjects, Subtests 1, 2, 3 (The CSET must be passed one full quarter prior to student teaching.)
 - Single Subject/Secondary: Passage of CSET in content area of credential (The CSET must be passed one full quarter prior to student teaching.)
5. Complete the following coursework and field experience requirements:
 - Multiple Subject/Elementary: EDUC 337, 345, 350, 353, 356, 490, 491, 492, 493- Math, 493- Reading, and Pre-Session Student Teaching

- Single Subject/Secondary: EDUC 337, 350, 358, 358L, 360, 361, 362, 490, 491, 492, 494- Middle School, 494- High School, and Pre-Session Student Teaching
6. Successful passage of the following Teaching Performance Assessments: Subject-Specific Pedagogy, Designing Instruction, and Assessing Learning

Restrictions on Courses Accepted for Transfer into Preliminary Program

1. Methods courses with fieldwork may not be taken by correspondence or directed study. Methods courses with fieldwork being transferred will require the fieldwork to be completed at Pacific Union College.
2. Methods courses without fieldwork may be taken by correspondence or directed study if approved by the department. Limit of one approved course.

Clear Credential Program

A program leading to professional certification is available as a Clear Credential Program. The program results in SDA Professional and/or California Clear credentials. Completion of the program does not culminate in a post-baccalaureate degree.

Applicants must meet the following prerequisites before being considered for admission:

1. Hold a bachelor's degree from an accredited institution
2. Hold a teaching credential
3. Have a minimum cumulative GPA of 2.5
4. Submit an application for program admission
5. Submit two satisfactory professional recommendations
6. Verify full-time employment in a school where a California Induction/BTSA program is unavailable.

This program is currently under revision to meet new California standards. Further information, including specific certification requirements, can be obtained from the Credential Analyst in the Education Department.

Liberal Studies Major, B.S.

A minimum of 82 hours (40 upper-division hours)

The Liberal Studies major is highly recommended for all individuals seeking elementary level teaching credentials. The course-work in the degree is designed specifically to:

1. Provide a strong content knowledge base in the various subjects taught in the elementary classroom; and
2. Prepare the elementary credential candidate to pass the California Subject Exam for Teachers: Multiple Subjects, passage of which is required of all candidates for the California Multiple Subject credential.

► **Required Core Courses (82-83 hours):**

Arts and Humanities*

ARTF 124-125	Design and Composition I-II	3-3
DRMA 229	Fundamentals of Dramatic Performance	3
EDUC 310	Speech and Language of Young Children	3
EDUC 337	ELL Pedagogy	4
ENGL 330	Literature for Children	4
ENGL 335	Survey of Linguistics	4

Natural Science and Mathematics*

ASTR 115	Astronomy	5
BIOL 101	Human Anatomy	5
BIOL 105	Introduction to Biology	5
MATH 211-212	Foundations of School Math	3-3

Social and Behavioral Science*

HIST 134-135	History of the United States	4-4
PSYC 334	Child Development	3

At least one of the following courses:

GEOG 210	World Regional Geography (3)	3
GEOG 220	Geography of the Americas (3)	3

Education

EDUC 101	Introduction to Teaching	1
EDUC 333	Educational Psychology	3
EDUC 345	Elementary School Math and Science	4
EDUC 350	Exceptional Children in the Classroom	3
EDUC 353	Beginning Reading and Writing	4
EDUC 356	Intermediate Reading and Writing	3
EDUC 408	Social Studies and the Arts	2

Interdisciplinary or Integrative Course

At least one of the following courses:

ENGL 352	English Theme Course (3)	3-4
PHYS 485	Issues in Science and Religion (3)	
PSYC 435	Psychology of Religion (3)	
PSYC 490	Issues in Religion, Ethics, & the Human Sciences (4)	
RELH 360	Adventist Heritage (4)	
SOCI 435	The Sacred and Profane in Society (3)	

► **General-Education Requirements (84-92 hours):**

Students who wish to obtain the Liberal Studies major must complete specific general education courses as follows**:

I. Foundations of Learning (15 hours)

ENGL 101-102	College English	4-4
STAT 222	Introduction to Statistics	4
<i>Communication course (one of the following):</i>		3
COMM 105	Speech Communication (3)	
COMM 226	Public Speaking (3)	

II. History and Social Sciences (15-16 hours)

HIST 101-102	History of World Civilizations	4-4
PSYC 121	General Psychology	4
1 additional course from Section II-B: Social Sciences		3-4

III. Arts and Humanities (14 hours)

ENGL 301	Great Books	4
<i>Art history course (one of the following):</i>		3-4
ARTH 107	American Art (3)	
ARTH 108	History of Far Eastern Art (3)	
ARTH 115	History of Western Art (4)	
ARTH 116	History of Western Art (4)	
ARTH 278	Women Artists (3)	

Music history course

MUHL 105	Survey of Music	3
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Philosophy course

PHIL 101	Introduction to Philosophy	4
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IV. The Natural World (10 hours)

GSCI 205	Scientific Discoveries	3
CHEM 102	Survey of Organic Chemistry	4

Science and Society course (one of the following):

BIOL 355	Issues on Origins (3)	3
ENVR 360	Conservation Biology (3)	
ENVR 361	Energy and Climate Change (3)	
ENVR 362	Pollution and Environmental Quality (3)	
PHYS 390	History and Philosophy of Science (3)	

** The listing assumes that the following have been completed at an accredited secondary institution: a full year each of biology, chemistry, and physics and Algebra I and Algebra II with a grade of C- or better. Students lacking these college-preparatory courses will have to make up the deficiencies in their foundational course work.

* Courses used to satisfy general education requirements may not be used to satisfy requirements in the this area.

Education

V. Revelation, Belief, and Action (18 hours)	
<i>Eighteen hours of religion including the following:</i>	18
doctrinal Studies: RELT 331 or 332 or 333	
SDA Church history: RELH 360	
At least 6 hours of RELB coursework	
At least 9 upper-division hours	
VI. Health and Fitness (8 hours)	
HLED 166 Health Education	2
ESTH 476 Physical Education for Children	3
3 ESAC courses, including 1 aerobics course	1-1-1
VII. Practical and Applied Arts (4-7 hours)	
EDUC 238 Computer Technology for Teachers	2
EDUC 238L Computer Technology for Teachers Lab	1
Select 1 additional course from Section VII: A, C, or D.	1-4
Total General Education Hours:	84-92

Master of Education Degree

The graduate program at Pacific Union College leads to a Master of Education (M.Ed.) degree. This degree meets the requirements for the SDA Professional Credential and may lead to a California Clear Credential if additional requirements are met. The program is designed for part-time enrollment during the summers and the degree is completed over a period of several years.

Admission to the Master of Education Degree Program

All potential students, including former Pacific Union College students, must apply for admission both to the college and to the master's degree program.

The application will be considered once official postsecondary transcripts and other requested materials have been filed with the Education Department.

Admission is determined by the Education Department faculty on the basis of credentials held, recommendations, former academic performance, and background.

Requirements for Admission

1. A baccalaureate degree from an accredited college or university.
2. A state credential or SDA credential, or eligibility for these credentials.
3. Admission to Pacific Union College.
4. Submission of a graduate application to the Education Department that includes the following:
 - a) application form
 - b) two recommendations
 - c) official transcripts

- d) interview with department chair and one other Education faculty member
 - e) essay discussing interests and goals
5. A minimum GPA of 3.0 in each of the following areas:
 - a) Undergraduate upper-division major
 - b) Education courses
 - c) Overall college work, or the last 96 quarter hours
 6. Acceptable scores in the Graduate Record Examination (GRE) General Test.
 7. A proposed program of studies appropriate to the student's strengths, interests, and professional goals.

Notification of Admissions Action

Upon review of the application, the Education Department will notify the applicant of the action taken.

Cancellation of Acceptance

The college reserves the right to cancel the acceptance of any person for graduate study should further evidence indicate that he or she does not adequately meet requirements for admission to the master's program.

Previous and Transfer Credit

The department chair must approve credit for any coursework taken prior to admission to the program.

A maximum of 12 quarter hours of approved transfer credits may be applied toward the degree.

Admission of Guest Applicants

A student that has been accepted for graduate study in another accredited institution of higher education and wishes to earn credit at Pacific Union College for transfer is not required to follow the regular admission procedures outlined above. For further information, see the section entitled "Admission as a Guest Student for Transfer Credit" in this catalog.

Committee on Studies

The Education Department faculty will work with each student to construct an acceptable Program of Studies and will monitor progress during the period of graduate study.

Program of Studies

- The Program of Studies must provide for the following:
1. removal of any undergraduate deficiencies,
 2. sequencing of course work so that all requirements are completed within the seven-year limit,
 3. completion of all departmental and college requirements for the degree.

Master of Education, M.Ed.
(Program offered during summers only)

This program is currently under revision to meet new California standards. The requirements listed below will be in effect through summer of 2010, but will be changed before summer 2011. Updated information may be obtained online or from the Credential Analyst in the Education Department.

A minimum of 45 hours (37 graduate-level hours)

► **Pedagogy Requirements (30 hours):**

EDUC 510	Leadership in Education	2
EDUC 515	Educational and Psychological Evaluation	3
EDUC 516	American Curriculum ³	
EDUC 517	Current Issues in Education	2
EDUC 530	Brain Research and Learning	3
EDUC 537/537L	Advanced ESL Teaching Methods and Materials/ Field Experience (SB2042)	3-1
EDUC 538/538L	Computers in the Classroom/Lab	2-1
EDUC 550	Advanced Study of Exceptional Children in the Classroom (SB2042)	3
EDUC 566	Advanced Health Education (prerequisite: HLED 166- Health Education)	3

At least one of the following courses with laboratory:

EDUC 513/513L	Advanced Instructional Strategies/Lab (3-1)	4
EDUC 525/525L	Teaching Children with Reading Difficulties/ Lab (3-1)	

► **Action Research Project (7 hours)**

EDUC 596	Methods in Research	2
EDUC 597	Action Research Project	5

► **Subject Matter Courses (8 hours)**

At least 8 hours of graduate level electives or reserved graduate credit, chosen in consultation with a departmental advisor.

Note: Credit earned by correspondence, examination, student teaching or continuing education is not applicable for graduate degree course requirements.

Reserved Graduate Credit

Students who have completed 135 hours toward a baccalaureate degree and who will be eligible to apply for admission to the master's program after graduation may request to reserve a maximum of 8 quarter hours of approved upper-division courses for graduate credit provided that they are not needed to fulfill requirements for the bachelor's degree. Make arrangements with the Education Department and the Records Office.

Graduation Requirements

Masters candidates have the option of fulfilling requirements under the catalog of their first enrollment or any subsequent catalog during the time of continuous enrollment. The graduation requirements include the following:

1. Satisfactory completion of approved Program of Studies.
2. A minimum overall graduate GPA of 3.0 with no grade lower than B-.
3. Satisfactory completion of examinations and projects as determined by the student's Committee on Studies.
4. Completion of requirements within seven calendar years beginning with the first enrollment in courses counting toward the master's degree or date of acceptance into the program, whichever comes first. Students who take these courses at any time during the seven-year period are considered to have continuous enrollment status. A time extension requires approval from the Education Department.

Bachelor of Science in Early Childhood Education, B.S.E.C.E

In harmony with its mission of excellence in Christian education, the Education Department offers a quality academic program accessible to an adult student population through non-traditional formats, times, and locations in the region surrounding the college. The department currently offers the B.S.E.C.E. program in Napa and at the Clearlake campus of Yuba College.

The Bachelor of Science in Early Childhood Education degree program builds on personal experience and previous college credit. The program is especially designed for working adult students. Classes meet one evening a week for four hours and are tailored for a mature, interactive learning style. The curriculum is a series of upper-division courses that lasts about 23 months.

A minimum of 192 quarter hours, including 60 upper-division hours, is required for obtaining the degree. Students enrolled in this program must maintain a cumulative GPA of 2.0 (C) or above.

Additional information about the Bachelor of Science in Early Childhood Education degree is available by contacting the Education Department at (877) 782-4637 (toll free), (707) 965-6548, www.finishcollege.org, or e-mail dcp@puc.edu.

This major and these courses are available only through the Education Department Degree Completion Program held off campus.

Prerequisites to Admission

1. 60 transferable semester hours (90 quarter hours), including the required ECE foundation coursework
2. 1 year full-time ECE work experience or 2 years full-time work experience outside of the Early Childhood field

Education

Degree Requirements

In order to earn the B.S.E.C.E degree, students complete the following requirements:

1. Required ECE foundation coursework*
2. Core major requirements
3. Required cognate course*
4. Student teaching requirement*
5. General education program requirements*
6. Additional electives as necessary to earn a minimum of 192 quarter hours of college coursework*

Required ECE Foundation Coursework

8 semester hours (12 quarter hours) of transferable ECE coursework, including an approved course in Child Development

Core Major Requirements

60 hours (Delivered in the B.S.E.C.E. program)

ECE 311	Speech and Language of Children	3
ECE 330	Literature for Children	4
ECE 340	Social, Emotional and Moral Development of Young Children	3
ECE 359	Exceptional Children in the Classroom	3
ECE 370	Math for the Young Child	3
ECE 380	Program Planning for Infants and Toddlers	4
ECE 381	Program Planning for Infants and Toddlers - Practicum	1
ECE 386	Approaches to Early Childhood Education	2
ECE 387	Cultural Diversity	3
ECE 388	Science for the Young Child	3
ECE 389	Management and Guidance of Children	4
ECE 425	Adult Supervision and Management	4
ECE 431	Administration and Supervision of Early Childhood Programs I	4
ECE 432	Administration and Supervision of Early Childhood Programs II	4
ECE 433	Administration and Supervision of Early Childhood Programs - Practicum	1
ECE 440	Emergent Literacy	3
ECE 441	Emergent Literacy - Practicum	1
ECE 471	Early Childhood Senior Seminar	2
RELB 305	Biblical Perspectives	4
RELT 310	Ethics and Personal Values	4

Required Cognate Course

An approved course in health education

*These requirements are not delivered within the B.S.E.C.E. program.

Student Teaching requirement

At least 2 semester hours (3 quarter hours) of student teaching in an approved program

General Education Program for Degree Completion

Since the majority of adult students in the degree completion program will be transferring nearly two thirds of their credits from other institutions, Pacific Union College has a modified general education program for these students. A total of 68 quarter hours of general education credit from seven different areas is required. 16 of these hours are met by major and cognate requirements, and the remaining 52 hours are to be distributed as described below.

All courses that are applied to the general education program requirements must be approved by Pacific Union College. Articulation agreements with local community colleges define acceptable courses in other institutions that will meet Pacific Union College's general education requirements.

For a description of the intents and purposes of each general education requirement area, see the section entitled "The Academic Program" in this catalog.

I. Foundations Of Learning (15 hours)

A. Rhetoric and College Writing (11):

Two-course college English sequence 4-4
One public speaking course 3

B. Reasoning from Data (4):

One introductory statistics course 4

II. History and Social Sciences (11 hours)

A. History (8):

Two history courses 4-4

B. Social Sciences (3):

This requirement is met by the core major requirements

III. Arts and Humanities (6 hours)

A. Literature (3):

This requirement is met by the core major requirements

B-C. Visual Arts and Music: History/Appreciation (3):

One course in music or art history and/or appreciation 3

IV. The Natural World (4 hours)

A. Intermediate Algebra (0):

A full year of high school Algebra II (with grades of C- or higher) or an intermediate algebra course
This is a non-credit requirement 0

<p>B. <i>Science with Laboratory (4):</i> One laboratory course in natural science May be in astronomy, biology, chemistry, geology, physics, or a comparable area</p>	4
<p>V. <i>Revelation, Belief, and Action (8 hours)</i> A. <i>Studies in Religion (8):</i> This requirement is met by the core major requirements</p>	
<p>VI. <i>Health and Fitness (2 hours)</i> A. <i>Health (2):</i> This requirement is met by the required cognate course</p>	
<p>VII. <i>Practical and Applied Arts (2 hours)</i> A-D. <i>Practical Arts, Information Management, Management of Personal Finance, Personal Skills (2):</i> One practical and applied arts course</p>	

Options for this area are listed in the section entitled “The Academic Program” in this catalog

General Education Electives (20 hours) 20
Students must complete 20 quarter hours of general education electives (in addition to the specific requirements described above) in order to earn a total of 68 hours of general education coursework. The 20 hours must be earned as described below:

- The electives must be distributed over at least four of the seven general education areas listed above and may not include more than ten quarter hours in any one area.
- The general education electives are to be chosen from the requirements for the Pacific Union College B.S./B.A. general education program. Options for each of the seven areas are listed see the section entitled “The Academic Program” in this catalog.

Early Childhood Education

LOWER-DIVISION COURSES:

ECED 181 2 F
Introduction to Early Childhood Education

A general overview of early childhood education. Includes basic child development, history of early childhood education, types of programs, qualifications and characteristics of successful teachers, career opportunities, teaching permit information, and current issues.

ECED 184 2 S
Health, Safety, and Nutrition

An holistic examination of health, safety, and nutrition and their effect on the well-being of children. Students learn how to prepare and maintain a safe and healthy environment and encourage good nutrition for young children. Helps meet State requirements for specified training in preventative health practices. Odd years.

ECED 185 3 W
Art, Music, and Movement for Young Children

Focus on art, music, and movement activities in promoting the overall development of children and learning across the curriculum. Students gain experience with a variety of art materials, music genres, and movement activities. Odd years.

ECED 189 2 W
Constructive Guidance and Classroom Management I

An introduction to guidance and discipline in the early childhood classroom. Explores the primary philosophical approaches to behavior management. Presents the methods of guidance leading to the development of intrinsic motivation for pro-social behavior and moral development in young children.

ECED 215 2 S
Observation and Evaluation of Early Childhood Programs

Evaluation and discussion of a variety of early childhood programs including

Montessori, Reggio Emilia, Head Start and cooperative schools. Corequisite: ECED 216.

ECED 216 1 S
Observation and Evaluation of Early Childhood Programs — Practicum

Observation and analysis of specific off-campus early childhood programs. Observations are arranged by the instructor. Corequisite: ECED 215.

ECED 220 4 W
Curriculum Planning, Play and Environments

Exploration of developmentally appropriate practice in the early childhood classroom, including play, planned and emergent curriculum, curriculum planning, and preparation of the environment. Prerequisites: ECED 181, 334, 335, fingerprint clearance. Corequisite: ECED 221.

Education

ECED 221 **1 W** **Curriculum Planning, Play and Environments — Practicum**

Observations and activities related to EDUC 220, weekly opportunity to interact with and teach children in the child care environment. Prerequisite: Fingerprint clearance. Corequisite: ECED 220.

ECED 230 **4 W** **Child, Family, and Community**

Explores the value and necessity of collaboration between parents, teachers, and the community in support of children. Includes challenges facing contemporary families, the needs of families with diverse backgrounds, available community resources, political awareness, and child and family advocacy. Effective methods of communication with families and communities. Even years.

ECED 251 **3 F** **Early Literacy**

Emergent literacy for the young child involving the skills, knowledge, and attitudes that are developmental precursors to conventional forms of reading and writing. Students discover how to involve children in literacy through real life experiences, children's literature, phoneme awareness, and early reading and writing.

ECED 276 **8 F, W, S** **Student Teaching I**

Student teaching in an approved off-campus preschool. The student will teach all areas of the curriculum half-time for eight weeks and full-time for one week. Application and arrangements must be made at least one quarter before registering for the course. Students may need transportation to and from teaching assignments. Prerequisites: A minimum cumulative GPA of 2.25, ECED 181, 185, 189, 215, 216, 220, 221, 230, 251, 334, 335. Corequisite: ECED 277. Graded S/F.

ECED 277 **1 F, W, S** **Student Teaching Seminar**

Discussion of topics relevant to student teaching. Includes portfolio preparation. Corequisite: ECED 276.

UPPER-DIVISION COURSES:

ECED 334 **4 F** **Child Development** (See PSYC 334.)

ECED 335 **1 F** **Child Development Practicum**

Skills for observing and recording the cognitive, social, emotional, physical, and language development of children. Various methods are used to observe children in one of the Discoveryland preschools and PUC Elementary School. Corequisite: ECED 334.

ECED 361 **4 F** **Administration and Supervision of Early Childhood Programs I**

Techniques and knowledge needed to develop and administer a quality early childhood center, including assessment of community need, licensing guidelines, board development, budget and financial planning, development of the center (equipping, staffing, enrolling children), evaluation, and development of parent and community support. Even years.

ECED 362 **4 W** **Administration and Supervision of Early Childhood Programs II**

Study of the competencies required in the successful operation of a child development center. Includes marketing, recruitment, human resource management, facilities and risk management, professional development and leadership skills. Even years.

ECED 363 **1 S** **Administration and Supervision of Early Childhood Programs—Practicum**

30 hours throughout the quarter assisting the director of an early childhood center in a variety of ways, including creating newsletters, billing, registration of children, public relations, checking for room ratios, fund raising events, and filing. Even years.

ECED 370 **3 F** **Math for the Young Child**

An organized, sequential approach to creating math curriculum for young children. Methods of teaching math concepts such as classification, shapes, spatial sense, seriation, numbers, and measurements. Taught using naturalistic, informal, and structural types of learning. Stresses the integration of math with language arts, science, social studies, art, and music and movement. Even years.

ECED 371 **3 S** **Science for the Young Child**

Methods of teaching science to young children. Students learn how to teach children to explore, classify, compare, contrast, and hypothesize in physical science, biology, and botany. Odd years.

ECED 380 **3 F** **Program Planning for Infants and Toddlers**

Programs for infants and toddlers to promote their optimum social, emotional, cognitive, and physical development. Includes observation, assessment, curriculum, continuity of care, special needs, and parent-teacher interaction. Odd years.

ECED 381 **1 F** **Program Planning for Infants and Toddlers—Practicum**

Three hours per week observing, assessing, caring for, and teaching infants or toddlers in a center. Odd years.

ECED 482 **3 F, W, S**
Student Teaching II

Student teaching in an approved, off-campus early childhood classroom for three hours a day, three days a week for the entire quarter. The student will teach at least one child with special needs. Involves observing, assisting and teaching in the areas of math, science, emergent literacy, music, movement, and art. Students plan the curriculum for the quarter, collaborate with the supervising teacher, and individualize guidance strategies for the children, thus having opportunities to practice master teacher techniques. Prerequisites: A minimum cumulative GPA of 2.25 and upper-division GPA of 2.5, A.S. degree in ECE, ECED 370, 371. Corequisite: ECED 483. Qualifies for IP grading. Graded S/F.

ECED 483 **1 F-W-S**
Student Teaching Seminar II

Integration of educational theory with teaching practice. In-depth discussion of Teaching Performance Expectations (TPEs). Includes portfolio preparation. Corequisite: ECED 482. Qualifies for IP grading.

ECED 489 **2 F**
Constructive Guidance and Classroom Management II

The primary philosophical approaches to guidance and classroom management as they apply to school-wide policies. Includes methods of guidance leading to the development of intrinsic motivation for pro-social behaviors such as cooperation, empathy, and altruism in young children. Students develop their own philosophy of guidance and management based on observations of children, discussion, and research. Prerequisite: ECED 189. Odd years.

Education

LOWER-DIVISION COURSES:

EDUC 101 **1 F, W, S**
Introduction to Teaching

An overview of the teaching profession. Includes certification requirements, the history of education, teaching as a profession, and the characteristics of successful teachers. The program admission process begins in this class. Corequisite: EDUC 101L.

EDUC 101L **1 F, W, S**
Classroom Observations

A 25-hour field experience that provides practical information about classroom teaching for the student who is entering the teaching profession. Involves extensive observation of teachers both in the classroom and on video. Must be completed before a student may be admitted to the credential program. Students who wish to apply credit for this course toward the requirements for a teaching credential must earn a grade of B or better. This requirement may be waived on experience. Contact the credential analyst for more information. Corequisite: EDUC 101.

EDUC 238 **2 F, S, Su**
Computer Technology for Teachers

The use of computers in the elementary and secondary classroom. Development of skills in using technology to support teaching and learning. Distinguishes between technology as an “add-on” in the classroom and technology as an integral part of learning. Prerequisite: EDUC 101, 101L. Corequisite: EDUC 238L.

EDUC 238L **1 F, S, Su**
Computer Technology for Teachers Laboratory
 Prerequisite: EDUC 101, 101L. Corequisite: EDUC 238.

UPPER-DIVISION COURSES:

EDUC 310 **3 S**
Speech and Language of Young Children
 (See also SPPA 310.)

Development of speech and language in children from birth to six years. Introduces differential diagnosis and treatment planning for children with delayed language development. Odd years.

EDUC 333 **3 W, Su**
Educational Psychology

Exploration of how children and adolescents learn and think in the classroom. Examines how characteristics such as intelligence, personality, cognitive and moral development, and diversity impact student learning. Includes the study of learning theories, motivation, cooperative learning, assessment, and managing a classroom. Odd summers.

EDUC 335 **2 F, Su**
Ethical Dimensions of Teaching

Ethical and moral situations that teachers and students face. Examines the history and development of current practice. Emphasizes ideals and principles of Christian education and their application in Seventh-day Adventist schools. Compares and contrasts the philosophy of American and Adventist education. Emphasis on integrating faith and learning. Even summers.

Education

EDUC 336 **3 S**

The Multicultural Classroom

Preparation of candidates for the wide diversity of students they will encounter in the classroom. Includes an emphasis on developing methods for involving the family in the educational process. Addresses the legal basis for desegregation and multiculturalism in American Education. Emphasizes the knowledge and skills needed to help students be better informed and proactive in a multicultural society.

EDUC 337 **4 S, Su**

ELL Pedagogy

(See ENGL 337.) Prerequisite: EDUC 101, 101L.

EDUC 350 **3 W, Su**

Exceptional Children in the Classroom

Major categories of disabilities and giftedness and strategies to meet the needs of these children in the general classroom. Information about federal and state laws pertaining to disabilities and how to write and implement an IEP. Prerequisite: EDUC 101, 101L.

EDUC 480 **3 W**

Classroom Management

An overview of classroom management models, including behaviorist options, with an emphasis on redemptive approaches. Identification of personal views toward classroom organization and structure and development of classroom management plan based on “best practice” strategies. The value of effective structure, developing procedures and rules, engaging curriculum, effective communication, and consistent follow-through. Prerequisite: EDUC 101, 101L.

ELEMENTARY METHODS COURSES:

EDUC 345 **4 S**

Teaching Math and Science in the Elementary School

Prepares pre-service elementary teachers in science, health, and mathematics instruction through interrelated activities in classwork and fieldwork. Emphasis on California state content standards in science, health, and mathematics; planning and implementing effective lessons for each area. Prerequisites: Regular program admission, EDUC 353, 356, 490, 491, 493 (353L). Corequisites: EDUC 492, 493 (345L).

EDUC 353 **4 W**

Beginning Reading and Writing

A comprehensive approach to teaching reading and writing in pre-kindergarten through grade three. Research on how children learn to read, diagnosis of reading difficulties, phonics, stages of writing development, and planning and delivery of appropriate reading and writing instruction based on assessment. Emphasis on early prevention of failure in literacy for at-risk children. Prerequisites: Regular program admission. Corequisites: EDUC 356, 490, 491, 493 (353L).

EDUC 356 **3 F**

Intermediate Reading and Writing

The nature of language acquisition and the principles related to intermediate reading/language arts instruction. Includes instructional strategies for developing ability to transmit meaning through talking and writing and to comprehend meaning through listening and reading. Emphasizes assessment and management techniques and teaching to diverse groups of students. Includes multigrade teaching and state standard aligned instruction. Prerequisites: Regular program admission. Corequisites: EDUC 490.

EDUC 390 **2 F, Su**

Teaching K-12 Bible

Teaching objectives, materials, and strategies in Biblical education. Emphasizes the spiritual development of K-12 students and provides methods of teaching whereby Bible curriculum can be harmonized with that development. Explores and analyzes the Seventh-day Adventist Bible curriculum. Required for SDA elementary endorsement. Required for SDA secondary endorsement only if a Bible endorsement is desired. Prerequisite: Regular program admission. Corequisite: EDUC 390L. Available odd summers for employed teachers only; EDUC 390L is not offered or required as a corequisite during the summers.

EDUC 390L **1 F**

Teaching K-12 Bible Practicum

Designed to support EDUC 390 and place candidates in a Bible classroom within an SDA school setting. Includes observation of present practices in Bible instruction. Candidates will assist cooperating teachers as well as plan and implement a brief unit of study, based on the current class curriculum and the NAD Bible curriculum guides. Prerequisite: Regular program admission. Corequisite: EDUC 390.

EDUC 408 **2 F**

Social Studies and the Arts

Aspects of teaching history, social science, visual arts, and performing arts. Implementation of state adopted content standards in these subject areas. Observation of professionals in the field, paying particular attention to content and strategies of instruction, as well as techniques for teaching art as it relates to other subject areas and careers. Emphasizes case studies, integrated units, and cross-cultural activities. Prerequisite: Regular program admission.

EDUC 493 1-12 F-W-S
Student Teaching, Full-Time, Elementary

Elementary student teaching is divided into four components:

a) *EDUC 493 (353L)- Student Teaching, Beginning Reading Experience (1):*

25-hour field experience completed in a K-2 classroom. Involves observing, assisting, and actually teaching in the area of beginning reading and writing under the direction of an experienced primary grade teacher. Counts as 1 hour of Student Teaching and is supervised and evaluated. Prerequisite: Regular program admission, TB clearance, EDUC 356, 490. Corequisite: EDUC 353, 491. Graded S/F.

b) *EDUC 493 (345L)- Student Teaching, Math Field Experience (1):*

25-hour field experience completed in an upper-grade elementary school classroom. Involves observing, assisting, and actually teaching in the area of math under the direction of an experienced elementary grade teacher. Counts as 1 hour of Student Teaching and is supervised and evaluated. Prerequisite: Regular program admission, Department Review #1, EDUC 353, 491, 493 (353L). Corequisite: EDUC 345, 492. Graded S/F.

c) *Pre-Session Student Teaching:*

Two-week experience at the beginning of a school year. Involves observing and assisting a teacher just prior to the beginning of school and into the first few days of a new school year. This 10-day full-time experience counts as part of student teaching. The credit for this experience is given when a student completes full-time student teaching. Prerequisite: Completion of reading or math field experience, Department Review #1, EDUC 345 or EDUC 353. Pre-Session Student Teaching should be completed in the summer prior to the year in which full-time student teaching takes place.

d) *EDUC 482L- Student Teaching, Full-Time, Elementary (12):*

Full-time student teaching occurs at the conclusion of the credential program courses. It lasts for the 11 weeks of the quarter and is a full-time, full day commitment. It is not possible for the student teacher to hold a day job during this time. By the end of the experience, the student will take complete responsibility for all classroom management, instructional planning, teaching, and student assessment. Candidates employed on a regular full-time teaching contract at a grade level covered by the desired credential may petition the department to complete in-service student teaching. Prerequisites: EDUC 337, 345, 350, 353, 356, 490, 491, 492, 493 (345L), 493 (353L), Department Review #1 and #2, Pre-Session Student Teaching, Passage of the California Teaching Performance Tasks Subject-Specific Pedagogy, Passage of CSET: Multiple Subjects, Designing Instruction, and Assessing Learning. Corequisite: EDUC 498. Qualifies for IP grading. Graded S/F.

SECONDARY METHODS COURSES:

EDUC 358 3 F
Literacy in the Content Areas

First in a series of three courses preparing pre-service teachers for the secondary classroom. Emphasis is placed on lesson design based on 1) the unique learning characteristics of adolescents, and 2) the reading and study skills needed in each content area. Effective teaching strategies for students with diverse levels of understanding and skill, including ELL students with limited language skills. Prerequisites: Regular program admission; junior class standing. Corequisite: EDUC 490.

EDUC 361 3 W
Middle School Teaching Strategies

Second in a series of three secondary methods courses. Special focus on the unique needs of middle school students. Creation of an environment and development of learning plans that accommodate developmental characteristics of young adolescents (ages 10-14). Exploration of problem-based learning, differentiated instruction, authentic assessment, block scheduling, and small schools' alternating curriculum. Prerequisites: regular program admission, EDUC 358, and junior class standing. Corequisites: EDUC 494 (361L) and EDUC 491.

EDUC 362 3 S
Secondary Content Area Teaching Strategies

Final course in the secondary methods sequence; brings together all the secondary teaching elements that have been taught throughout the year. Focus on the high school environment and the knowledge and skills needed to plan and deliver instruction in specific content areas. Creation of assessment tools for the content area, development of effective learning units, and creation of course syllabi. Students will make sample instructional presentations in class and conduct interviews with secondary teachers in their own content areas. Prerequisites: regular admission to the program; EDUC 358; EDUC 361; EDUC 494 (361L); EDUC 491; and junior class standing. Corequisites: EDUC 494 (362L) and EDUC 492.

EDUC 390 2 F, Su
Teaching K-12 Bible

See description under "Elementary Methods Coursework."

EDUC 390L 1 F
Teaching K-12 Bible Practicum

See description under "Elementary Methods Coursework."

Education

EDUC 494 **1-12 F-W-S** **Student Teaching,** **Full-Time, Secondary**

Student teaching is divided into four components:

a) EDUC 494 (361L)- Student Teaching, Middle School Field Experience (1):

Involves 25 hours of observation and teaching in the specific content area of the credential in a middle school classroom (grades 6-8). Counts as 1 hour of Student Teaching and is supervised and evaluated. Prerequisites: Regular program admission, major course work with GPA of 2.5 or above or passage of CSET. Corequisite: EDUC 361, 491. Graded S/F.

b) EDUC 494 (362L)- Student Teaching, Senior High School Field Experience (1):

Involves 25 hours of observation and teaching in the specific content area of the credential in a senior high school classroom (grades 9-12). Counts as 1 hour of Student Teaching and is supervised and evaluated. Prerequisites: TB clearance, EDUC 361, 494 (361L), 50% of subject matter program or passage of CSET, Department Review #1. Corequisite: EDUC 362, 492. Graded S/F.

c) Pre-Session Student Teaching:

Two-week experience at the beginning of a school year. Involves observing and assisting a teacher just prior to the beginning of school and into the first few days of a new school year. This 10-day full-time experience counts as part of student teaching. Credit is given when a student completes full-time student teaching. Prerequisite: EDUC 494 (361L), 494 (362), Department Review #1 and #2. Pre-Session Student Teaching should be completed in the summer prior to the year in which full-time student teaching takes place.

d) EDUC 494- Student Teaching, Full-Time, Middle or Senior High School (12):

Full-time student teaching occurs at the conclusion of the credential program courses. It lasts for the 11 weeks of the quarter and is a full-time, full day commitment. It is not possible for the student teacher to hold a day job during this time. By the end of the experience, the student will take complete responsibility for all classroom management, instructional planning, teaching, and student assessment. Candidates employed on a regular full-time teaching contract at a grade level covered by the desired credential may petition the department to complete in-service student teaching. Prerequisites: EDUC 337, 350, 358, 358L, 361, 362, 490, 491, 492, 494 (361L), 494 (362L), Department Review #1 and #2, Pre-Session Student Teaching, Passage of the California Teaching Performance Tasks Subject-Specific Pedagogy, Passage of the CSET: Content Area, Designing Instruction, and Assessing Learning. Corequisite: EDUC 498. Qualifies for IP grading. Graded S/F.

ELEMENTARY AND SECONDARY STUDENT TEACHING SEMINARS:

EDUC 490 **1 F** **Student Teaching Seminar:** **Subject Specific**

Guides candidates toward the successful completion of the California Teaching Performance Assessment on Subject-Specific Pedagogy. Evaluates the candidate's ability to understand how information about a class is used to prepare instruction for particular subjects and content areas and develops and adapts student assessment plans based on the content. Also provides support for candidates as they complete their student teaching. Prerequisites: Regular program admission. Corequisite: EDUC 356 or EDUC 358. Graded S/F.

EDUC 491 **1 W** **Student Teaching Seminar:** **Designing Instruction**

Guides candidates toward the successful completion of the California Teaching Performance Assessment on Designing Instruction. Evaluates the ability to identify the links between students' characteristics and learning needs. Also provides support for candidates as they complete their student teaching. Prerequisite: Regular program admission, EDUC 490. Corequisites: EDUC 353/ 493 (353L) or EDUC 361/ 494 (361L). Graded S/F.

EDUC 492 **1 S** **Student Teaching Seminar:** **Assessing Learning**

Guides candidates toward the successful completion of the California Teaching Performance Assessment on Assessing Learning. Evaluates the ability to assess student learning. Also provides support for candidates as they complete their student teaching. Prerequisites: Regular program admission, EDUC 490, 491. Corequisite: EDUC 345/493 (345L) or EDUC 362/ 494 (362L). Graded S/F.

EDUC 498 **1 F, W, S** **Student Teaching Seminar:** **Culminating Teaching Experience**

Guides candidates toward the successful completion of the California Teaching Performance; Assessment Culminating Teaching Experience. Evaluates the ability of the candidate to integrate the three previous strands of the TPA: subject specific pedagogy, designing learning, and assessing learning. Also provides support for students as they complete their student teaching. Prerequisites: Regular program admission, EDUC 490, EDUC 491, EDUC 492. Corequisite: EDUC 493 (elementary) or EDUC 494 (secondary). Graded S/F.

Summer Education Courses

Taught only during the summer. Most courses are taught on a 2-year alternating basis. Courses are open to individuals employed as full time teachers. Contact the Education Department for the list of course offerings for any specific summer.

EDUC 410 **1-2 Su** **Soul Shapers: Level 1**

An in-depth study experience of Choice Theory and its application to the classroom and school setting. The writings of Scripture, Ellen White, and William Glasser provide the theoretical framework for class discussions and assignments. Experimental in nature, with learning coming out of the activities that are done during class. Meets the SDA Philosophy of Education requirement for the SDA teaching credential. Graded S/F.

EDUC 411 **1-2 Su** **Soul Shapers: Level 2**

Builds on the theory and insight of the Level 1 course and focuses on conferencing skills in varied school and home scenarios. Students learn to conference using the principles of Choice Theory. Immediate feedback is given throughout the course as students practice what they have learned about lead-management techniques and fostering and maintaining positive relationships. Repeatable for credit. Graded S/F.

EDUC 420 **1-2 Su** **Education Workshop**

Hands-on practical summer workshops for teachers seeking certification renewal credit. Offered under different subtitles on a rotating basis. Repeatable for credit under different subtitles. Graded S/F.

Past subtitles include the following:

*Cooperative Learning
Kindergarten Workshop
Pathways Reading
Making & Using Portfolios
Reading & Writing Workshop
Robotics in the Classroom*

EDUC 421 **2 Su** **SDA Methods in Elementary Mathematics**

Meets the SDA Basic Elementary certification requirement for methods in mathematics. Open to practicing teachers holding a Conditional certificate; not open to students in the campus credential program. Even summers.

EDUC 422 **3 Su** **Reading and Writing for Life**

Meets the SDA Basic Elementary certification requirement for methods in reading and language arts. Open to employees holding a SDA Conditional certificate; is not open to students in the campus credential program. Odd summers.

EDUC 425 **2 Su** **SDA Secondary Curriculum Methods**

Meets the SDA Basic Secondary certification requirement for secondary curriculum methods. Open to practicing teachers holding a Conditional certificate; not open to students in the campus credential program. Odd summers.

EDUC 426 **2 Su** **SDA Secondary Reading Methods**

Meets the SDA Basic Secondary certification requirement for methods in secondary reading. Open to practicing teachers holding a Conditional certificate; not open to students in the campus credential program. Even summers.

EDUC 427 **1 Su** **Assessment & Evaluation for Beginning Teachers**

Introductory overview of educational assessment & evaluation as used in the elementary and secondary classroom. Meets the SDA Basic certification requirement for educational assessment. Open to practicing teachers holding a Conditional certificate. Even summers.

EDUC 430 **1-2 Su** **Kindergarten Administration**

Meets the SDA special endorsement requirements for Kindergarten teachers. Presents both SDA and state guidelines relating to student readiness and school entrance requirements. Focuses on leadership knowledge and skills needed for a successful Kindergarten program. Open to practicing teachers and students in the campus credential program. Graded S/F. Even summers.

EDUC 431 **1-2 Su** **Kindergarten Curriculum**

Meets the SDA special endorsement for Kindergarten teachers. The NAD curriculum framework forms the basis of course content. Practical applications for Kindergarten classrooms are emphasized. Open to practicing teachers and students in the campus credential program. Graded S/F. Odd summers.

EDUC 446 **2 Su** **SDA Methods in Elementary Social Studies**

Meets the SDA Basic Elementary certification requirement for methods in Social Studies. Open to practicing teachers holding a Conditional certificate; not open to students in the campus credential program. Even summers.

Education

EDUC 447 **2 Su** **Real Science, Real Learning**

Meets the SDA Basic Elementary certification requirement for methods in science & health. Open to practicing teachers holding a Conditional certificate; not open to students in the campus credential program. Odd summers.

GRADUATE COURSES:

Prerequisite: Admission to the M.Ed. program, admission to the fifth-year program or department approval.

EDUC 510 **2 Su** **Leadership in Education**

Students examine insights concerning themselves and their relationships with colleagues, stakeholders, and pupils that can make a real difference in their subsequent classroom attitudes and behavior. Even summers.

EDUC 513 **3 Su** **Advanced Instructional Strategies**

In-depth examination and use of progressive instructional strategies, including learner-centered strategies such as cooperative learning, critical thinking, project-based learning, and teaching to multiple intelligences. Corequisite: EDUC 513L. Even summers.

EDUC 513L **1 Su** **Advanced Instructional Strategies Field Experience**

A 30-hour field experience involving application of learning theory by teaching in K-12 or college classrooms using advanced instructional techniques. Corequisite: EDUC 513. Even summers.

EDUC 515 **3 Su** **Educational Assessment and Evaluation**

A multifaceted study emphasizing (a) the process of collecting information as an aid in understanding and making educational plans for pupils and (b) integrated processes for determining the nature and extent of pupil learning and development. In addition to authentic assessment, commonly used teacher-made and standardized tests are studied. Odd summers.

EDUC 516 **3 Su** **American Curriculum**

People and events that have shaped curriculum development in the United States. Includes an exploration of current and innovative school models, including Quality Schools, charter and magnet schools. Even summers.

EDUC 517 **2 Su** **Current Issues in Education**

Contemporary controversial issues in public and private education. Students become aware of possible alternatives in handling the issues, and to use their creativity to search for alternate solutions. Repeatable for credit. Odd summers.

EDUC 525 **3 Su** **Teaching Children with Reading Difficulties**

Diagnostic procedures and assessment instruments used to identify reading difficulties. Emphasis on instructional techniques used for remediation. Corequisite: EDUC 525L. Odd summers.

EDUC 525L **1 Su** **Teaching Children with Reading Difficulties Field Experience**

A 30-hour field experience that involves assessing and diagnosing reading difficulties, writing assessment reports and recommendations, and developing instructional plans for children identified as needing reading intervention and/or remediation. Includes critical analysis and development of learner-centered language and literacy instructional techniques, with emphasis on the remediation of elementary pupils and/or middle school/high school students with reading difficulties. Corequisite: EDUC 525. Odd summers.

EDUC 530 **3 Su** **Brain Research and Learning**

A critical examination of current investigations of cognitive aspects of learning. Odd summers.

EDUC 537 **3 Su** **Advanced ESL Methods and Materials**

Theory and practice of second language teaching methods and materials, focusing specifically on the teaching and learning of literacy skills. Corequisite: EDUC 537L. Even summers.

EDUC 537L **1 Su** **Advanced ESL Methods and Materials Field Experience**

A teaching practicum that allows students to apply learned theory in a language classroom. Field teaching will be arranged according to students' interests and/or specific program needs. Corequisite: EDUC 537. Even summers.

EDUC 538 **2 Su**
Computers in the Classroom

The uses of electronic media to communicate through collaborative tools, multimedia, web pages, and print media. Emphasis on how technology can be used to plan, locate, evaluate, select, and use information to solve problems and draw conclusions. Prerequisite: EDUC 238L. Corequisite: EDUC 538L.

EDUC 538L **1 Su**
Computers in the Classroom Laboratory

Cutting-edge technologies to enhance teaching and learning. Applications include Hyperstudio, Powerpoint, web-page design, videoconferencing, and desktop publishing. Corequisite: EDUC 538.

EDUC 550 **3 Su**
Advanced Study of Exceptional Children in the Classroom

Strategies for teaching students with learning disabilities in special and regular classrooms. Addresses curriculum content and specific strategies and materials related to each academic area. Includes collection and use of formal and informal assessment information for designing the content of Individual Educational Programs (IEP) for students with disabilities in academic and behavioral areas. Prerequisite: EDUC 350. Odd summers.

EDUC 559 **1-2 Su**
Small Schools Curriculum

Meets the SDA requirements for a professional endorsement as a Small Schools Specialist. Focus is given to SDA curriculum guides, with a special focus on how to manage instruction in a multi-grade, multi-age setting. Open to practicing teachers holding at least a Conditional certificate; not open to students in the campus credential program. Graded S/F. Even summers.

EDUC 560 **1-2 Su**
Small Schools Administration

Meets the SDA requirements for a professional endorsement as a Small Schools Specialist. Focus is given to leadership skills, especially the organization knowledge and skills needed to manage a school program, while also teaching full time. Open to practicing teachers holding at least a Conditional certificate; not open to students in the campus credential program. Graded S/F. Odd summers.

EDUC 566 **3 Su**
Advanced Health Education

A study of the key health concerns of youth today and how a teacher creates an environment to prevent, change or cope with health problems. Focus on local, state, and federal laws concerning health issues, communicating to students and parents, and developing skills toward advocacy. Even summers.

EDUC 595 **1-3 Su**
Independent Study

Individual study open to students with adequate preparation in the proposed area. Repeatable to a maximum of 3 credits.

EDUC 596 **2 Su**
Methods in Research

Principles of disciplined inquiry and an introduction to the methods of research including planning, using resources, reviewing literature, developing methodology, and communicating evidence verbally and visually.

EDUC 597 **1-5 Su**
Action Research Project

The culmination of the master's degree program, involving a practical application of theoretical concepts in an actual classroom situation. Research methods and literature review are presented. After receiving formal project approval, students implement the project and, upon completion, prepare a formal written report to be shared orally with the Education faculty and other graduate students during the summer quarter. Prerequisite or corequisite: EDUC 596. Qualifies for IP grading.

Degree Completion Courses: Early Childhood Education

Available only in the Bachelor of Science in Early Childhood Education (B.S.E.C.E.) curriculum, an off-campus degree completion program.

UPPER-DIVISION COURSES:

ECE 311 **3**
Speech and Language of Children

Development of speech and language in children from birth to age six. Introduces differential diagnosis and treatment planning for children with delayed language development.

ECE 330 **4**
Literature for Children

Literature for children from infancy through grade six. Emphasis on literary quality and a broad knowledge of the best that has been written for children.

Education

- ECE 340** **Social, Emotional and Moral Development of Young Children** **3**
The social, emotional, and moral development of young children; classroom practices to promote positive development. Topics include attachment, emotional intelligence, temperaments, perspective-taking, altruism, self-regulation, cooperation, and the socio-moral atmosphere.
- ECE 359** **Exceptional Children in the Classroom** **3**
The major categories of disabilities and giftedness, and strategies for meeting the needs of these children in the general classroom. Students learn about federal and state laws pertaining to disabilities and how to write and implement an IEP.
- ECE 370** **Math for the Young Child** **3**
A sequential approach to creating a developmentally appropriate math curriculum. Methods of teaching math concepts such as classifying, shapes, spatial sense, seriation, numbers, and measurements are taught using naturalistic, informal, and structured types of learning. Integrates math with language arts, science, art, and music and movement.
- ECE 380** **Program Planning for Infants and Toddlers** **4**
Planning developmentally appropriate programs for infants and toddlers which will promote their optimum social, emotional, and cognitive development. Continuity of care, special needs, and parent-teacher interaction are also addressed. Corequisite: ECE 381.
- ECE 381** **Program Planning for Infants and Toddlers- Practicum** **1**
30 hours of observing, evaluating, caring for, and teaching infants or toddlers representing various age categories. Corequisite: ECE 380.
- ECE 386** **Approaches to Early Childhood Education** **2**
The major approaches to early childhood education including Montessori, High Scope, Waldorf, Reggio Emilia, Head Start, Constructivist, and Cooperative. Students gain experience in writing analysis papers on several approaches and responding to and evaluating class members' papers.
- ECE 387** **Cultural Diversity** **3**
The legal basis for desegregation and multiculturalism in American education. Provides the knowledge and skills needed to be proactive in a multicultural society. Prepares students for the wide diversity of pupils. Methods for involving the family in the educational process.
- ECE 388** **Science for the Young Child** **3**
Developmentally appropriate methods of teaching science. Students learn how to teach children to explore, classify, compare, contrast, and hypothesize in physical science, biology and botany.
- ECE 389** **Management and Guidance of Children** **4**
The primary philosophical approaches to guidance and classroom management; methods that promote moral development and pro-social behavior. Students develop their own philosophy of guidance and classroom management based on observations of children, discussion, and research.
- ECE 425** **Adult Supervision and Management** **4**
The function and management of adults in child-care settings: values and goals, decision making, problem solving, and the management process as applied to the individual and the organization. Principles and guidelines for developing a good mentor-teaching program.
- ECE 431** **Administration and Supervision of Early Childhood Programs I** **4**
The techniques and knowledge needed to set up and administer a quality early childhood center, including assessment of community need, licensing guidelines, board selection, budget and financial planning, development of the center (equipping, staffing, enrolling children), evaluation, and promotion of parent and community support.
- ECE 432** **Administration and Supervision of Early Childhood Programs II** **4**
The key competencies required for marketing, recruitment, human resource management, facilities and risk management, professional development, and leadership skills.
- ECE 433** **Administration and Supervision of Early Childhood Programs -Practicum** **1**
30 hours of assisting the director of an early childhood center in a variety of ways including creating newsletters, billing, registration of children, public relations, checking for room ratios, and planning fund raising events.

ECE 440 **3**
Emergent Literacy and Literacy Strategies

The core components of a literacy program for preschool age children (3-5 years) including oral language development, phonemic awareness, print awareness, and alphabetic knowledge. Emphasis on understanding the research that supports the importance of each component, strategies for teaching, assessment tools to monitor student progress, and creating classroom environments that are rich in language and literacy learning opportunities, including actively integrating music, movement, and art in to the literary curriculum. Students develop core lessons. Corequisite: ECE 441.

ECE 441 **1**
Emergent Literacy and Literacy Strategies-Practicum

Students teach a child, between the ages of three and five, who has been identified by the classroom teacher as needing additional help in literacy development. They produce strategies for teaching each component of literacy development, teach the child using these strategies, and use assessment tools to monitor the child's progress. Corequisite: ECE 440.

ECE 471 **2**
Early Childhood Senior Seminar

A capstone course that includes a competency portfolio preparation and the discussion of topics relevant to the student teaching experience that is required before graduation. The portfolio includes the documentation needed to meet the 13 Early Childhood Education Performance Expectations.

Note: The following general education courses are taught by members of the Religion faculty.

RELB 305 **4**
Biblical Perspectives

Historical concepts and themes of the Bible that relate most directly to effectiveness in early childhood education practice and public life.

RELT 310 **4**
Ethics and Personal Values

Spiritual formation, ethics and world view, and their shaping influence on personal values, early childhood education, and public life.



Faculty

James Robertson, director; Levi Gore

Departmental Office: 238D Chan Shun Hall; 965-7030

Degrees and Programs

Emergency Services, A.S. 109

The EMERGENCY SERVICES PROGRAM prepares students for the position of emergency medical technician (EMT) as well as other positions in related fields such as offices of emergency services and firefighting. Students who wish to continue their education upon completion of the program are academically prepared to enter paramedic school. Training includes vocational certifications in CPR, incident command, emergency vehicle operations, and emergency medical technician – basic.

Students are encouraged to gain practical experience while in the program. Working as an EMT or emergency department technician provides valuable experience as well as income. Volunteer opportunities are available through the local fire department and the ambulance company. Both organizations are largely staffed by college students and provide extra-curricular training as well as a way to serve the community. Many volunteer firefighters and EMTs from Angwin have used their training and experience to transition into paid positions.

Major in Emergency Services, A.S.

A minimum of 48.5 hours

► Required Core Courses (21.5 hours):

EMER 101	Introduction to Emergency Services	3
EMER 104-105	Emergency Medical Technician-Basic	4-4
EMER 225	Public Health	3
EMER 235	Emergency Vehicle Operation	2
EMER 255	Emergency Scene Management	3
EMER 273	Emergency Medical Practicum	2
EMER 396	Emergency Services Seminar	.5

► Required Cognate Courses (27 hours):

BIOL 101	Human Anatomy	5
BIOL 102	Human Physiology	5
BIOL 223	Medical Terminology	2
MGMT 261	Introduction to Management	3
MICR 134	General Microbiology	5
SPAN 105	Spanish for Health Care Professionals	3

At least one of the following courses: 4

SOCI 121	Introduction to Sociology (4)
SOCI 232	American Social Problems (4)

Recommended Cognate Course

NURS 212	Pharmacology (3)
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Emergency Services

Emergency Services

LOWER-DIVISION COURSES:

EMER 101 **3 F** **Introduction to Emergency Services**

The scope and practice of the EMT at the different levels of certification/licensure. Topics include CPR, first aid, incident command, and leadership skills. Upon successful completion of the course, students will receive a California First Responder certificate.

EMER 104-105 **4-4 W-S** **Emergency Medical Technician-Basic**

Emergency medical training necessary to provide pre-hospital basic life support to the sick and injured. Meets, in part, the requirements for California EMT-Basic certification. Must be 18 years old by course completion to be eligible for certification. Three lectures and one laboratory per week. Prerequisite: EMER 101 or CPR for the Healthcare Provider. EMER 104 or equivalent is a prerequisite for EMER 105.

EMER 225 **3 W** **Public Health**

An overview of the American health system and public health education. Emphasis on the role of the pre-hospital medical provider in public health issues. Topics include disease prevention and treatment and the special concerns associated with the health of children and senior citizens; includes child and elder abuse. Prerequisite: EMER 105 or equivalent.

EMER 235 **2 F** **Emergency Vehicle Operations**

The safe operation of emergency vehicles during all phases of use, including but not limited to emergency response. One lecture and one laboratory per week. Prerequisite: EMER 105 or equivalent and permission of the instructor.

EMER 255 **3 S** **Emergency Scene Management**

Application of the nationally adopted incident command system to emergency scenes. Emphasizes proper use of resources, interfacing with allied agencies, and decision-making under stress. Prerequisite: EMER 105 or equivalent.

EMER 273 **2 F, W, S** **Emergency Medical Practicum**

Application of skills from EMER 105 in a pre-hospital or hospital setting. Prerequisite: Current EMT certification by the LEMSA. Qualifies for IP grading.

EMER 396 **.5 S** **Emergency Services Seminar**

Single topics of current interest in the emergency medical field presented by guest lecturers.



Faculty

*Cynthia Westerbeck, chair; Janet Borisevich-Mezenov,
Linda Gill, Georgina Hill, Sara Kakazu, John McDowell,
Maria Rankin-Brown, Heather Reid*

Mei Ann Teo, Artist in Residence

Departmental Office: Stauffer Hall; 965-7550

Degrees and Programs

English, B.A.	111
Teaching Credential	112
TESOL Certificate	112

English majors discover a great variety of literature, including traditional English and American texts as well as newly appreciated works by women and minority writers. They explore all the genres from many perspectives: recent critical approaches, history of ideas, classical studies, and Christianity and literature. They develop and refine their writing in both critical and creative writing courses.

English majors may select one of the five emphases: British and American Literature, Drama, English Education, Teaching English to Speakers of Other Languages, and Writing.

Major in English, B.A.

A minimum of 59 hours (41 upper-division hours)

► Required Core Courses (41 hours):

ENGL 223	British Literature Survey	4
ENGL 224	Literary Theory	4
ENGL 335	Survey of Linguistics (Corequisite: ENGL 134*)	4 (1)
ENGL 346	Creative Writing (any subtitle)	4
ENGL 355	American Colonial and Romantic Periods	4
ENGL 490	Senior Seminar	1

At least one of the following courses:

ENGL 356	American Realism and Naturalism (4)	4
ENGL 357	American Modernism (4)	4

At least one of the following courses:

ENGL 464	English Medieval Literature (4)	4
ENGL 465	English Renaissance Literature (4)	4

At least two of the following courses:

ENGL 466	The Enlightenment in Britain (4)	8
ENGL 467	The Romantic Age in Britain (4)	
ENGL 468	The Victorian Age in Britain (4)	
ENGL 469	The Modern Age in Britain (4)	
ENGL 470	Contemporary Literature in English (4)	

At least one of the following courses:

ENGL 484	Literature of the Bible (4)	4
ENGL 485	The Classical World (4)	

► Emphases (choose one- see next page)

1. British & American Literature
2. Drama
3. English Education
4. Teaching English to Speakers of Other Languages
5. Writing

* This requirement may be met by completion of a course or satisfactory performance on a departmental examination.

English

1. Emphasis in British & American Literature (18 hours)

ENGL 389	Junior Seminar	1
ENGL 474	Shakespeare	4
ENGL 492	Senior Project	2

At least 11 hours from the following: 11
Additional upper-division ENGL literature courses in British periods, American periods, genres, and themes; at least one genre or theme course is required.

2. Emphasis in Drama (18 hours)

DRMA 141/341	Dramatic Arts Society (3 quarters)	1-1-1
DRMA 229	Fundamentals of Dramatic Performance	3
DRMA 239	Techniques of Stage Production	3
DRMA 339	Specialized Training (any 2 topics)	2-2
ENGL 352	Literary Theme: Bay Area Theater Season	3

At least one of the following courses: 2-4
ENGL 473 Shakespeare in Performance (2-3)
ENGL 474 Shakespeare (4)

3. Emphasis in English Education (28-29 hours)

DRMA 229	Fundamentals of Dramatic Performance	3
ENGL 301	Great Books: Global Perspectives	4
ENGL 307	Composition Theory	3
ENGL 331	Literature for Adolescents	4
ENGL 336	Second Language Acquisition	4
ENGL 434	Advanced English Syntax	4
JOUR 141	Newswriting and Reporting	3

At least one of the following courses: 3-4
ENGL 473 Shakespeare in Performance (3)
ENGL 474 Shakespeare (4)

4. Emphasis in Teaching English to Speakers of Other Languages (20 hours)

ENGL 320	Cultural and Psychological Learner Differences	2
ENGL 336	Second Language Acquisition	4
ENGL 337	ELL Pedagogy	4
ENGL 434	Advanced English Syntax	4
ENGL 443	ESL Curriculum Development and Classroom Management	4
ENGL 491	ESL Teaching Practicum	2

5. Emphasis in Writing (18 hours)

ENGL 389	Junior Seminar	1
ENGL 492	Senior Project	2

At least 15 hours from the following: 15
ARTD 253 Publication Technology (3)
ENGL 346 Creative Writing (up to 15 credits)

ENGL 348	Literary Genres (4)
ENGL 434	Advanced English Syntax (4)
ENGL 494	Writing Internship (3)*
JOUR 141	Newswriting and Reporting (3)
JOUR 244	Copy Editing (2)
JOUR 443	Investigative Reporting and Writing (3)
MDIA 140	Short Scriptwriting (2)
PREL 350	Promotional Writing for the Media (3)

Recommended for students wishing to go into publishing:
ARTD 110 Design: Tools, Materials and Techniques (2)
ARTD 261 Fundamentals of Graphic Design (3)

Teaching Credential

Students desiring to enter a program of studies leading to a California teaching credential in English should take the B.A. degree in English with the emphasis in English Education. Students will need to pass the English portion of the CSET exam one quarter prior to the full-time student teaching experience. Students are invited to discuss the program with their major advisor in the English Department.

Those who plan to teach on the secondary level should consult with the credential analyst in the Education Department and should become acquainted with the specific requirements for admission to and successful completion of the Teacher Education Program as outlined in the section entitled "Education" in this catalog.

TESOL Certificate (24-25 hours)

ENGL 291	ESL Tutoring Practicum	1
ENGL 320	Cultural and Psychological Learner Differences	2
ENGL 335	Survey of Linguistics (Corequisite: ENGL 134**)	4 (1)
ENGL 336	Second Language Acquisition	4
ENGL 337	ELL Pedagogy	4
ENGL 443	ESL Curriculum Development and Classroom Management	4
ENGL 491	ESL Teaching Practicum	2

At least one of the following courses: 3-4
ANTH 124 Cultural Anthropology (4)
COMM 330 Intercultural Communication (3)
ENGL 434 Advanced English Syntax (4)

* Most writing internships require JOUR 141 as a prerequisite.

** This requirement may be met by completion of a course or satisfactory performance on a departmental examination.

Minor in Drama

A minimum of 30 hours (18 upper-division hours)

► Required Electives (30 hours):

At least 30 hours from the following:		30
DRMA 141	Dramatic Arts Society (up to 3 credits)	
DRMA 229	Fundamentals of Dramatic Performance (3)	
DRMA 239	Techniques of Stage Production (up to 6 credits)	
DRMA 339	Specialized Training (up to 6 credits)	
DRMA 341	Dramatic Arts Society (up to 3 credits)	
ENGL 346	Creative Writing (4) (Playwriting or Screenwriting)	
ENGL 348	Literary Genres—Drama (4)	
ENGL 352	Theme Course—Bay Area Theater Season (3)	
ENGL 473	Shakespeare in Performance (2-3)	
ENGL 474	Shakespeare (4)	

Minor in English

A minimum of 30 hours (22 upper-division hours)

► Required Courses (12 hours):

ENGL 223	British Literature Survey	4
ENGL 224	Literary Theory	4
ENGL 355	American Colonial and Romantic Periods	4
At least 18 hours from the following:		18
ENGL 335	Survey of Linguistics (4)	
ENGL 348	Literary Genres (4)	
ENGL 352	Theme Courses (3)	
ENGL 356	American Realism and Naturalism (4)	

ENGL 357	American Modernism (4)
ENGL 464	English Medieval Literature (4)
ENGL 465	English Renaissance Literature (4)
ENGL 466	The Enlightenment in Britain (4)
ENGL 467	The Romantic Age in Britain (4)
ENGL 468	The Victorian Age in Britain (4)
ENGL 469	The Modern Age in Britain (4)
ENGL 470	Contemporary Literature in English (4)
ENGL 473	Shakespeare in Performance (3)
ENGL 474	Shakespeare (4)
ENGL 484	Literature of the Bible (4)
ENGL 485	The Classical World (4)

Minor in Writing

A minimum of 30 hours (20 upper-division hours)

► Required Electives (30 hours):

At least 30 hours from the following:		30
ARTD 253	Publication Technology (3)	
ENGL 346	Creative Writing (up to 20 credits)	
ENGL 348	Literary Genres (4)	
ENGL 434	Advanced English Syntax (4)	
ENGL 494	Writing Internship (3)*	
JOUR 141	Newswriting and Reporting (3)	
JOUR 244	Copy Editing (2)	
JOUR 443	Investigative Reporting and Writing (3)	
MDIA 140	Short Scriptwriting (2)	
PREL 350	Promotional Writing for the Media (3)	

* Most writing internships require JOUR 141 as a prerequisite.

Drama

LOWER-DIVISION COURSES:

DRMA 141 1 F, W, S Dramatic Arts Society

Study and performance of dramatic texts. Students audition for parts and are assigned a variety of roles and functions, including technical. Repeatable to a maximum of 4 credits.

DRMA 229 3 W, S Fundamentals of Dramatic Performance

Improvisation, voice, movement, and acting. Development of stage presence. Introduction to characterization and dramatic text. Includes public performance.

DRMA 239 3 F Techniques of Stage Production

Students will cultivate the director's eye and vision through the exploration of various acting methods such as Viewpoints, Suzuki, and Montage Creation. Culminates in a final performance. Repeatable to a maximum of 6 credits.

UPPER-DIVISION COURSES:

DRMA 339 2 Specialized Training

Prepares students in the theory and skills needed to participate in theater productions using a variety of dramatic styles and genres. Repeatable for credit under different subtitles such as

Acting for Singers

Acting Shakespeare

Improvisational Theater

Movement for Musical Theater

(May not be available every year. See each year's class schedule for current offerings.)

English

DRMA 341 **1 F, W, S**
Dramatic Arts Society
(See DRMA 141)

English

For English placement information, see the section of this catalog entitled "General Education".

SERVICE COURSES:

*(Not applicable to a major or minor in this department)**

ENGL 099 **4 F**
Developmental Reading and Writing

Emphasis on reading for significant details, reading for the main idea, scanning, critical reading, rate flexibility, and vocabulary development. Required of students who do not meet minimum standards of admission for ENGL 100.

ENGL 100 **4 F, W**
Introduction to Reading and Composition

For students who need to strengthen their command of basic reading and writing skills as shown by national test scores, secondary-school grades, and diagnostic testing. Emphasis on analytical reading, writing, and usage. Required of students who do not meet minimum standards for admission to ENGL 101. Corequisite: ENGL 133**.

* *Exception: ENGL 301 is applicable to the B.A. in English with an emphasis in English Education.*

** *This corequisite is required only for those students who demonstrate need for extra support in syntax, mechanics, and basic editing (based on placement testing and proficiency examinations).*

ENGL 101-102 **4-4 F, W, S, Su**
College English

Integration of composition and reading. ENGL 101 emphasizes critical reading of thematic units, examining expository essays, short stories, and poetry. Writing includes the personal and expository essay but culminates in the use of library source materials and standard documentation. Prerequisite: ENGL 100 or equivalent. Corequisite: ENGL 133**.

ENGL 102 continues the critical reading of thematic units, including study of short stories, drama, and poetry. Use of library source materials is expanded and refined in the production of a research paper. Prerequisite: ENGL 101 or equivalent. Corequisite: ENGL 133**.

ENGL 133 **1 F, W, S**
Practicum in Writing and Syntax

Individualized practice in syntax, mechanics, and basic editing. Required of students who demonstrate need for extra support in these areas based on placement testing and proficiency exams in ENGL 100, 101, and 102. Repeatable to a maximum of 3 credits.

ENGL 301 **4 F, W, S,**
Great Books

Thematically organized works generally recognized as distinguished explorations and expressions of significant issues. Literature is selected from several genres, countries and time periods. Readings, lectures, discussions, reports and papers. Repeatable for credit under different subtitles. Current subtitles include:

Class and Gender
Global Perspectives
Literature and the Arts
Mazes & Labyrinths
Salvation Stories
Travel Narratives
Ventures in Science

Prerequisite: ENGL 102 or equivalent; enrollment limited to juniors and seniors.

LOWER-DIVISION COURSES:

ENGL 134 **1 W**
Review of English Syntax

The classification and application of English grammar. Covers the following sentence components: subjects, objects, verbs, adverbs, adjectives, prepositions, connectors, phrases, clauses, etc. Corequisite: ENGL 335.

(ENGL 101-102 or equivalent is prerequisite to ENGL 223 and courses beyond.)

ENGL 223 **4 F**
British Literature Survey

British literature from the Anglo-Saxon period to the 21st century. Provides historical context for the development of major literary genres.

ENGL 224 **4 W**
Literary Theory

Major literary theories of the 20th century and their application to selected texts. Students begin developing a writing portfolio that is continued throughout the major and is presented during the Senior Seminar, ENGL 490.

ENGL 291 **1 F, W, S, Su**
ESL Tutoring Practicum

Methods in assisting English language learners one-on-one in listening, speaking, pronunciation, reading, vocabulary, grammar, writing and American customs.

UPPER-DIVISION COURSES:

ENGL 307 **3 F**
Composition Theory and Pedagogy

Contemporary theories of composition and the writing process: inventing, composing, revising, and editing. Also includes developing assignments, designing writing courses, and assessment of student writing. Even years.

ENGL 320 **2 S**
Cultural and Psychological Learner Differences

Effects on language learning of customs, values, language aptitude, motivation, learner strategies, personality, and interaction between learner characteristics and types of instruction. Even years.

ENGL 330 **4 W**
Literature for Children

Literature suitable for children from infancy through grade six. Emphasizes a broad spectrum of primary texts. Even years.

ENGL 331 **4 W**
Literature for Adolescents

Literature suitable for young adult students from grade seven through senior high school. Odd years.

ENGL 335 **4 W**
Survey of Linguistics

Linguistic concepts and methods: language development and second language acquisition; physiology of human speech; elementary phonology, morphology, syntax, and semantics; language change; dialectology; language and thought; ethical issues in language use. Corequisite: ENGL 134.*

ENGL 336 **4 W**
Second Language Acquisition

How English is learned as a second language. Examination of each aspect of language learning: speaking, pronunciation, listening, grammar, reading, writing, and vocabulary development. Includes attention to cultural and individual learning differences. Opportunities are provided to tutor students. Required in the emphasis in English Education and the emphasis in TESOL. Corequisite: ENGL 134.* Recommended prerequisite: ENGL 335. Odd years.

ENGL 337 **4 S**
ELL Pedagogy

(See also EDUC 337)
 Current methods of teaching English Language Learners. Concentrates on practical, innovative techniques that foster development of listening, speaking, pronunciation, grammar, reading, writing, and vocabulary in a variety of content areas.

ENGL 346 **4 F, W, S**
Creative Writing

(See also MDIA 346.)
 Techniques of and practice in writing various literary forms. Repeatable for credit under different subtitles:

Nonfiction
Playwriting
Poetry
Screenwriting
Short Story

ENGL 348 **4**
Literary Genres

Repeatable for credit under different subtitles, such as drama, poetry, and the novel. Each course includes representative works from the genre under study and emphasizes historical development of the genre. (May not be available every year. See each year's Class Schedule for current offerings.)

ENGL 352 **3**
Theme Courses

Courses with an interdisciplinary focus. Repeatable for credit under different subtitles, such as Bay Area Theater. (May not be available every year. See each year's Class Schedule for current offerings.)

The period courses in American literature (ENGL 355-357) explore a variety of genres and authors representing each literary "period" listed. Though the emphasis is on the reading of primary works, students also apply a variety of interpretive approaches to the literature.

ENGL 355 **4 F**
American Colonial and Romantic Periods

American authors from colonial times through the romantic era, emphasizing historical context.

ENGL 356 **4 S**
American Realism and Naturalism

Authors from American realists and naturalists. Even years.

ENGL 357 **4 W**
American Modernism

20th century American authors to 1950. Odd years.

ENGL 389 **1 S**
Junior Seminar

Techniques of literary research; choice of research topic for completion in ENGL 492 Senior Project.

ENGL 434 **4 F**
Advanced English Syntax

A review of traditional English grammar, with an introduction to transformational-generative techniques. Recommended prerequisites: ENGL 134, 335. Odd years.

ENGL 443 **4 W**
ESL Curriculum Development and Classroom Management

Assessing and adapting current English language teaching materials that meet specific learner needs. Includes techniques in successful English language classroom management. Recommended prerequisites: ENGL 336, 337. Even years.

* *This requirement may be met by completion of a course or satisfactory performance on a departmental examination.*

English

The period courses in English literature (ENGL 464-470) explore a variety of genres and authors representing each literary "period" listed. Though the emphasis is on the reading of primary works, students also apply a variety of interpretive approaches to the literature.

ENGL 464 **4 F** **English Medieval Literature**

Texts from British Medieval literature. Even years.

ENGL 465 **4 F** **English Renaissance Literature**

Texts from British Renaissance literature. Odd years.

ENGL 466 **4 W** **The Enlightenment in Britain**

British writers from the Restoration and Neoclassic tradition. Odd years.

ENGL 467 **4 S** **The Romantic Age in Britain**

British writers of the first third of the 19th century. Odd years.

ENGL 468 **4 F** **The Victorian Age in Britain**

British writers from 1830 to 1880. Even years.

ENGL 469 **4 W** **The Modern Age in Britain**

British writers from 1880 to 1950 with focus on British Modernists. Even years.

ENGL 470 **4 S** **Contemporary Literature in English**

Literature in English since 1950. Even years.

ENGL 473 **2-3 Su** **Shakespeare in Performance**

An in-depth encounter, both in text and performance, with the four Shake-

speare plays currently being presented at the Oregon Shakespeare Festival in Ashland, Oregon. Includes daily seminars, a backstage tour, and an interview with an actor. The three-credit option requires completion of an additional paper or research project. Qualifies for IP grading.

ENGL 474 **4 W** **Shakespeare**

A selection of Shakespeare's histories, romances, tragedies, comedies, and poetry in the context of his times. Even years.

ENGL 484 **4 S** **Literature of the Bible**

A study of the literary nature of the Bible. Odd years.

ENGL 485 **4 S** **The Classical World**

Ancient Greece and Rome studied through primary texts, including Greek and Roman epics, dramas, histories, and philosophical works. Even years.

ENGL 490 **1 F** **Senior Seminar**

Guides students in their preparation for applying to graduate school or entering the job market, including preparation for professional exams (GRE, CSET), job interviews, professional statements and cover letters, and writing samples. Requires completion of the senior portfolio and senior exit survey. Qualifies for IP grading.

ENGL 491 **2 F, W, S** **ESL Teaching Practicum**

Guided exposure to the ESL classroom through observation and supervised teaching. Prerequisites: ENGL 336 and 337.

ENGL 492 **2 W** **Senior Project**

Completion and presentation of the independent project begun in ENGL 389: Junior Seminar. Requires a literary paper of approximately 20 pages, or a creative project of comparable scope. Qualifies for IP grading.

ENGL 494 **3 F, W, S** **Writing Internship**

Supervised experience in writing on the job. A student may apply for an internship for one quarter in a department-approved workplace (examples: a college public relations office, a hospital department of communications or development, or other nonprofit organization or public relations firm). From this supervised experience in writing the student presents a portfolio containing a variety of finished documents. Qualifies for IP grading.

ENGL 495 **1-3 F, W, S** **Independent Study**

Repeatable to a maximum of 3 credits.

English as a Second Language

SERVICE COURSE:

(Not applicable to a major or minor in this department)

ENSL 100 **1-4 F, S** **English for Special Purposes**

Practical language application for advanced ESL and other international students. Customized in response to student needs and interests in the following areas: professional pronunciation, advanced ESL composition, academic skills, American culture and institutions, and understanding the Christian culture. Repeatable for credit.



Faculty

Michael Hellie, chair; Charles Evans, Elaine Neudeck, Robert Paulson

Departmental Office: 60 Pacific Auditorium; 965-6344

Degrees and Programs

Physical Education with Teacher Education Emphasis, B.S.	117
Exercise Science, B.S.	118
Teaching Credential	118

The EXERCISE SCIENCE, HEALTH, & NUTRITION (ESHN) DEPARTMENT serves the Pacific Union College community by providing opportunities for career development in sports professions, for instruction, and for participation.

The department has the following objectives:

- to give thorough instruction in the requirements for participation and leadership in sports activities,
- to develop a knowledge and understanding of health and safety concepts,
- to offer a wide variety of suitable activities, in and out of the classroom, in an environment that supports Christian values,
- to encourage each individual to achieve a high level of total fitness and neuromuscular coordination supporting a wholesome lifestyle, and
- to encourage daily vigorous exercise for everyone in all stages of life.

The Physical Education degree with emphasis in Teacher Education is designed for students wishing to become sports teachers. The Exercise Science degree is designed for the student who either seeks to enter medical school or advance into athletic training. This program recommends the required cognate courses for a pre-professional program and has the required courses for entering a sport medicine graduate program in athletic training.

Major in Physical Education with Teacher Education Emphasis, B.S.

A minimum of 84 hours (44 upper-division hours)

► **Required Core Courses (68 hours):**

ESAC 368	Water Safety Instructor	2
ESAC 370	Lifeguard Training	2
ESTH 166	Historical Foundations of Physical Education	2
ESTH 170	Care and Prevention of Athletic Injuries	2
ESTH 181	Basic Movement	2
ESTH 183	Theory and Technique of Track and Field	2
ESTH 260	Theory and Technique of Football	2
ESTH 261	Theory and Technique of Volleyball	2
ESTH 262	Theory and Technique of Basketball	2
ESTH 263	Theory and Technique of Softball	2
ESTH 264	Theory and Technique of Soccer	2
ESTH 271-2-3	Theory and Technique of Officiating	2-2-1
ESTH 287	Theory and Technique of Individual Sports	2
ESTH 365	Outdoor Experience	3
ESTH 371	Kinesiology	4
ESTH 372	Physiology of Exercise	4
ESTH 373	Corrective Physical Education	3
ESTH 374	Motor Learning	4
ESTH 381	Theory and Technique of Racquet Sports	2
ESTH 384	Theory and Technique of Rhythmic Activities	2
ESTH 461	Coaching I	2
ESTH 470	Management of Physical Education Programs	3
ESTH 471	Evaluation in Physical Education	3
ESTH 476	Physical Education for Children	3
ESTH 483	Theory and Technique of Weight Training and Developmental Physical Education	2
ESTH 490	Ethics in Physical Education	2
HLED 166	Health Education	2

► **Required Cognate Courses (16 hours)**

BIOL 101	Human Anatomy	5
BIOL 102	Human Physiology	5

Exercise Science, Health and Nutrition

COMM 330	Intercultural Communication	3
FDNT 235	Nutrition	3

Students majoring in physical education are expected to choose a minor in consultation with their major advisor.

Major in Exercise Science, B.S.

A minimum of 63 hours (32 upper-division hours):

► Required Core Courses (55 hours):

BIOL 101	Human Anatomy	5
BIOL 102	Human Physiology	5
ESAC 370	Lifeguard Training	2
ESTH 166	Historical Foundations	2
ESTH 170	Care and Prevention of Athletic Injuries	2
ESTH 181	Basic Movements	2
ESTH 265	Theory and Technique of Aquatic Fitness	2
ESTH 287	Theory and Technique of Individual Sports	2
ESTH 371	Kinesiology	4
ESTH 372	Physiology of Exercise	4
ESTH 373	Corrective Physical Education	3
ESTH 374	Motor Learning	4
ESTH 378	Fitness Assessment and Exercise Prescription	3
ESTH 381	Theory and Technique of Racquet Sports	2
ESTH 471	Evaluation in Physical Education	3
ESTH 483	Theory and Technique of Weight Training	2
ESTH 490	Ethics in Physical Education	2
ESTH 492	Practicum in Sports Science	3
FDNT 235	Nutrition	3
HLED 166	Health Education	2

► Required Core Electives (6 hours):

At least 6 hours from the following:

<i>(To be chosen in consultation with the major advisor)</i>		6
ESTH 183	Theory and Technique of Track and Field (2)	
ESTH 260	Theory and Technique of Football (2)	
ESTH 261	Theory and Technique of Volleyball (2)	
ESTH 262	Theory and Technique of Basketball (2)	
ESTH 263	Theory and Technique of Softball (2)	
ESTH 264	Theory and Technique of Soccer (2)	

Recommended Cognate Courses:

<i>(For students earning pre-professional degrees)</i>	
BIOL 111-112-113	Biological Foundations (15)
BIOL 320	Cellular and Molecular Biology (4)
CHEM 111-112-113	General Chemistry (15)
CHEM 371-372-373	Organic Chemistry (12)
CHEM 381	Biochemistry I (4)
CHEM 482	Biochemistry II (4)
PHYS 111-112-113	General Physics (12)

The B.S. degree curriculum (including all recommended cognates) meets or exceeds all undergraduate science requirements for pre-medical and pre-dental students applying to Loma Linda University and many other schools.

Teaching Credential

Students desiring to enter a program of studies leading to a California teaching credential in physical education should take the B.S. degree in Physical Education, Teacher Education Emphasis. Students will need to pass the physical education portion of the CSET exam one quarter prior to doing full-time student teaching. Students are invited to discuss the program with their major advisor in the Exercise Science, Health, & Nutrition Department.

Those who plan to teach on the secondary level should consult with the credential analyst in the Education Department and should become acquainted with the specific requirements for admission to and successful completion of the Teacher Education Program as outlined in the section entitled "Education" in this catalog.

Minor in Physical Education

A minimum of 30 hours (12 upper-division hours)

► Required Courses (10 hours):

ESTH 166	Historical Foundations of Physical Education	2
ESTH 170	Care and Prevention of Athletic Injuries	2
ESTH 470	Management of Physical Education Programs	3
ESTH 471	Evaluation in Physical Education	3

► Required Electives (20 hours):

<i>(To be chosen in consultation with the major advisor)</i>		
<i>At least 10 hours from the following:</i>		10
ESTH	Theory and Technique courses	
<i>At least 10 hours from the following:</i>		10
ESTH	Any ESTH courses	

Physical Education Activity

LOWER-DIVISION COURSE:

ESAC 100 **Adaptive Physical Education** **1**
Requires physician's certification of need. Repeatable for credit.

Aerobics

All aerobics courses are repeatable for credit.

LOWER-DIVISION COURSES:

ESAC 101A **Jogging** **1**

ESAC 103A **Physical Fitness** **1**

ESAC 105A **Fitness for Women** **1**

ESAC 107A **Swim and Stay Fit** **1**

ESAC 109A **Hydro-Aerobics** **1**

UPPER-DIVISION COURSES:

ESAC 304A **Cycling** **1**

ESAC 338A **Ultimate Frisbee** **1**

Aquatics

All aquatics courses are repeatable for credit.

LOWER-DIVISION COURSE:

ESAC 158 **Elementary Swimming** **1**

UPPER-DIVISION COURSES:

ESAC 368 **Water Safety Instructor** **2**
Recommended prerequisite: Red Cross Level 5.

ESAC 370 **Lifeguard Training** **2**
Recommended prerequisite: Red Cross Level 5.

Individual and Dual Sports

All individual and dual sports courses are repeatable for credit.

LOWER-DIVISION COURSES:

ESAC 133 **Mountain Biking** **1**

ESAC 171 **Pickleball** **1**

ESAC 174 **Elementary Badminton** **1**

ESAC 176 **Elementary Weight Training** **1**

ESAC 178 **Canoeing** **1**

ESAC 180 **Elementary Golf** **1**

ESAC 192 **Elementary Skiing/Snowboarding** **1**

ESAC 194 **Elementary Tennis** **1**

UPPER-DIVISION COURSES:

ESAC 374 **Intermediate Badminton** **1**

ESAC 376 **Intermediate Weight Training** **1**

ESAC 380 **Intermediate Golf** **1**

ESAC 392 **Intermediate Skiing/Snowboarding** **1**

ESAC 394 **Intermediate Tennis** **1**

Team Sports

All team sports courses are repeatable for credit.

LOWER-DIVISION COURSES:

ESAC 120 **Elementary Basketball** **1**

ESAC 123 **Baseball-Men** **1**

ESAC 124 **Flag Football** **1**

ESAC 128 **Soccer** **1**

Exercise Science, Health & Nutrition

ESAC 130 Softball	1	ESTH 181 Basic Movement Fundamentals of body movement, posture, conditioning exercises, self-testing activities; selection, evaluation, and organization of social recreational activities. Odd years.	2 F	ESTH 263 Theory and Technique of Softball Practice in and theory of softball. Development of fundamental skills of the game; analysis of skills, techniques, team strategy, rules and officiating procedures. Even years.	2 S
ESAC 132 Elementary Volleyball	1				
UPPER-DIVISION COURSES:					
ESAC 333V Advanced Volleyball-Women	1	ESTH 183 Theory and Technique of Track and Field Practice sessions and drills for developing fundamental skills and special abilities; study of rules and officiating techniques; consideration of practice scheduling and strategy. Odd years.	2 S	ESTH 264 Theory and Technique of Soccer Practice and theory of soccer. Development of fundamental skills of the game; analysis of skills, techniques, team strategy and rules.	2 S
ESAC 334V Advanced Volleyball-Men	1				
ESAC 335V Advanced Basketball-Women	1				
ESAC 336V Advanced Basketball-Men	1	ESTH 260 Theory and Technique of Football Practice in and theory of flag football. Development of fundamental skills of the game; analysis of skills, techniques, team strategy, and rules. Even years.	2 F	ESTH 265 Theory and Technique of Aquatic Fitness Emphasis on the theory of how to develop appropriate workout programs in the area of aquatics. Students learn choreography of water exercise programs in aquatic aerobics, swimming fitness, and adaptive water exercise. Students participate in individual fitness performance and develop programs for specific population demographics, specific ages, and those with special needs.	2 S
Professional and Theory					
LOWER-DIVISION COURSES:					
ESTH 166 Historical Foundations of Physical Education History of physical education, health and recreation. Effects of social expectations and world events on views of physical education and sports. An introduction to careers in these and related fields.	2 F	ESTH 261 Theory and Technique of Volleyball Practice in and theory of volleyball. Development of fundamental skills of the game; analysis of skills, techniques, team strategy, and rules. Even years.	2 F		
ESTH 170 Care and Prevention of Athletic Injuries Care and prevention of injuries associated with coaching and teaching sport and game activities in a school setting. Topics include sprains, bleeding, fractures, exposure to heat and cold, seizures, heart attacks, accidental exposure to poisons and chemicals, and other injuries requiring immediate medical attention.	2 F	ESTH 262 Theory and Technique of Basketball Analysis and practice of skills and team play; interpretation of rules; strategy and techniques of teaching. Even years.	2 W	ESTH 271-272-273 Theory and Practice of Officiating Theory of and practice in officiating at team sports, interpretation of rules, officiating techniques, examinations, and ratings. Consists of a combination of lectures and practice. Prerequisite: Previous experience in playing football, volleyball, basketball, and softball.	2-2-1 F-W-S

ESTH 287 **2 S**
Theory and Technique of Individual Sports

Development of fundamental skills and strategies in various individual activities such as handball, golf, racquetball, and archery. Emphasis on teaching techniques, officiating, rules, and organization of materials for school programs.

UPPER-DIVISION COURSES:

ESTH 365 **3 S**
Outdoor Experience

Theory and practice in camping, hiking, backpacking, and canoeing techniques. Ecological considerations, equipment and food selection, outdoor cooking, and orienteering.

ESTH 371 **4 F**
Kinesiology

A study of joints and muscular structure and their relation to physical exercise. Three lectures and one laboratory per week. Prerequisites: BIOL 101, 102. Odd years.

ESTH 372 **4 W**
Physiology of Exercise

Physiological effects of muscular exercise, physical conditioning, and training. Significance of these effects for health and for performance in activity programs. Three lectures and one laboratory per week. Prerequisites: BIOL 101, 102. Odd years.

ESTH 373 **3 S**
Corrective Physical Education

Common deviations of posture and feet; functional disturbances and crippling conditions found in school children. Survey of source material needed to plan and conduct individual, developmental, and special courses in physical education in schools. Prerequisite: ESTH 476. Odd years.

ESTH 374 **4 W**
Motor Learning

Physiological and psychological instructional considerations for learning, skill acquisition, and performance as applied to motor skills. Three lectures and one laboratory per week. Prerequisites: PSYC 121, BIOL 101, 102. Even years.

ESTH 378 **3 S**
Fitness Assessment and Exercise Prescription

Introduction to the theoretical and practical aspects of exercise assessment, exercise interpretations, and exercise prescription. Covers principles of exercise prescription with hands-on experiences using various clinical and field methods to evaluate cardiorespiratory fitness, muscular strength and endurance, flexibility and body composition. Prerequisite: ESTH 372. Odd years.

ESTH 381 **2 F**
Theory and Technique of Racquet Sports

Analysis of and practice in strokes and tactics; rules, history and skill progression for various levels of instruction. Odd years.

ESTH 384 **2 W**
Theory and Technique of Rhythmic Activities

Development of personal and teaching skills for theoretical and practical application of rhythms: the leadership of aerobic exercise, dramatic and creative play, folk rounds, and other activities. Development of skills for personal combative activities and techniques for teaching such skills. Odd years.

ESTH 461 **2 W**
Coaching I

Designed to develop skills for coaching athletic teams. Development of philosophies in harmony with Seventh-day Adventist principles concerning athletic events. Skills in team building and strategies. Practical experience included. Prerequisites: At least 3 of the following courses- ESTH 260, 261, 262, 263, 264. Odd years.

ESTH 470 **3 F**
Management of Physical Education Programs

Relationship of physical education to modern education theory. The organization of physical education activities, organization and classification of pupils; emphasis on the arrangement and construction of equipment and planning of school programs suitable to denominational schools. Odd years.

ESTH 471 **3 W**
Evaluation in Physical Education

Scientific testing in physical education: analysis and study of tests, diagnosis of physical efficiency, and physiological reactions to exercise. Evaluation of programs and student achievement through measurement technique. Odd years.

ESTH 476 **3 F**
Physical Education for Children

Activity interests of children and appropriate materials for different age levels; selection of materials and methods of presentation. Consists of a combination of lectures and practice. Satisfies one quarter of the general-education activity requirement.

ESTH 483 **2 S**

Theory and Technique of Weight Training and Developmental Physical Education

Theory and technique of weight training, analysis of exercises for the atypical student and correction of postural deviations. Open to department majors and minors. Prerequisite: ESTH 371. Even years.

ESTH 490 **2 W**

Ethics in Physical Education

The power of religion in developing Christian professionals in health, physical education and recreation. Concepts of the way God, man and Spirit relate to one another; development of Christlike leadership qualities in both instructors and students. Even years.

ESTH 492 **3 W**

Practicum in Sports Science

Combines classroom work with practical hands-on experience to prepare students to continue their education in the fields of athletic training, personal training, sports physical therapy, or sports medicine. Skills developed in the program are taken from the following areas: anatomy and physiology, athletic injury care, prevention and rehabilitation, physical therapy, fitness programs for individuals and groups, health and wellness, nutrition, and strength training. Should be taken during the student's last year at Pacific Union College before graduation.

ESTH 495 **1-3 F, W, S, Su**

Independent Study

Open by permission of the department chair to advanced students with adequate background and experience. Repeatable to a maximum of 3 credits.

Food and Nutrition

LOWER-DIVISION COURSE:

FDNT 235 **3 F, W, S** **Nutrition**

Principles of nutrition, emphasizing nutritional requirements, dietary sources of nutrients, nutrient utilization, effects of nutrition on energy intake and weight control, fitness, disease prevention, and life cycle.

Health Education

LOWER-DIVISION COURSES:

HLED 162 **2 F, W, S** **Fitness for Life**

Introduces the philosophy of health, aimed at lasting nutritional and physical conditioning that promotes a high level of well-being. Emphasis on the prevention of heart disease, obesity, and stress. Laboratory evaluation in body composition, blood analysis, stress testing, and the treadmill.

HLED 166 **2 F, W, S** **Health Education**

Encourages the development of self-awareness and promotes "wellness" as a life-long personal investment. Advocates protection and effective use of human and ecological resources and acquiring skills for individual responsibility. Emphasis on Seventh-day Adventist health principles. Treats substance abuse and nutrition as required for SDA and California teaching credentials.

HLED 169 **2 W**

Current Health Concerns

Explores the background and cause of common health problems of the adult as well as prevention and treatment. Designed to promote physical vitality and a sense of well-being.



Faculty

Amy Rebok Rosenthal, chair; Ileana Douglas,
Hilary Elmendorf, Paul McGraw

Departmental Office: 209 Irwin Hall; 965-6403

Degrees and Programs

History, B.A.....	123
Social Studies, B.S.	124

Students in the HISTORY & SOCIAL STUDIES DEPARTMENT explore the civilizations of Africa, Asia, Europe, North America, and South America. Using original and secondary written sources, films, and other documents, and through field trips and summer study programs outside the United States, departmental faculty work with their students in the study of geography, history, and political science.

Scholarship is encouraged and recognized by membership in Phi Alpha Theta, the history honors society, and through debates, lectures, and student and faculty presentations sponsored by Pacific Union College's Alpha Zeta Theta Chapter.

Students have access to the Utt Memorial Library in the department's seminar room and the adjacent Honors Program Common Room. Faculty-student suppers and discussion groups complete the collegial and friendly atmosphere, the hallmark of the department.

Prospective teachers should take a Social Studies major and consult with department teachers about non-departmental courses. Following completion of the Social Studies major each student seeking a California teaching certificate must take the California Subject Examination for Teachers (CSET).

Major in History, B.A.

A minimum of 55 hours (31 upper-division hours):

► Required Core Courses (30 hours):

HIST 101-102	History of World Civilizations	4-4
HIST 134-135	History of the United States	4-4
HIST 180	History Methods I (3 quarters)	1-1-1
HIST 280	History Methods II	2
HIST 380	History Methods III	2
HIST 450	History Study Tour	4
HIST 480	Senior Thesis (3 quarters)	1-1-1

► Emphases (choose one):

1. American History Emphasis (25 hours)

HIST 411	Seminar in the History of the Americas	4
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At least one of the following courses: 3

HIST 210	Introduction to African History (3)
HIST 220	Introduction to Ancient History (3)
HIST 230	Introduction to Asian History (3)
HIST 240	Introduction to Latin American History (3)

At least one of the following courses: 3-4

HIST 328	Medieval Europe (4)
HIST 329	Renaissance Europe (4)
HIST 331	Reason and Revolution (4)
HIST 332	Europe Since Napoleon (4)
HIST 351	History of Culture (3)*

At least three of the following courses: 11-12

HIST 351	History of Culture (3)**
HIST 355	Colonial America (4)
HIST 356	The New Nation: 1763-1820 (4)
HIST 357	Civil War and Reconstruction (4)
HIST 358	Recent America (4)

* Must be a European topic.

** Must be an American topic.

History & Social Studies

At least one of the following courses: 4

HIST 410	Seminar in African History (4)	
HIST 412	Seminar in Asian History (4)	
HIST 413	Seminar in European History (4)	

2. European History Emphasis (25 hours)

HIST 413	Seminar in European History	4
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At least one of the following courses: 3

HIST 210	Introduction to African History (3)	
HIST 220	Introduction to Ancient History (3)	
HIST 230	Introduction to Asian History (3)	
HIST 240	Introduction to Latin American History (3)	

At least three of the following courses: 11-12

HIST 328	Medieval Europe (4)	
HIST 329	Renaissance Europe (4)	
HIST 331	Reason and Revolution (4)	
HIST 332	Europe Since Napoleon (4)	
HIST 351	History of Culture (3)*	

At least one of the following courses: 3-4

HIST 351	History of Culture (3)**	
HIST 355	Colonial America (4)	
HIST 356	The New Nation 1763-1820 (4)	
HIST 357	Civil War and Reconstruction (4)	
HIST 358	Recent America (4)	

At least one of the following courses: 4

HIST 410	Seminar in African History (4)	
HIST 411	Seminar in the History of the Americas (4)	
HIST 412	Seminar in Asian History (4)	

Major in Social Studies, B.S.

A minimum of 70 hours (30 upper-division hours):

► Required Core Courses (30 hours):

HIST 101-102	History of World Civilizations	4-4
HIST 134-135	History of the United States	4-4
HIST 180	History Methods I (3 quarters)	1-1-1
HIST 280	History Methods II	2
HIST 395	Social Studies Seminar	2
HIST 450	History Study Tour	4
HIST 480	Senior Thesis (3 quarters)	1-1-1

* Must be a European topic.

** Must be an American topic.

► Required Core Electives (40 hours):

Complete at least 40 hours of electives, including at least 21 upper-division hours, distributed as described:

At least 22 hours from the following 22
Additional HIST courses

Any three of the following options: 18

At least 6 hours from ECON courses
At least 6 hours from GEOG courses
At least 6 hours from PLSC courses
At least 6 hours from SOCI courses

Electives for those interested in social work, teaching, medicine, or law should be chosen in consultation with the major advisor.

Teaching Credential

Students desiring to enter a program of studies leading to a California teaching credential in social science should take the B.S. degree in Social Studies. Students will need to pass the social science portion of the CSET exam one quarter prior to doing full-time student teaching. Students are invited to discuss the program with their major advisor in the History & Social Studies Department.

Those who plan to teach on the secondary level should consult with the credential analyst in the Education Department and should become acquainted with the specific requirements for admission to and successful completion of the Teacher Education Program as outlined in the section entitled "Education" in this catalog.

Minor in History

A minimum of 31 hours (12 upper-division hours)

► Required Courses (19 hours):

HIST 101-102	History of World Civilizations	4-4
HIST 134-135	History of the United States	4-4
HIST 180	History Methods I	1-1-1
HIST 280	History Methods II	2

► Required Electives (9 hours):

At least 9 hours from the following: 12
Additional upper-division HIST courses

Economics

(See *Business Administration and Economics* for course descriptions.)

Geography

LOWER-DIVISION COURSES:

GEOG 210 **3 W** **World Regional Geography**

Regions of the world and their cultural, historical, climatic, and economic similarities or diversities. Emphasis on current developments. Even years.

GEOG 220 **3 W** **Geography of the Americas**

Climate, natural resources, political, and economic geography of North and South America. Odd years.

History

LOWER-DIVISION COURSES:

HIST 101-102 **4-4 F, W, S** **History of World Civilizations**

Major characteristics and developments in world civilizations based on primary and secondary texts. Also integral: discussion of history's place in the liberal arts and of the problems of the historical method. Prerequisite: ENGL 100.

HIST 134-135 **4-4 F, W, S** **History of the United States**

The United States from colonial beginnings to the present time. The central theme is the growth of American democracy with its implications for government and society, racial and religious minorities and the emergence of the nation as a world power. Prerequisite: ENGL 100.

HIST 180 **1 F, W, S** **History Methods I**

An introduction to the major, the department, its faculty and to the basic writing skills required for the survey courses in World Civilizations and U.S. History. Repeatable to a maximum of 3 credits.

HIST 210 **3 F** **Introduction to African History**

Sub-Saharan Africa from the earliest societies to the modern era. Topics include the development of ancient African kingdoms and their customs, the spread and influence of Islam, the arrival of Europeans, colonialism and decolonization. Odd years.

HIST 220 **3 F** **Introduction to Ancient History**

Ancient civilizations from their emergence to their collapse, with special attention to the development of government, philosophy and the arts. Even years.

HIST 230 **3 W** **Introduction to Asian History**

Asian civilization from earliest times to the present. Primarily focuses on Japan and China with special attention to social, economic, political and intellectual developments. Odd years.

HIST 240 **3 W** **Introduction to Latin American History**

Latin America from the earliest civilizations to the present. Emphasis on cultural, political, and economic trends. Even years.

HIST 280 **2 W** **History Methods II**

Builds on the writing skills established during the freshman seminar series and introduces majors to the dominant historiographical schools in the field of history. Requires a major research paper based on primary and secondary sources. Prerequisite: HIST 180.

UPPER-DIVISION COURSES:

HIST 320 **3 F** **Christian History: To 1054**

(See also RELH 320.)

Development of the Christian Church from its pre-Christian origins to 1054, the year of the East-West schism. Emphasis on those social, political, intellectual, and religious pressures that contributed to the formation of Christian doctrines and the establishment of hierarchy and institutions. Detailed examination of significant work by major Christian figures.

HIST 321 **3 W** **Christian History: 1054 to 1600**

(See also RELH 321.)

Developments in the Christian Church from the high Middle Ages to the Protestant Reformation. Emphasis on the major historical, theological and cultural forces that influenced the medieval church and gave rise to the Protestant Reformation. Examination of the work and writings of various Protestant reformers.

History & Social Studies

HIST 322 **3 S**

Christian History: 1600 to the Present

(See also RELH 322.)

Development of the Christian Church from the aftermath of the Protestant Reformation to the present day.

Emphasis on the effects on the Church of major cultural movements, such as the Enlightenment, colonization and imperialism, modern warfare, and ecumenism. Detailed examination of significant works by Christians in response to “the modern world.”

HIST 328 **4 S**

Medieval Europe

The vital period from 300 to 1400, which saw the creation of Europe. The priorities and characteristics of the civilization which facilitated the emergence of a multifaceted medieval society that serves as the ancestor of the modern world. Prerequisites: HIST 101, 102, 280. Odd years.

HIST 329 **4 S**

Renaissance Europe

Europe from the 14th to 17th centuries, when experiments in art, literature, political theories and systems, and religion were prominent features of society. Prerequisites: HIST 101, 102, 280. Odd years.

HIST 331 **4 W**

Reason and Revolution

Europe from 1648 to 1815, with special attention to the effect of the Age of Reason on the modern mind, the growth of the bureaucratic state, and the impact of the era of revolution. Prerequisites: HIST 101, 102, 280. Even years.

HIST 332 **4 F**

Europe Since Napoleon

The political, social and religious trends during the 19th and 20th centuries. Prerequisites: HIST 101, 102, 280. Even years.

HIST 337 **3 S**

History of California

The geographic, economic, social, and historical factors which have contributed to the development of California. Even years.

HIST 351 **3 W**

History of Culture

Thematic study of culture as it influences the world today. Emergence of culture through literature, sports, movies, radio, television, media, religion, and food. Appropriate for both majors and non-majors. Repeatable for credit under different subtitles.

HIST 355 **4 W**

Colonial America

The discovery, settlement, and growth of the European colonies in America, emphasizing those religious, political, and economic developments, particularly in the English colonies, that prepared the way for independence. Prerequisites: HIST 134, 135, 280. Even years.

HIST 356 **4 W**

The New Nation: 1763-1820

The formative period of American national identity between 1763 and 1820. Includes intensive study of the creation and development of the U.S. Constitution. Prerequisites: HIST 134, 135, 280. Odd years.

HIST 357 **4 F**

Civil War and Reconstruction

Slavery, the nature of the Union and the immediate and permanent effects of the Reconstruction on America. Prerequisites: HIST 134, 135, 280. Even years.

HIST 358 **4 F**

Recent America

The rapid changes in American society, economy, and politics since World War II. Prerequisites: HIST 134, 135, 280. Odd years.

HIST 360 **4 S**

Adventist Heritage

(See also RELH 360)

An interdisciplinary exploration of theological and historical issues important to an understanding of the Advent Movement and the ministry of Ellen G. White. Meets the requirement in Prophetic Guidance and Denominational History for SDA teaching credentials.

HIST 380 **2 S**

History Methods III

Refines writing and analytical skills developed in freshman and sophomore seminars. Introduces majors to the professionalization of history and history as a career. Includes conference paper presentations, admission to and preparation for graduate school, and guest lecturers from the field of history. Prerequisites: HIST 180, 280.

HIST 395 **2 F**

Social Studies Seminar

Focuses on the preparation of social studies majors for careers in education, law and history. Incorporates preparation for the California Subject Examination for Teachers in History.

HIST 410 **4 F**
Seminar in African History

Themes in African history. Requires a major research paper. Repeatable for credit under different topics. Prerequisites: HIST 210, 280. Even years.

HIST 411 **4 S**
Seminar in the History of the Americas

Themes in U.S. and Latin American history. Requires a major research paper. Repeatable for credit under different topics. Prerequisites: HIST 134, 135, 240, 280. Odd years.

HIST 412 **4 W**
Seminar in Asian History

Themes in Asian history. Requires a major research paper. Repeatable for credit under different topics. Prerequisites: HIST 230, 280. Even years.

HIST 413 **4 W**
Seminar in European History

Themes in European history. Requires a major research paper. Repeatable for credit under different topics. Prerequisites: HIST 101, 102, 280. Odd years.

HIST 450 **4 Su**
History Study Tour

Summer travel opportunity for majors. Topics vary. Prerequisites: HIST 101, 102, 134, 135 and appropriate introductory course. Repeatable for credit under different subtitles. Even summers.

HIST 480 **1 F, W, S**
Senior Thesis

First quarter serves as a preparation course for writing the senior thesis and requires the production of a thesis proposal. Second quarter incorporates the writing of the senior thesis. Third quarter consists of a formal thesis presentation to faculty and peers. Prerequisite: HIST 380. Repeatable to a maximum of 3 credits. Eligible for IP grading.

HIST 495 **1-3 F, W, S**
Independent Study

Individual research; open by permission of the department chair to advanced students with an adequate background. Repeatable to a maximum of 3 credits.

Political Science

LOWER-DIVISION COURSES:

PLSC 124 **3 F**
Introduction to American Government

The development and functioning of the American machinery of government and a study of the political processes, both formal and informal, in which the citizen is involved.

PLSC 274 **3 F**
Introduction to Political Thought

An introduction to the perennial questions and major thinkers in this area of philosophy.

UPPER-DIVISION COURSES:

PLSC 328 **3 S**
Critical World Issues

An important issue is selected by the instructor, discussed in class, and studied as a research topic. May include one or more of the following: the elements of national power, the dynamics of state conflict, national traits and policy patterns, the role of ideologies or moral considerations in the decision-making process, and the relationship between a society's world view and the realities of policy-making. Repeatable for credit under different topics. Even years.

PLSC 340 **3 S**
History of Political Thought

Selected ancient, medieval, and modern political thinkers. Prerequisite: PLSC 274. Even years.

PLSC 485 **3 F**
Foreign Relations of the United States

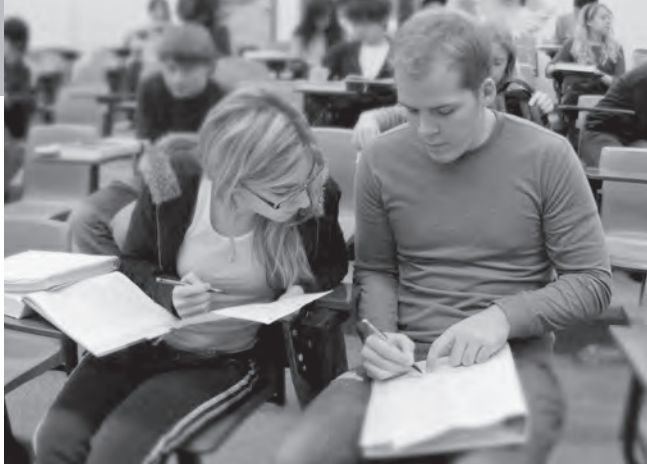
Episodes selected from the history of American foreign relations to illustrate the development of U.S. foreign policy. Even years.

PLSC 495 **1-3 F, W, S**
Independent Study

Individual research; open only by permission of the department chair to advanced students with an adequate background. Repeatable to a maximum of 3 credits.

Sociology

(See Psychology & Social Work, Sociology area, for course descriptions.)



Faculty

Lloyd Best, chair; Roy Benton, Richard Rockwell, Steve Waters
 Departmental Office: 238 Chan Shun Hall; 965-7269

Degrees and Programs

Mathematics, B.S.....	129
Teaching Credential.....	130

The MATHEMATICS DEPARTMENT provides courses for future mathematicians, teacher education, general education, and programs in other departments. A common goal of each course is that students will develop problem-solving skills based on mathematical reasoning and understanding, not merely rote memorization.

Students majoring in mathematics will have experience with mathematical modeling, abstraction, generalization, logical analysis, and mathematical technology. Small class sizes promote communication and teamwork opportunities among students and faculty.

A focus on pure mathematics can lead to careers in university teaching and research following graduate studies in mathematics and related areas, such as statistics, computer science, and physics. A focus on applied mathematics is a path to careers in medicine, government, business, and industry following graduate study in such areas as computational biology, operations research, and applied statistics. A focus on mathematics education is a major component in a program of studies leading to the California Teaching Credential in secondary school mathematics. Actuarial certification can lead to careers in the insurance and investment industry, where actuaries use a broad knowledge of statistics, finance, and business.

Major in Mathematics, B.S.

A minimum of 67 hours (30 upper-division hours)

► Required Core Courses (42 hours):

MATH 131-132-133	Calculus I-II-III	4-4-4
MATH 265	Elementary Linear Algebra	4
MATH 269	Elementary Differential Equations	4
MATH 275	Logic and Sets	4
MATH 331	Probability Theory	3
MATH 351	Introduction to Abstract Algebra I	3
MATH 385	Mathematical Modeling	4
MATH 390	Seminar	1
MATH 421	Elementary Real Analysis I	3
MATH 490	Senior Seminar	1

At least one of the following courses:

MATH 332	Mathematical Statistics (3)	3
MATH 342	Geometries II (3)*	3
MATH 352	Introduction to Abstract Algebra II (3)	3
MATH 422	Elementary Real Analysis II (3)	3

► Required Core Electives (18 hours):

At least 12 hours from the following: 12
 Additional upper-division MATH courses

At least 6 hours from the following: 6
 Additional MATH courses

► Required Cognate Courses (7-9 hours):

CPTR 115	Intro. to Computer Programming	4
At least one of the following courses:		3-5
CHEM 451	Physical Chemistry (3)	3
CPTR 132	Data Structures and Algorithms I (4)	4
CPTR 347	Database Systems (4)	4
CPTR 437	Computer Graphics (3)	3
CPTR 455	Theory of Computation (3)	3

* Students who select this option must also complete MATH 341: Geometries I as an upper-division core elective.

Mathematics

ENGR 211	Engineering Mechanics (3)
ENGR 216	Circuit Theory (4)
FIN 341	Finance (5)
INFS 470	Management Science (4)
PHYS 211	Physics with Calculus (4)
STAT 322	Statistical Methods (3)

All core and cognate courses should be chosen in consultation with the major advisor. In selecting courses, students are encouraged to consider the recommendations described below:

Pure Mathematics

The following courses are recommended for students interested in pure mathematics: MATH 267, MATH 332, MATH 352, MATH 422, MATH 425, and MATH 465.

Applied Mathematics

The following courses are recommended for students interested in applied mathematics: MATH 332, MATH 355, MATH 375, STAT 322, INFS 470.

It is also recommended that students interested in applied mathematics earn at least a minor in an applied field such as Biology, Business Administration, Computer Science, Physics, or Psychology.

Mathematics Education

The following courses are recommended for students interested in mathematics education: MATH 341, MATH 342, MATH 354, MATH 355, and MATH 451.

Actuarial Certification

The following courses are recommended for students interested in preparing for the national examinations for actuarial certification: MATH 267, MATH 332, MATH 375, STAT 322, and INFS 470.

Teaching Credential

Students desiring to enter a program of studies leading to a California teaching credential in mathematics should take the B.S. degree in Mathematics and complete the recommended courses for the Mathematics Education focus. Students will need to pass the mathematics portion of the CSET exam one quarter prior to doing full-time student teaching. Students are invited to discuss the program with their major advisor in the Mathematics Department.

Those who plan to teach on the secondary level should consult with the credential analyst in the Education Department and should become acquainted with the specific requirements for admission to and successful completion of the Teacher Education Program as outlined in the section entitled "Education" in this catalog.

Minor in Mathematics

A minimum of 30 hours (6 upper-division hours)

► *Required Courses (16 hours):*

MATH 131-132-133	Calculus I-II-III	4-4-4
MATH 275	Logic and Sets	4

► *Required Electives (14 hours):*

<i>At least 6 hours from the following:</i>	6
Additional upper-division MATH or STAT courses	
<i>At least 8 hours from the following:</i>	8
Additional MATH courses	

The following elective courses are especially recommended for students interested in secondary-level teaching: MATH 265, MATH 341, MATH 342, and MATH 351.

The following elective courses are especially recommended for students interested in engineering or a physical science: MATH 265, MATH 267, and MATH 269.

Mathematics

SERVICE COURSES:

(Not applicable to a major or minor in this department)

MATH 019 **4 F, W**
Introductory Algebra

Basic concepts and techniques of algebra for students without recent experience in algebra. Integers, algebraic expressions, first-degree equations and inequalities, simple rational expressions and proportions, integer exponents, scientific notation, polynomials, and graphing linear functions.

MATH 096 **4 F, W, S**
Intermediate Algebra

Factoring, linear and quadratic equations, functions, graphs, rational expressions, rational exponents and radicals, equations involving rational and radical expressions, complex numbers, and systems of equations. Prerequisite: MATH 019 or equivalent.

MATH 106 **4 F, S**
College Algebra

Begins with a quick review of intermediate algebra, including rational exponents and radicals, complex numbers, linear and quadratic equations, and inequalities. Also includes polynomial and rational functions, binomial theorem, composition and inverse of functions, exponentials and logarithms, systems of equations, arithmetic and geometric progressions. Other topics may include further study of polynomials and/or linear programming. Prerequisite: Algebra II in high school or MATH 096.

MATH 113 **2 S**
Trigonometry

A study of the six trigonometric functions and their relationships to one another, as well as the study of applications involving these six functions. Included are degree and radian measure, right triangle trigonometry, graphs of the trigonometric functions, inverse trigonometric functions, fundamental identities, addition identities, double-angle and half-angle identities, solutions of trigonometric equations, law of cosines, law of sines, and vector triangles. Prerequisite: MATH 106 or a strong background in algebra.

MATH 130 **5 F**
Precalculus

Functions and graphs emphasized as tools to prepare the student for calculus. Included are polynomial and rational functions, logarithmic and exponential functions, as well as a thorough treatment of the six trigonometric functions and their inverses. Prerequisite: MATH 106 or a strong background in algebra.

MATH 211-212 **3-3 F-W**
Foundations of School Mathematics I-II

The logic and structure underlying school mathematics. Concepts, procedures, problem-solving and applications at concrete, pictorial, and abstract levels.

MATH 211 includes problem-solving techniques, sets, logic and deductive reasoning, the arithmetic of whole numbers, fractions, decimals, integers, rational and real numbers, ratio and proportion, and percent. Prerequisite: Algebra II in high school or MATH 096.

MATH 212 includes geometry and measurement. Prerequisite: MATH 211.

LOWER-DIVISION COURSES:

MATH 131-132-133 **4-4-4 F-W-S**
Calculus I-II-III

MATH 131: Introduction to the techniques of differentiation and integration. Includes the chain rule, fundamental theorem and maximizing/minimizing applications. Graphing calculators and mathematical software tools are used extensively. Prerequisite: MATH 106 and MATH 113, or MATH 130, or a strong background in algebra and trigonometry.

MATH 132: Further skills in integration and its applications. Includes general substitutions, integration by parts, applications to geometry and physics, infinite series, and Taylor expansions. Prerequisite: MATH 131.

MATH 133: Includes special curves, parametrizations, polar coordinates, solid analytic geometry, partial derivatives, and multiple integrals. Prerequisite: MATH 132.

MATH 265 **4 F**
Elementary Linear Algebra

Matrix algebra and determinants, applications to solving systems of linear equations, vector spaces, linear transformations, eigenvalues, and eigenvectors. Prerequisite: MATH 131.

MATH 267 **4 W**
Vector Calculus

Functions of more than one variable including the general chain rule, line and surface integrals, divergence, curl, gradient, and Stokes' theorem. Prerequisite: MATH 133.

Mathematics

MATH 269 **4 S** **Elementary Differential Equations**

Ordinary differential equations balancing analytic techniques, qualitative methods, and basic modeling. Topics include eigenvalue methods for linear systems, Laplace transforms, phase plane, null-clines, equilibria, harmonic oscillator, and population models. Prerequisite: MATH 132. Recommended prerequisite: MATH 265.

MATH 275 **4 S** **Logic and Sets**

A bridge to upper-division mathematics, developing the student's ability to handle abstract concepts and careful proofs. Propositional and predicate logic, various types of proof, algebra of sets and functions, equivalence relations, and countable sets. Prerequisite: MATH 131. UPPER-DIVISION COURSES:

MATH 331 **3 W** **Probability Theory**

Theory and applications of probability theory. Probability distributions and densities including multivariate, marginal, and conditional distributions. Expected value, Chebyshev's and Bayes' theorems. Moment-generating functions and product moments. Special discrete and continuous distributions and densities. Prerequisites: MATH 132, 275, STAT 222. Odd years.

MATH 332 **3 S** **Mathematical Statistics**

Theory and application of sampling distributions, transformation of variables, central limit theory, estimation, hypothesis testing, Bayesian inference, and decision theory. Prerequisite: MATH 331. Odd years.

MATH 341-342 **3-3 W-S** **Geometries I-II**

A two-quarter study of the development and history of Euclidean geometry, the discovery of non-Euclidean geometry and the subsequent reformulation of the foundations of geometry.

MATH 341 reviews basic Euclidean geometry, introduces non-Euclidean geometries, and investigates geometric applications through problems and projects.

MATH 342 focuses on the axiomatic method, logic, various axiom sets for Euclidean geometry, neutral geometry, history of the parallel postulate, discovery of non-Euclidean geometry, hyperbolic geometry, and philosophical implications.

Prerequisite: MATH 275. Even years.

MATH 351-352 **3-3 F-W** **Introduction to Abstract Algebra I-II**

MATH 351 is a basic introduction to groups, rings, integral domains, fields, and isomorphisms. Also included are mappings, equivalence relations, and modular arithmetic. MATH 352 is a continuation of MATH 351 that stresses applications. Topics studied include polynomials, elementary Galois theory, geometric constructions, algebraic coding, lattices, and Boolean algebras. Prerequisite: MATH 275. Odd years.

MATH 354 **3 S** **Number Theory**

Topics include Diophantine equations, theorems and conjectures about prime numbers, congruences, the theorems of Euler and Fermat, perfect numbers, continued fractions, and Pythagorean triples. Prerequisite: MATH 275. Odd years.

MATH 355 **4 F** **Combinatorics and Graph Theory**

Permutations and combinations, occupancy models, generating functions, recurrence relations, principle of inclusion and exclusion, and pigeonhole principle. Graph Theory includes directed and undirected graphs, Euler and Hamiltonian paths, chromatic number, trees, matchings and coverings. Involves both theory and applications. Prerequisite: MATH 275. Even years.

MATH 375 **4 W** **Numerical Analysis**

Theory and techniques for finding approximate solutions to mathematical problems, including error analysis, interpolation, approximation, fixed-point iteration, nonlinear equations, systems of equations, integration, and ordinary differential equations. Prerequisites: MATH 132, 265, and CPTR 115. Even years.

MATH 385 **4 F** **Mathematical Modeling**

Mathematical modeling of problems selected from a variety of applied areas, including industry, biology, business, and the social sciences. Both deterministic and stochastic models are considered, with an emphasis on practical problem-solving. Includes exploration of the computer as a problem-solving tool. Prerequisites: MATH 269 and CPTR 115. Odd years.

MATH 390 **1 S**
Seminar

Topics of current interest in mathematics and mathematics education, including applications of mathematics in other fields, introduced through lectures, reports, and periodicals. Discussion of professional mathematics organizations, conferences, and publications. Prerequisite: upper-division standing. Graded S/F.

MATH 421-422 **3-3 F-W**
Elementary Real Analysis I-II

The fundamental definitions and theorems underlying single-variable calculus and related topics. MATH 421 includes the completeness property, limits of sequences and functions, and continuity. MATH 422 is a continuation that covers derivatives, the Riemann integral, and infinite series. Prerequisites: MATH 132, 275. Even years.

MATH 425 **4 S**
Complex Analysis

The elements of the theory of analytic functions including Cauchy's theorem, calculus of residues, conformality, and applications. Prerequisites: MATH 133, 275. Even years.

MATH 451 **4 W**
History of Mathematics

A survey of major developments in mathematics from antiquity to modern times. Involves historically relevant problem sets, videos, class discussions, and presentations by students and teacher. Prerequisite: MATH 131. Odd years.

MATH 465 **4 S**
Linear Algebra

A deeper study than given in MATH 265, including Jordan form, inner product spaces, quadratic forms, Hamilton-Cayley theorem, and normal operators. Prerequisites: MATH 265, 351. Odd years.

MATH 485 **1-4 S**
Special Topics in Mathematics

Study of a selected topic not covered elsewhere in the curriculum. Course content varies from year to year, reflecting current interest. Topics studied in recent years have been Differential Geometry, Set Theory and Cardinal Numbers, Formal Logic and Godel's Theorem, Topology, Chaos and Fractals. Repeatable for credit. Further information is available at the departmental office.

MATH 490 **1 S**
Senior Seminar

Topics of current interest in mathematics and mathematics education, including applications of mathematics in other fields. Under supervision of departmental faculty, each student prepares and presents a paper on a topic of interest. Prerequisite: MATH 390.

MATH 495 **1-3 F, W, S**
Independent Study

Properly qualified students may, with the approval of the department chair, undertake a directed research problem suited to their background and experience. Repeatable to a maximum of 9 credits.

Statistics

LOWER-DIVISION COURSE:

STAT 222 **4 F, W, S**
Introduction to Statistics

Descriptive statistics, graphical methods, basic concepts of probability, binomial and normal probability distributions, central limit theorem, hypothesis testing involving means, confidence intervals, introduction to correlation and regression, and chi-square testing. Examples from a wide variety of disciplines, including business, the social sciences, and the life sciences, to prepare students with varying backgrounds and interests to become intelligent consumers and users of statistics. Prerequisites: Algebra II in high school (C- or above) or MATH 096, ENGL 101.

UPPER-DIVISION COURSE:

STAT 322 **3 W, S**
Statistical Methods

Linear and multiple regression and correlation, analysis of variance, time series analysis and forecasting, and non-parametric methods. Prerequisites: STAT 222, INFS 148 or equivalent.



Faculty

Sylvia Rasi Gregorutti, chair; Charo Caballero-Chambers

Departmental Office: 212 Irwin Hall; 965-6574

Chair's Office: 965-6510

Degrees and Programs

Spanish, B.A.	135
Teaching Credential	136
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The MODERN LANGUAGES DEPARTMENT offers instruction in French, German, Italian, and Spanish. A major is available in Spanish, and minors are available in French, German, Italian, and Spanish.

Pacific Union College participates in the Adventist Colleges Abroad Program (ACA), which provides opportunity for students to study the language of their choice in a foreign country. Participating campuses are in Argentina, Austria, Brazil, France, Germany, Greece, Italy, Japan, Spain, Thailand (Chinese) and Ukraine. Hebrew is taught at the Greek campus.

A student majoring in Spanish will be asked to spend from one to three quarters, as needed, in the Adventist Colleges Abroad Program in Spain or in Argentina and to take the courses prescribed by the major advisor. Summer programs are also available in Mexico and Spain.

Major in Spanish, B.A.

A minimum of 48 hours (30 upper-division hours)

All students majoring in Spanish must complete in residence at Angwin at least three upper-division Spanish courses (minimum of twelve hours).

Students with a background in the Spanish language will be placed in the program in accordance with their ability. Those who achieve advanced placement on a departmental proficiency examination may complete a Spanish major by taking 30 hours of upper-division Spanish and a minor in any field.

A student may choose from the following courses, all of which apply toward the major:

SPAN 132	Intensive Intermediate Spanish I	5
SPAN 133	Intensive Intermediate Spanish II	5
<i>or</i>		
SPAN 151	Intermediate Spanish I	4
SPAN 152	Intermediate Spanish II	4
SPAN 153	Intermediate Spanish III	4
<i>(Only one intermediate sequence may apply toward the major.)</i>		
SPAN 251	Spanish Conversation and Composition I	3
SPAN 252	Spanish Conversation and Composition II	3
SPAN 253	Spanish Conversation and Composition III	3
SPAN 367	Spanish and Latin American Culture and Civilization	4
SPAN 382	Applied Spanish Linguistics	4
SPAN 385	Business Spanish	4
SPAN 440	Spanish and Latin American Film	4
SPAN 441	Readings in Spanish Literature	4
SPAN 442	Readings in Latin American Literature	4
SPAN 495	Independent Study	1-6
<i>Upper-division electives at ACA Campus*</i>		

At the Spanish-language ACA campuses (Argentina, Mexico, Spain), a student can choose from a variety of courses that apply to the Spanish major. Course descriptions are in the current *Adventist Colleges Abroad Bulletin*, available at the departmental offices or online at www.aca-noborders.org.

Modern Languages

Recommended Cognate Courses:

A full-year course in beginning French, German or Italian (12)	
ANTH 124	Cultural Anthropology (4)
ARTH 115-116	History of Western Art (4)
COMM 330-430	Intercultural Communication I-II (3-3)
GEOG 220	Geography of the Americas (3)
HIST 240	Introduction to Latin American History (3)
MGMT 457	International Management (3)
PLSC 485	Foreign Relations of the United States (3)

Teaching Credential

Students desiring to enter a program of studies leading to a California teaching credential in a language other than English with a concentration in Spanish should take the B.A. degree in Spanish. Students will need to pass the language other than English (Spanish concentration) portion of the CSET exam one quarter prior to the full-time student teaching experience. Students are invited to discuss the program with the chair of the Modern Languages Department.

Those who plan to teach on the secondary level should consult with the credential analyst in the Education Department and should become acquainted with the specific requirements for admission to and successful completion of the Teacher Education Program as outlined in the section entitled "Education" in this catalog.

Minors in French, German, Italian and Spanish

A minimum of 30 hours at the intermediate level or higher (15 upper-division hours)

A student desiring a minor in French, German or Italian usually spends one year studying abroad. Spanish minors usually require two quarters of study abroad.

Language Placement

Students who have had previous work in a given language and wish to take a beginning course in that language must obtain the consent of the department chair.

Students from a Spanish background taking Spanish will normally enroll in SPAN 251-252-253 Spanish Conversation and Composition I-II-III.

Those unsure of what course to enroll in should consult with the department chair or the instructor teaching the language the student plans to take. A useful reference is the Modern Languages Lower Division Course Placement chart found on the department web page and in the Academic Advising Handbook.

Adventist Colleges Abroad (ACA)

Pacific Union College is a member of Adventist Colleges Abroad (ACA), a consortium of colleges and universities operated by the Board of Higher Education of the North American Division of the Seventh-day Adventist Church. This consortium affords opportunity to qualified students for international study while completing the requirements of their programs at their home campus. The program allows students to immerse themselves in the culture and life of the host country and become conversant in the language; to mature socially, spiritually, and intellectually; and to develop sensitivity to cultural differences and a sense of responsibility for and mission to other peoples of the world. The following institutions are international affiliates of ACA offering academic year programs of study:

Argentina	Universidad Adventista del Plata, Libertador San Martín Spanish Language and Latin American Culture
Austria	Seminar Schloss Bogenhofen, St. Peter am Hart German Language and Culture
Brazil	Instituto Adventista de Ensino, São Paulo Portuguese Language and Culture
France	Campus Adventiste du Salève, Collonges-sous Salève French Language and Culture
Germany	Friedensau Adventist University, Friedensau bei Burg German Language and Culture
Italy	Istituto Avventista Villa Aurora, Florence Italian Language and Culture
Spain	Seminario Adventista Español, Sagunto Spanish Language and Culture

In addition to academic-year programs, ACA offers six-week summer terms at the following international study centers:

Austria	Seminar Schloss Bogenhofen, St. Peter am Hart: German
Brazil	Instituto Adventista de Ensino, São Paulo: Portuguese
France	Campus Adventiste du Salève, Collonges-sous-Salève: French
Greece	La Sierra University Study Center, Athens: Intermedi- ate Biblical Greek, Beginning Biblical Hebrew
Italy	Istituto Avventista Villa Aurora, Florence: Italian
Japan	Saniku Gakuin College, Isumi-gun: Japanese
Mexico	Universidad de Montemorelos, Montemorelos: Spanish
Spain	Colegio Adventista de Sagunto, Sagunto: Spanish
Thailand	Asia-Pacific International University, Saraburi: Chinese
Ukraine	Ukrainian College of Arts and Sciences, Kiev: Russian

Applicants for international study need not be language majors or minors. Students majoring in various disciplines that allow for one or more elective years within the four-year curriculum may study in the year-abroad and summer session programs without losing credits or prolonging time before graduation by carefully planning the year(s) preceding and following their international study experience. Prerequisites for admission to ACA study abroad programs are as follows:

1. Admission as a regular student to Pacific Union College for the summer or academic year abroad.
2. Competence in the language of the host country for Argentina, France, and Spain (minimum: one year of college or two years of secondary study with a language GPA of 3.00). This level of language competence is prerequisite to one's being considered for admission. Language competence is encouraged but not required of students enrolling in academic year programs in Austria, Germany, or Italy, or of students in summer programs.
3. An overall college or university GPA of 2.50.
4. A good citizenship record that gives evidence of better-than-average maturity, adjustability, and congeniality.
5. Presentation of the application with all required information and signatures (academic and financial arrangements) to the Pacific Union College Admissions Office by April 1 (summer program) or May 1 (academic year).
6. Attendance at an ACA orientation meeting at Pacific Union College.

College freshmen with competence in the language are not specifically excluded from ACA academic year programs, but the course of study is usually more beneficial to sophomores and juniors, especially those who plan to major or minor in the language. Although enrolled on an international campus, students are registered at Pacific Union College; are considered in

residence at this college; and are eligible for all external grants, loans, scholarships, and financial aid offered to students in attendance at Pacific Union College. Credit earned abroad is recorded each term in the Pacific Union College Records Office.

The Adventist Colleges Abroad program offers a wide variety of language courses at intermediate and advanced levels concentrating on grammar, orthography, composition, phonetics, conversation, reading, pronunciation, literature, culture, civilization, and folklore as well as courses in art, education, geography, history, music, physical education, and religion.

Applicants must consult with their major professors, the Modern Language faculty, and the ACA coordinator before enrollment. Pacific Union College personnel advise students about courses to take abroad and determine how the credits will apply toward graduation requirements. Those who carefully plan their academic-year programs with Pacific Union College advisors may earn up to 54 quarter hours toward a baccalaureate degree. ACA courses may apply toward the major, minor, general education, and elective requirements; credit is awarded on the basis of course prefix.

ACA courses are in high demand; applications are processed in the order received. Applications are available at the Admissions Office and the Modern Languages Department. Deadline for summer applications is April 1; for the academic year, May 1. For further information:

Adventist Colleges Abroad
12501 Old Columbia Pike
Silver Spring, MD 20904-6600
(301) 680-6444
FAX (301) 680-6463
E-mail: 104474.304@compuserve.com
Website: www.aca-noborders.org

Chinese

SERVICE COURSE:

(Not applicable to a major or minor in this department)

CHIN 111 4 W
Beginning Chinese I

See course description under SPAN 111.

French

SERVICE COURSES:

(Not applicable to a major or minor in this department)

FREN 111-112-113 4-4-4 F-W-S
Beginning French I-II-III

See course description under SPAN 111-112-113. Must be taken in sequence.

German

SERVICE COURSES:

(Not applicable to a major or minor in this department)

GRMN 111-112-113 4-4-4 F-W-S
Beginning German I-II-III

See course description under SPAN 111-112-113. Must be taken in sequence.

Modern Languages

Italian

SERVICE COURSES:

(Not applicable to a major or minor in this department)

ITAL 111-112-113 4-4-4 F-W-S **Beginning Italian I-II-III**

See course description under SPAN 111-112-113. Must be taken in sequence.

Spanish

SERVICE COURSES:

(Not applicable to a major or minor in this department)

SPAN 105 3 W **Spanish for Health Care Professionals**

Beginning-level conversational Spanish for health service professionals emphasizing pronunciation, vocabulary, and oral communication for medical settings.

SPAN 111-112-113 4-4-4 F-W-S **Beginning Spanish I-II-III**

Designed to develop speaking, listening, reading, and writing skills in the language studied. Basic grammar and vocabulary presented through a proficiency-oriented approach emphasizing the practical use of the language. Individual laboratory work provides additional opportunity to practice and develop the communicative skills that can be expanded in subsequent study and use of the language.

All courses include an introduction to selected elements of the cultures in countries where the language is used. The first course in the sequence includes a special emphasis on the cultural component, as designated in the course title by L&C (Language & Culture).

These courses are not for students who

have had two or more years of secondary school coursework in the language. Must be taken in sequence.

SPAN 131 5 F **Intensive Spanish Review**

Intensive “bridge” for students who have completed a beginning course in Spanish but need review and practice before beginning the intermediate level. Includes laboratory practice. Prerequisite: One or two years of high school Spanish.

LOWER-DIVISION COURSES:

SPAN 132-133 5-5 W-S **Intensive Intermediate Spanish I-II**

Continuation of SPAN 131, providing intensive study of Intermediate Spanish (see course description under SPAN 151-152-153). Must be taken in sequence. Prerequisite: Passing grade in SPAN 131 or equivalent.

SPAN 151-152-153 4-4-4 F-W-S **Intermediate Spanish I-II-III**

Designed to increase proficiency in speaking, listening, reading and writing the language studied. Focus on reinforcing control of basic grammar and on vocabulary expansion. Selected cultural features of countries where the language is used. Individualized laboratory practice. Must be taken in sequence. Prerequisite: Two years of secondary Spanish or SPAN 111-112-113 or its equivalent.

SPAN 251-252-253 3-3-3 F-W-S **Spanish Conversation and Composition I-II-III**

Emphasis on oral and written expression in Spanish. For non-native students having completed more than two years of secondary-school Spanish or intermediate-level college Spanish; and for students whose native language is Spanish. Fulfills the intermediate-level general education language requirement for the B.A.

UPPER-DIVISION COURSES:
(Taught in Spanish)

SPAN 367 4 F **Spanish and Latin American Culture and Civilization**

A study of Spanish and Latin-American culture and civilization with emphasis on contemporary life. Even years.

SPAN 382 4 F **Applied Spanish Linguistics**

Introduces principles of phonetics, phonology, morphology, and syntax. Special reference to foreign language teaching methodology and the particular problems of teaching Spanish. Odd years.

SPAN 385 4 W **Business Spanish**

Practice and vocabulary-building in Spanish as used in business, commerce, finance, and economics. Odd years.

SPAN 440 4 S **Spanish and Latin American Film**

Examination and discussion of Spanish and Latin American film in the various historical, political, and social contexts. Even years.

SPAN 441 4 W **Readings in Spanish Literature**

Readings in representative poets, novelists, and playwrights. Even years.

SPAN 442 4 S **Readings in Latin American Literature**

Readings in representative poets, novelists and playwrights. Odd years.

SPAN 495 1-3 F, W, S **Independent Study**

Thirty-six hours of reading per hour of credit. A weekly conference with the instructor. Enrollment limited to Spanish majors; admission by approval of the instructor. Repeatable once for credit.



Faculty

*Rachelle Berthelsen Davis, chair; Bruce Rasmussen, Rosalie Rasmussen, Lynn Wheeler
Asher Raboy, Artist in Residence
Departmental Office: 102 Paulin Hall; 965-6201*

Degrees and Programs:

Music, B.Mus.	140
Music, B.S.	142
Music, A.S.	142

The MUSIC DEPARTMENT offers a two-year Associate of Science degree and two four-year curricula leading to Bachelor of Music and Bachelor of Science degrees. Emphasis in the Bachelor of Music degree may be in Music Education or in Performance.

Entrance Requirements

All music majors must take the Theory Placement Examination and the Functional Keyboard Facility Examination the first quarter in residence. Unsatisfactory performance mandates enrollment in MUSP 121 and/or MUTH 103 and/or MUTH 103L.

General Performance Requirements

Study in the major performance area is required each quarter of residence for Bachelor of Music majors. Performance emphasis majors must take an additional 6 hours of secondary performance credit. Secondary performance studies are usually permitted only after the student has reached upper-division status in the major performance area. Credit is based upon a half-hour lesson and four hours of practice per week for each credit hour earned.

A juried performance is expected each quarter for music majors when they are taking lessons in their major performance areas. A student preparing a required recital must perform the program for a faculty audition committee one month prior to the projected recital date. Specific year-by-year requirements in the various performance areas and details regarding jury evaluations are available at the Music Department Office and in the *Music Department Student Handbook*.

Required Recitals & Ensembles

Performance emphasis majors present a half-hour recital (MUSP 390) during the junior year and a one-hour recital (MUSP 490) in the senior year. Music education emphasis majors present a half-hour recital (MUSP 489) in the senior year. Bachelor of Science majors present a half-hour recital (MUSP 489) during the senior year or complete a special project (MUED 489) in an area of particular interest. The topic is chosen in consultation with the department chair and a teacher in the area of the project, with the approval of the music faculty. Associate of Science majors perform a minimum of 15 minutes in a recital during their last quarter of lessons.

All majors must periodically perform in general student recitals. For details, see the *Music Department Student Handbook*.

All four-year degree majors are required to register for ensemble credit each quarter in residence except while doing student teaching. Associate of Science majors are required to register for a minimum of six quarters of ensembles.

Concert Attendance

All four-year majors are required to attend a minimum of seven art music concerts each quarter in residence. Associate of Science majors are required to attend seven art music concerts during each of at least six quarters.

Certificate of Achievement

To encourage excellence in performance, the department may award the Certificate of Achievement to any outstanding music major who presents a recital or is soloist in a major performance of particularly high quality during each of the four years in residence. The student must apply to the music faculty for this award after giving the final recital.

Required Examinations

All music majors are required to take examinations prepared by departmental faculty during their first and last quarter in residence and the Major Field Achievement Test in music is required during the final quarter before graduation.

Music

Bachelor of Music, B.Mus.

Minimum of 119 hours (56 upper-division hours)

► Required Core Courses (37 hours):

MUED 241	Basic Conducting	2
MUHL 244	World and Popular Music	3
MUHL 331	Music from Antiquity through the Baroque	3
MUHL 332	Music of the Classic & Romantic Eras	3
MUHL 333	Contemporary Music	3
MUTH 122-123	Theory I & Laboratories	4-4
MUTH 221-222-223	Theory II & Laboratories	4-4-4
MUTH 224	Music Technology: Notation	1
MUTH 225	Music Technology: Editing & Synthesis	2

► Emphases (Choose one):

Music Education Emphasis (116-119 hours)

► Required Core Courses (62 hours):

Music Education

MUED 338	Music for Children	2
MUED 338L	Music for Children Laboratory	1
MUED 342	Instrumental Conducting	3
MUED 343	Choral Conducting	3
MUED 381-382-383	Music in Elem. & Sec. Schools	2-2-2

At least 10 hours from the following*: 10

MUED 370	Handbell Techniques & Methods (1)	
MUED 371**	Trumpet Techniques & Methods (1)	
MUED 372**	Trombone Techniques & Methods (1)	
MUED 373	Horn/Tuba Techniques & Methods (1)	
MUED 374**	Flute Techniques & Methods (1)	
MUED 375**	Single-Reed Techniques & Methods (1)	
MUED 376	Double-Reed Techniques & Methods (1)	
MUED 377**	Percussion Techniques & Methods (1)	
MUED 378**	Violin/Viola Techniques & Methods (1)	
MUED 379	Cello/Db'l Bass Techniques & Methods (1)	
MUED 473-474	Piano Pedagogy (1-1)	
MUED 475-476	Organ Pedagogy (1-1)	
MUED 477**	Voice Pedagogy (2)	
MUED 478-479	String Pedagogy (1-1)	

Music Ensemble 12

One large ensemble for each quarter in residence except the student-teaching quarter. Participation in both choral and instrumental ensembles for a minimum of three quarters each and

* Piano majors must take MUED 473-474 and organ majors must take MUED 475-476.

** Unless they are in the major performance area, these courses are required.

in a small ensemble in the area of one's specialty for a minimum of one quarter. For piano majors, three of the total hours must be in MUEN 359 Keyboard Ensemble. When MUEN 359 is taken, the large ensemble is not required.

Music Performance

MUSP 163 and 363	Performance Studies: Major (maximum 6 hours lower-division)	12
MUSP 489***	Senior Recital	1

Music Theory

MUTH 331	Orchestration	3
MUTH 332	Counterpoint	3
MUTH 431	Form & Analysis	3
MUTH 432	Composition	1-1-1

► Required Professional Education Courses (54-57 hours):

See the section entitled "Education" in this catalog for further information about prerequisites and admission to the teacher education program.

EDUC 101	Introduction to Teaching	1
EDUC 101L	Classroom Observation	1
EDUC 238	Computer Technology for Teachers	2
EDUC 238L	Laboratory	1
EDUC 333	Educational Psychology	3
EDUC 335	Ethical Dimensions of Teaching/Learning	2
EDUC 336	The Multicultural Classroom	3
EDUC 337	ELL Pedagogy	4
EDUC 350	Exceptional Children in the Classroom	3
EDUC 358	Literacy in the Content Areas	3
EDUC 361	Middle School Teaching Strategies	3
EDUC 362	Secondary Area Teaching Strategies	3
EDUC 390/390L	K-12 Bible & Practicum (optional- for religion endorsement)	0-3
EDUC 480	Classroom Management	3
EDUC 490	Student Teaching Seminar: Subject Specific	1
EDUC 491	Student Teaching Seminar: Designing Instruction	1
EDUC 492	Student Teaching Seminar: Assessing Learning	1
EDUC 494	Middle School Field Experience	1
EDUC 494	Senior High Field Experience	1
EDUC 494	Full-Time Student Teaching	12
EDUC 498	Student Teaching Seminar: Culminating Teaching Experience	1
ENGL 335	Survey of Linguistics	4

*** Under unusual circumstances, MUED 489 Senior Project may meet this requirement by special permission of the department.

Recommendation for Directed Teaching

Before acceptance into the Directed Teaching program, students must have passed the Keyboard Proficiency and Keyboard Harmony Examinations as prerequisites for recommendation by the music faculty. For details, see the *Music Department Student Handbook*.

Teaching Credential

Students desiring to enter a program of studies leading to a California teaching credential in music should take the B.Mus. degree with the emphasis in Music Education. Students will need to pass the music portion of the CSET exam one quarter prior to doing full-time student teaching. Students are invited to discuss the program with their major advisor in the Music Department.

Those who plan to teach on the secondary level should consult with the credential analyst in the Education Department and should become acquainted with the specific requirements for admission to and successful completion of the Teacher Education Program as outlined in the Education section of this catalog.

Performance Emphasis (82 hours)

Music Education

MUED 349 Directed Teaching: Music (in major area) 1-1

One of the following courses: 3

MUED 342 Instrumental Conducting (3)

MUED 343 Choral Conducting (3)

At least 4 hours from the following:* 4

MUED 370 Handbell Techniques & Methods (1)

MUED 371 Trumpet Techniques & Methods (1)

MUED 372 Trombone Techniques & Methods (1)

MUED 373 Horn/Tuba Techniques & Methods (1)

MUED 374 Flute Techniques & Methods (1)

MUED 375 Single-Reed Techniques & Methods (1)

MUED 376 Double-Reed Techniques & Methods (1)

MUED 377 Percussion Techniques & Methods (1)

MUED 378 Violin/Viola Techniques & Methods (1)

MUED 379 Cello/Double Bass Techniques & Methods (1)

MUED 473-474 Piano Pedagogy (1-1)

MUED 475-476 Organ Pedagogy (1-1)

MUED 477 Voice Pedagogy (2)

MUED 478-479 String Pedagogy (1-1)

* Piano majors must take MUED 473-474; organ majors must take MUED 475-476; voice majors must take MUED 477; string majors must take MUED 478-479; and all other majors must take 2 hours of MUED 495, studying the pedagogy and literature of their area of performance emphasis.

Music Ensemble

One large ensemble for each quarter in residence. 12

For piano majors, three of the twelve hours must be in MUEN 359, Keyboard Ensemble. When MUEN 359 is taken, the large ensemble is not required.

Chamber music in the major area 3

Music Performance

MUSP 164 and 364 Performance Studies: Major 36
(maximum 18 hours lower-division)

MUSP 386 Performance Studies: Secondary Area 6

MUSP 390 Junior Recital 1

MUSP 490 Senior Recital: Emphasis Major 1

Music History and Literature 2

A literature course in the area of the student's major. Keyboard majors take MUHL 337; string majors take MUHL 339; all others take MUHL 495 studying the literature of their major instrument.

Music Theory

MUTH 331 Orchestration 3

MUTH 332 Counterpoint 3

MUTH 431 Form & Analysis 3

MUTH 432 Composition 1-1-1

► **General Education Requirements:**

The general-education requirements for the B.Mus. degree are the same as for the B.S. degree except as indicated below.

1. I.C (Statistics) is not required.
2. Only one course is required in II.B (Social Sciences).
3. Only one course is required from either III.B.1 (Visual Arts) or III.B.4 (Language & Culture).
4. III.B.2 (Music) is met by the major.
5. III.B.3 (Philosophy) is not required.
6. Only two sections are required from IV.B.1 (Scientific Inquiry), IV.B.2 (Insight through Investigation), and IV.B.3 (Science and Society).
7. Section VII (Practical and Applied Arts) is not required.
8. Section VIII (Foreign Language) is not required, except that voice emphasis majors require one year of French, German, or Italian.

Special GE considerations for music education emphasis majors:

1. Teacher candidates must pass a test or take a course in U.S. Constitution (satisfied by HIST 134-135 or HIST 356 or PLSC 124).
2. Teacher candidates must complete RELH 360 as well as 3 hours of Doctrinal Studies (RELT 331, 332 or 333).
3. Teacher candidates must take HLED 166.

Music

Major in Music, B.S.

A minimum of 65 hours (21 upper-division hours)

► Required Core Courses (60 hours):

MUED 241	Basic Conducting	2
MUHL 244	World and Popular Music	3
MUHL 331	Music from Antiquity through the Baroque	3
MUHL 332	Music of the Classic & Romantic Eras	3
MUHL 333	Contemporary Music	3
MUTH 122-123	Theory I & Laboratories	4-4
MUTH 221-222-223	Theory II & Laboratories	4-4-4
MUTH 224	Music Technology: Notation	1
MUTH 225	Music Technology: Editing & Synthesis	2
MUSP 163 and 363	Performance Studies: Major (maximum of 6 hours lower-division)	7

One large ensemble for each quarter in residence 12

At least one of the following courses: 1

MUED 489	Senior Project (1)
MUSP 489	Senior Recital (1)

At least 3 hours from the following: 3

MUTH 331	Orchestration (3)
MUTH 332	Counterpoint (3)
MUTH 431	Form & Analysis (3)
MUTH 432	Composition (1-3)

► Required Core Electives (5 hours):

At least 5 hours from the following: 5

Five additional hours selected in consultation with the advisor and approved by the music faculty to develop a solid background in the area of the student's recital or project.

Major in Music, A.S.

A minimum of 37 hours

► Required Core Courses (14 hours):

MUHL 105	Survey of Music	3
MUHL 244	World and Popular Music	3
MUTH 122-123	Theory I & Laboratories	4-4

► Modules (Select one):

Church Music Module (26 hours)

MUED 106	Issues in Church Music	2
MUED 241	Basic Conducting	2
MUED 370	Handbell Techniques & Methods	1
MUHL 206	Music in Christian Worship	2
MUSP 163	Performance Studies	6
MUTH 331	Orchestration	3
MUTH 432	Composition	1
MUEN	6 quarters of ensemble (minimum of 1 instrumental and 1 choral)	6

Required Cognate Course:

REL P 210	Creative Worship	3
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General Music Module (23 hours)

MUED 241	Basic Conducting	2
MUSP 163	Performance Studies	6
MUEN 6 quarters of ensemble.		6

Electives:

9 hours selected in consultation with the advisor.

Piano Pedagogy Module (23 hours)

MUED 338	Music for Children	2
MUED 349	Directed Teaching: Music	1-1-1
MUED 473-474	Piano Pedagogy	1-1
MUHL 337	Keyboard Literature	2
MUSP 163	Performance Studies: Piano	6
MUEN	6 quarters of ensemble (minimum of 3 hours MUEN 159)	6

Electives:

2 hours selected in consultation with the advisor.

String Pedagogy Module (23 hours)

MUED 338	Music for Children	2
MUED 349	Directed Teaching: Music	1-1-1
MUED 478-479	String Pedagogy	1-1
MUHL 339	String Literature	2
MUSP 163	Performance Studies: String Instrument	6
MUEN	6 quarters of ensemble	6

Electives:

2 hours selected in consultation with the advisor.

Music Education

LOWER-DIVISION COURSES:

MUED 106 2 F
Issues in Church Music

Analysis of issues in church music. Acquaints students with traditional and contemporary worship practices. Odd years.

MUED 241 2 S
Basic Conducting

Foundation for the development of skill in the art of conducting various ensembles.

MUED 251-252-253 1-1-1 F-W-S
Singer's Diction

Correct pronunciation of text in other languages (Latin, English, German, Italian and French), based on the International Phonetic Alphabet (IPA). Builds good habits of tone, based on vowel placement and consonant articulation. Required of voice majors. Sequential quarters required.

UPPER-DIVISION COURSES:

MUED 338 2 F
Music for Children

Music for children from infancy through lower elementary school grades. Surveys standard children's music methods. Emphasizes development of child's voice through solfege and authentic folk materials and covers teaching methods for singing, rhythmic activities and listening skills. Odd years.

MUED 338L 1 F, W, S
Music for Children Laboratory

Observation and practical experience with young children, using methods discussed in MUED 338. Highly recommended complement to MUED 338. May be taken any quarter. Prerequisite: MUED 338.

MUED 342 3 W
Instrumental Conducting

Practical work with instrumental groups. Stick technique, score reading and preparation, aural skills for conductors, and other related activities. Prerequisite: MUED 241. Even years.

MUED 343 3 W
Choral Conducting

Development of conducting gestures and rehearsal techniques for choral ensembles. Opportunities are provided to conduct secondary and college-level choral groups. Prerequisite: MUED 241. Odd years.

MUED 349 1 F, W, S
Directed Teaching: Music

Lessons taught by students in studio or classroom. Supervised and evaluated. Usually taken in conjunction with MUED 473 or 478 and continued winter and spring quarters. Repeatable to a maximum of 3 credits.

MUED 370 1 W
Handbell Techniques and Methods

Basic and advanced ringing techniques, handbell literature, group organization, solo and ensemble ringing, bell assignments, and bell maintenance. Even years.

MUED 371 1 F
Trumpet Techniques and Methods

Teaching and performing trumpet through the intermediate level. Performance techniques, pedagogical methods and materials, maintenance, and practical teaching experience. Odd years.

MUED 372 1 W
Trombone Techniques and Methods

Objectives similar to those of MUED 371. Odd years.

MUED 373 1 S
Horn/Tuba Techniques and Methods

Objectives similar to those of MUED 371. Odd years.

MUED 374 1 F
Flute Techniques and Methods

Objectives similar to those of MUED 371. Even years.

MUED 375 1 W
Single-Reed Techniques and Methods

Objectives similar to those of MUED 371. Even years.

MUED 376 1 S
Double-Reed Techniques and Methods

Objectives similar to those of MUED 371. Even years.

MUED 377 1 F
Percussion Techniques and Methods

Objectives similar to those of MUED 371. Emphasis on snare drum, timpani, and mallets. Solo and ensemble playing. Even years.

Music

MUED 378 **1 F** **Violin/Viola Techniques and Methods**

Ability to play and teach violin and viola at the beginning and intermediate levels. Elementary individual and class methods of instruction and basic maintenance. Odd years.

MUED 379 **1 W** **Cello/Double Bass Techniques and Methods**

Objectives similar to those of MUED 378. Even years.

MUED 381 **2 F** **Music in Elementary and Secondary Schools I**

Theories of and practice with musical development. Emphasizes the Kodály approach to teaching music in the elementary school. Deals with vocal development of children from the nonsinger to the junior-high chorister. Prerequisite: MUED 338. Even years.

MUED 382 **2 W** **Music in Elementary and Secondary Schools II**

Music education philosophies and their practical applications for designing and implementing a secondary school choral curriculum. Topics include recruitment, auditions, repertoire selection, and classroom management. Prerequisites: MUED 241 and 338. Even years.

MUED 383 **2 S** **Music in Elementary and Secondary Schools III**

Development and maintenance of instrumental programs in elementary, middle, and secondary schools. Objectives, evaluative techniques, motivation, administration, recruiting, scheduling, technology, repertoire, and current topics. Prerequisites: MUED 241 and 338. Even years.

MUED 470, 480 **2, 2 Su** **Music Workshops**

During the summer session various workshops are offered in piano, choral music and strings.

MUED 473-474 **1-1 F-W** **Piano Pedagogy**

Teaching piano, including materials and methods of instruction. Recommended corequisite: MUED 349. Odd years.

MUED 475-476 **1-1 W-S** **Organ Pedagogy**

Teaching organ at beginning and intermediate levels. Survey of materials and methods of instruction. Odd years.

MUED 477 **2 S** **Vocal Pedagogy**

Principles and methods of vocal instruction in Western cultures. Even years.

MUED 478-479 **1-1 F, W** **String Pedagogy**

Teaching string instruments, including materials and methods of instruction. Recommended corequisite: MUED 349. Even years.

MUED 489 **1 F, W, S** **Senior Project**

Special project for B.S. majors and, in lieu of MUSP 489, for B.Mus. education emphasis majors in unusual circumstances. By permission of the music faculty and in consultation with the advisor and the department chair.

MUED 495 **1-3 F, W, S** **Independent Study**

Advanced independent project in music education. Requires approval of the department chair. Three hours maximum.

Music Ensembles

The following satisfy the music major large-ensemble requirements: Chorale, I Cantori, Orchestra, Symphonic Wind Ensemble, and Keyboard Ensemble. Additional small ensembles are also offered.

All music ensembles are repeatable for credit.

Upper-division credit for juniors and seniors is determined by the student's proficiency and previous experience in college-level music.

LOWER-DIVISION COURSES:

MUEN 154 **1 F, W, S** **I Cantori**

Mixed-voice chamber ensemble designed for voice majors and other serious vocal students. Considered a major touring ensemble; enjoys a full performance schedule. Core repertoire, both sacred and secular, performed with demanding performance standards. Auditions at the beginning of fall quarter, and membership required for the complete year. Corequisite: MUEN 161.

MUEN 155 **1 F, W, S** **Symphonic Wind Ensemble**

Advanced instrumentalists rehearse and perform a wide variety of music in various settings. Tours and workshops on alternate-year basis. Members are selected by audition.

MUEN 156 **1 F, W, S** **Orchestra**

Orchestral masterworks performed in quarterly concerts and other events. For advanced instrumentalists, both college students and community residents. Members are selected by audition.

MUEN 157 1 F, W, S

String and Piano Chamber Music

Experience with chamber music for piano with strings under the direction of a Music faculty member. Includes duos, trios, and larger groups.

MUEN 159 1 F, W, S

Keyboard Ensemble

Literature for keyboard duets, duos, and groups with instruments or voices and keyboard accompaniment. Three quarters required of all B.Mus. or A.S. Piano Pedagogy Module majors.

MUEN 160 1 F, W, S

Big Band

Emphasis on the rehearsal and performance of big band jazz. Development of reading and improvisation skills. Participation by audition/permission of instructor.

MUEN 161 1 F, W, S

Chorale

Large mixed chorus considered a minor touring ensemble. Repertoire includes music from a wide range of styles and periods, both sacred and secular. Membership is preferred for the complete year. Membership by audition.

MUEN 175 1 F, W, S

Flute Quartet

Normally limited to members of Symphonic Wind Ensemble. By audition.

MUEN 178 1 F, W, S

Saxophone Quartet

Normally limited to members of Symphonic Wind Ensemble. By audition.

MUEN 179 1 F, W, S

Woodwind Quintet

Normally limited to members of Symphonic Wind Ensemble. By audition.

MUEN 180 1 F, W, S

Brass Quintet

Normally limited to members of Symphonic Wind Ensemble. By audition.

MUEN 181 1 F, W, S

Brass Ensemble

Normally limited to members of Symphonic Wind Ensemble. By audition.

MUEN 182 1 F, W, S

Trombone Choir

By audition.

MUEN 184 1 F, W, S

String Quartet

Normally limited to members of the Orchestra. By audition.

MUEN 186 1 F, W, S

Beginning Handbell Choir

Open to any student with music reading skills.

UPPER-DIVISION COURSES:

MUEN 354 1 F, W, S

I Cantori

(See description of MUEN 154.)
Corequisite: MUEN 361.

MUEN 355 1 F, W, S

Symphonic Wind Ensemble

(See description of MUEN 155.)

MUEN 356 1 F, W, S

Orchestra

(See description of MUEN 156.)

MUEN 357 1 F, W, S

String and Piano Chamber Music

(See description of MUEN 157.)

MUEN 359 1 F, W, S

Keyboard Ensemble

(See description of MUEN 159.)

MUEN 360 1 F, W, S

Big Band

(See description of MUEN 160.)

MUEN 361 1 F, W, S

Chorale

(See description of MUEN 161.)

MUEN 375 1 F, W, S

Flute Quartet

(See description of MUEN 175.)

MUEN 378 1 F, W, S

Saxophone Quartet

(See description of MUEN 178.)

MUEN 379 1 F, W, S

Woodwind Quintet

(See description of MUEN 179.)

MUEN 380 1 F, W, S

Brass Quintet

(See description of MUEN 180.)

MUEN 381 1 F, W, S

Brass Ensemble

(See description of MUEN 181.)

MUEN 382 1 F, W, S

Trombone Choir

(See description of MUEN 182.)

MUEN 384 1 F, W, S

String Quartet

(See description of MUEN 184.)

MUEN 386 1 F, W, S

Advanced Handbell Choir

Rings level three music and above. Available by audition to students with previous ringing experience. Performs both on and off campus.

Music

Music History and Literature

LOWER-DIVISION COURSES:

MUHL 105 **3 F, W, S** **Survey of Music**

Music in western civilization, including music fundamentals and a brief history from antiquity to the present. Presented by recordings, visual aids, and lectures.

MUHL 206 **2 W** **Music in Christian Worship**

History and practice of the use of music in worship services. Emphasis on both liturgical and nonliturgical forms of worship. Odd years.

MUHL 244 **3 W** **World and Popular Music**

An overview of music in other countries and cultures and a survey of popular song and its absorption of world musics. Prerequisite or corequisite: ENGL 101.

UPPER-DIVISION COURSES:

MUHL 331 **3 F** **Music from Antiquity Through the Baroque**

Music history through the Baroque Era. Development of forms and styles, cultural backgrounds and biographies, and analysis of basic musicological methods. Prerequisites: ENGL 101, the ability to read both bass and treble clefs, and a basic knowledge of music theory. Odd years.

MUHL 332 **3 W** **Music of the Classic & Romantic Eras**

Music history of the Classic and Romantic Eras. See description of MUHL 331. Prerequisites: ENGL 101,

the ability to read both bass and treble clefs, and a basic knowledge of music theory. Odd years.

MUHL 333 **3 S** **Contemporary Music**

Music history from the Post-Romantics to the present. See MUHL 331. Prerequisites: ENGL 101, the ability to read both bass and treble clefs, and a basic knowledge of music theory. Odd years.

MUHL 337 **2 W** **Keyboard Literature**

The development of keyboard instruments; forms and literature pertaining to teaching and performance. Even years.

MUHL 339 **2 W** **String Literature**

The development of string instruments; forms and literature pertaining to teaching and performance. Odd years.

MUHL 495 **1-3 F, W, S** **Independent Study**

Advanced, independent project in music history. Requires approval of the department chair. Three hours maximum.

Music Performance

LOWER-DIVISION COURSES:

MUSP 120-124 **1 F, W, S** **Music Lessons: Class Instruction**

Lessons for groups of four or more students in voice or instruments. Meets one clock hour per week. Not applicable toward the principle performance area of a music major. Repeatable for credit.

MUSP 162 **1-2 F, W, S** **Music Lessons: General**

Elementary instruction in voice, harpsichord, organ, piano, guitar, and orches-

tra and band instruments. Not applicable toward the music major. Incurs an additional charge.* Repeatable for credit.

MUSP 163 **1-2 F, W, S** **Performance Studies: Major**

Private lessons in voice, harpsichord, organ, piano, guitar, and orchestra and band instruments. Applicable to all majors except B.Mus. performance emphasis. One hour is usually taken each quarter. Repeatable for credit.

MUSP 164 **1-3 F, W, S** **Performance Studies: Emphasis Major**

Private lessons in voice, harpsichord, organ, piano, guitar, orchestra and band instruments. Applicable to B.Mus. performance emphasis. Three hours are usually taken each quarter. Repeatable for credit.

UPPER-DIVISION COURSES:

MUSP 320-324 **1 F, W, S** **Music Lessons: Class Instruction** (See description of MUSP 120-124.)

MUSP 362 **1-2 F, W, S** **Music Lessons: General** (See description of MUSP 162.)

MUSP 363 **1-2 F, W, S** **Performance Studies: Major** (See description of MUSP 163.)

MUSP 364 **1-3 F, W, S** **Performance Studies: Emphasis Major** (See description of MUSP 164.)

* For further information on the cost of private music lessons, see the section entitled "Financial Information" in this catalog.

MUSP 386 1-2 F, W, S

**Performance Studies:
Secondary Area**

Private lessons for majors in secondary areas. Performance majors take 6 hours; music education majors, up to 6 hours by request. Available to students with upper-division status in the major performance area. Normally limited to one area and one hour credit per quarter. Selected in consultation with the major advisor. Repeatable for credit.

MUSP 390 1 F, W, S

Junior Recital

Required of performance emphasis majors in the junior year. Minimum of 30 minutes.

MUSP 489 1 F, W, S

Senior Recital

Required of music-education emphasis and B.S. music majors, the final quarter of lessons culminating in this recital. (See MUED 489 for exception.) Minimum of 30 minutes.

MUSP 490 1 F, W, S

Senior Recital: Emphasis Major

Required of performance emphasis majors, the final quarter of lessons culminating in this recital. Minimum of 60 minutes.

MUSP 495 1-3 F, W, S

Independent Study in Performance

Advanced, independent research project in solo and ensemble literature and pedagogy for the major instrument. Requires approval of department chair. Repeatable to a maximum of 3 credits.

Music Theory

LOWER-DIVISION COURSES:

MUTH 103 3 F

Fundamentals of Music Theory

Rudiments of music including notation, rhythm, melody, harmony, timbre, form, and texture. Usually taken at the same time as MUTH 103L Required of majors who have not passed the Theory I entrance examination. Does not apply to a music major.

MUTH 103L 1 F

**Fundamentals of Music Theory
Laboratory**

Exercises in aural and keyboard skills and sight singing. Meets two days a week. Usually taken in conjunction with MUTH 103. Required of majors who have not passed the Theory I entrance examination. Does not apply to a music major.

MUTH 122-123 4-4 W-S
Theory I

An integrated study of the parameters of music within a wide spectrum of cultures and historical periods. Exploration of the simpler forms and textures. Introduction to composition and arranging in vocal and instrumental applications. Music technology, singing, listening, and keyboard skills. Three lectures and two hours laboratory per week.

MUTH 221-222-223 4-4-4 F-W-S
Theory II

Advanced study of musical parameters begun in Theory I. Movement toward more complex forms and textures. Music technology, singing, listening, and keyboard skills. Three lectures and two hours laboratory per week.

MUTH 224 1 F

Music Technology: Notation

Fundamentals of music notation and desktop publishing using Finale. Presented through hands-on laboratory sessions. Part of the required sequence for Bachelor of Science in music and Bachelor of Music. Prerequisite: MUTH 122.

MUTH 225 2 W

**Music Technology:
Editing & Synthesis**

Fundamentals of music recording, editing, and synthesis using industry standard software. Presented through lectures and hands-on laboratory sessions. Part of the required sequence for Bachelor of Science in music and Bachelor of Music. Prerequisite: MUTH 122.

UPPER-DIVISION COURSES:

MUTH 326 2 W

Keyboard Harmony

For pianists and organists. Learning to transpose, modulate, and harmonize melodies; developing ability to improvise. Admission by permission of the instructor. Odd years.

MUTH 331 3 F

Orchestration

Technical aspects and sound qualities of instruments. Arranging for a variety of instrumental groups. Prerequisite: MUTH 123. Odd years.

MUTH 332 3 W

Counterpoint

Basic contrapuntal principles as generally illustrated in music of various historical styles. Prerequisite: MUTH 123. Odd years.

MUTH 431 **3 F**

Form and Analysis

Form and structure of music from plainchant to the present. Prerequisite: MUTH 123. Even years.

MUTH 432 **1 F, W, S**

Composition

Composing the smaller forms of music for a variety of vocal and instrumental combinations. Essentially private one on one sessions that will be unique for each student. Repeatable for credit. Prerequisite: MUTH 123.

MUTH 495 **1-3 F, W, S**

Independent Study

Advanced independent project in composition or theory. Requires approval of the department chair. Three hours maximum.



Faculty

Shana Ruggenberg, chair; Susan Bussell, Linda Cochran, Beverly Glover, Levi Gore, Joan Hughson, Helene Linzau, Doris Morgan, Gladys Muir, Laurie Parson, Bonnie Ramos, Kathryn Schneider, Donna Stretter, Tamara Tirado, Debbie Winkle

Departmental Office: 116 Davidian Hall; 965-7262

Degrees and Programs*

Nursing, A.S.	149, 152
Nursing, B.S.N.	155, 156

The faculty of the NURSING DEPARTMENT is committed to providing a broad, liberal and professional education to a diverse population of traditional and adult nursing students in multiple settings. This task is undertaken in a climate of Christian service, dedicated to the development of the whole person, and designed to serve the health needs of individuals, families, and the community at large. The curriculum and activities of the nursing program are planned in harmony with the mission of the college and of the Seventh-day Adventist Church, which it represents.

The department offers both Associate of Science (A.S.) and Bachelor of Science in Nursing (B.S.N.) degrees. The A.S. degree is available in a traditional format on the main campus in Angwin and in a non-traditional LVN to RN format at Travis Air Force Base in Fairfield. The B.S.N. degree is available as

* Pacific Union College is a member of the National League for Nursing. Both the A.S. and the B.S.N. programs are accredited by the League's Accrediting Commission. Questions and comments may be directed in writing to:

National League for Nursing Accrediting Commission
3343 Peachtree Rd, N.E., Suite 500
Atlanta, GA 30326

By telephone the NLN can be reached at (212) 363-5555, Ext. 153.

an RN to B.S.N. program in a non-traditional format on the main campus in Angwin. Both the LVN to RN and the RN to B.S.N. programs may be offered at other select sites; contact the department for more information.

Persons considering nursing are encouraged to include in their general education program courses in medical terminology, computer skills, and Spanish or the language of any Pacific Rim country.

Major in Nursing, A.S.

The Mission of the Associate of Science degree program in Nursing is to prepare students to provide competent nursing care for individuals of all ages by utilizing the nursing process, while functioning in the role of the associate degree nurse in the context of Christian faith and human service. This mission is fulfilled by providing quality nursing education guided by the Nursing Department's philosophy.

► Admission Requirements:

Admission requirements are those published in the General Catalog in effect during the year of the student's admission to the nursing program. The Nursing Department reserves the right to admit or deny admission to individuals applying to the nursing program.

1. Admission is competitive and candidates are evaluated based on:
 - a) Complete prerequisite courses with a grade of C or better in each course:
 - i. A full year of Algebra II at the secondary level or completion of MATH 096.
 - ii. A full year of Chemistry or Physics at the secondary level or completion of CHEM 101 or PHYS 105.
 - iii. ENGL 101 College English (4).
 - iv. BIOL 101 Human Anatomy (5) or BIOL 102 Human Physiology (5).
 - v. NURS 110 Introduction to Nursing (2).

- b) College GPA calculated on cognate and GE courses required for the A.S. nursing degree. The minimum GPA for nursing admission is 2.7. Preference will be given to those with GPAs above 3.0 and to those who have completed at least 12 units of nursing cognate courses at Pacific Union College.
 - i. Each course must be passed with a C or better.
 - ii. Applicants will not be considered for admission if they have repeated more than two cognate or GE courses, or repeated any course more than once.
 - c) ACT English test score of 19 or better.
 - d) TEAS (Test of Essential Academic Skills) total score at or above 75%.
 - e) Other factors (see A.S. Nursing Application Packet).
2. Applicants must submit an application for admission to the Nursing Department accompanied by the application fee of \$30. The nursing application also serves as application to the college. Application and readmission packets are available from the Nursing Department and at the Pacific Union College website: www.puc.edu/nursing.*

The application process begins with submission of the application form; completion of prerequisite requirements and submission of each of the following completes the process:

- a) Personal essay.
- b) Official academic transcripts from each college previously attended.
- c) Two acceptable professional/academic references. *Recommendations written by relatives and those presented directly to the Nursing Department by the applicants themselves are not acceptable.*
- d) Documentation showing current certification in cardiopulmonary resuscitation for healthcare professionals. Certification must be either AHA BLS Healthcare Provider or Red Cross Professional Rescuer.
- e) Health and safety documents (see A.S. Nursing Application Packet and *Nursing Department Student Handbook* for details on acceptable documentation):
 - i. Report of a full physical examination within the past 12 months that indicates acceptable health.
 - ii. Evidence of immunity to measles (rubeola),

mumps, rubella, and varicella, verified by titer or immunization.

- iii. Evidence of immunity to Hepatitis B, verified by titer or by documentation of immunization series in progress. Series should be started upon acceptance into the program if not previously initiated.
 - iv. Evidence of negative tuberculosis skin test within the last twelve months or appropriate radiologic documentation.
3. The Admissions Committee may request that the applicant participate in an admissions interview; applicants may also request an admissions interview.

After the applicant has completed all admissions requirements, the application will be processed according to department application deadlines and the student notified in writing of the action taken. See *A.S. Nursing Application Packet for details*.

► Readmission Procedure for Nursing:

Students who withdraw from the program in good academic standing may apply for readmission as follows:

1. Submit a completed readmission application to the Nursing Department. (Readmission packets are available from the Nursing Department.)
2. Provide one professional/academic recommendation.
3. Demonstrate adequate nursing knowledge for readmission:
 - a) Students requesting readmission after an absence of one through three years will be required to validate their current knowledge of nursing at the level of the last nursing course completed. Definitions of current requirements are available at the department office.
 - b) Students requesting readmission after an absence of more than three years will be required to validate their current nursing knowledge for each nursing course they have completed.
 - c) Knowledge validation results determine appropriate course-level placement.
 - d) A per-hour fee is charged for knowledge validation testing.
4. Meet all other “Requirements for Continuation In and Graduation from the Associate Degree Program in Nursing”

The Admissions Committee may request that an applicant participate in an admissions interview; applicants may also request an admissions interview. After the applicant has met all readmission requirements, the application will be processed and the student notified in writing of the action taken. Readmission is on a space-available basis and is not guaranteed.*

* RN licensure may be denied for crimes, abusive behavior, or any illegal acts that are substantially related to the practice of nursing. Before applying to the nursing program, any applicant who has ever been convicted of a crime should ask for a copy of the Board of Registered Nursing Regulations Relating to Denial of Licensure, available at the Nursing Department or online at www.rn.ca.gov.

Students who fail a core nursing course may apply for readmission according to the “Readmission Procedure for Nursing”. Failure is defined as:

- a) Receiving a grade below a C (2.0).
- b) Withdrawing for failing performance.

The following additional requirements must be met for readmission:

1. Students must identify problem areas that resulted in their failure.
2. Students must show evidence for potential success by having corrected identified problem areas.
3. Students are limited to one clinical nursing course repeat in the program, including withdrawals for failing performance.
4. Students are limited to one non-clinical nursing course repeat in the program, including withdrawals for failing performance. Non-clinical nursing courses are NURS 212, 235, and 390.

► **Transfer, Challenge, and Waiver Options:****

Applicants wishing to transfer, challenge or waiver must meet the same admission or readmission requirements as generic students. Applicants may establish additional academic credit for acquired knowledge through challenge examinations or other methods of evaluation. Applicants meeting admission and degree requirements through transfer, challenge, or waiver have the same access as any other applicant for open space in clinical nursing courses.

Requests for admission by transfer from another nursing program are evaluated on an individual and space-available basis. Transfer courses must be equivalent to the courses in the Pacific Union College generic program. Eligible applicants must meet the same admission and continuation requirements as for the A.S. degree.

Applicants may have previous coursework, knowledge, and skills evaluated to validate their current level of knowledge. Knowledge validation in nursing is available to evaluate:

1. Applicants transferring from another program for educating registered nurses.
2. Applicants transferring from programs educating licensed vocational nurses.

* *Because of enrollment limitations in clinical sections, students may experience delays of one or more quarters before readmission to the program.*

** *Specific information and materials about transfer, challenge, waiver, and the 30-semester/45-quarter unit option are available in the Nursing Department and will be sent upon request.*

3. Applicants having developed skills during previous employment, that are similar to those expected of students in required nursing courses.

The options available for LVNs or eligible applicants who have passed the GAP test to qualify to take the California licensure examination for registered nurses are as follows:

1. Advanced-Placement A.S. option (Angwin campus): Applicants are given credit for first-year nursing courses. Required nursing courses include NURS 221, 222, 254, 255, 256, 325, and 326. Applicants must meet the same admission and continuation requirements as for the A.S. degree with the following changes:
 - a) Applicants must have had at least one year of acute, direct, patient care experience within the previous 5 years.
 - b) Introduction to Nursing (NURS 110) is not required.
2. LVN to RN A.S. option: This program is offered at select off-campus sites. Intensive theory core weeks are conducted at regular intervals throughout each term for the nursing courses. Clinical hours are scheduled to allow working LVNs to meet their employment commitments. Required nursing courses are the same as previously described under the Advanced-Placement A.S. option. Applicants must meet the same admission and continuation requirements as for the A.S. degree with the following changes:
 - a) Applicants must have had at least one year of acute, direct, patient care experience within the previous 5 years.
 - b) Applicants must have completed a minimum of 16 college quarter units (10.6 semester units), including BIOL 101, 102 and MICR 134.
 - c) Introduction to Nursing (NURS 110) is not required.
 - d) Chemistry is not required.
3. 30-semester/45-quarter unit option: This option does not earn a degree in nursing from Pacific Union College. Required courses are MICR 134, BIOL 102, NURS 221, 222, 254, and 325 only. Applicants desiring this option are not subject to any evaluative processes for admission. An RN license obtained through this nondegree option is not recognized in all states and those electing this option may encounter difficulty articulating into B.S. nursing programs. Applicants are advised to carefully research the limitations of this option.

► **Transportation Policies:**

Students are expected to provide their own transportation to, during, and from off-campus clinical labs. State law requires proof of automobile liability insurance.

► **Requirements for Continuation in and Graduation from the Associate Degree Program in Nursing:**

1. Compliance with all policies and procedures in the Nursing Department Student Handbook.
2. Background checks: Required of all students upon entry into the program. Background checks are performed by an independent agency, paid for through student fees. Results are reviewed by the Department Chair and maintained in a confidential location. Background checks that yield results potentially unacceptable to clinical agencies will be evaluated on a case-by-case basis. If the agency does not accept a student on the basis of a background check, the student may not be allowed to continue in the nursing program if clinical requirements of the courses cannot be met.
3. Current malpractice insurance, paid for by student fees.
4. Current certification in cardiopulmonary resuscitation for healthcare professionals through either AHA or Red Cross.
5. Acceptable physical and mental health, and demonstration of compliance with all health and safety requirements.*
6. A minimum grade of C (2.0) in the required nursing, cognate, and general education courses.
7. No more than one clinical nursing course repeat and one non-clinical nursing course repeat allowed. Non-clinical nursing courses are NURS 212, 235, and 390. A second failure in either a clinical or a non-clinical course results in the student being permanently dropped from the program.
8. Completion of all general education and cognate requirements before entering the second year of the A.S. curriculum. Exceptions must be petitioned to the Nursing Admissions Committee. This requirement does not apply to the LVN to RN program.
9. Completion of all standardized tests administered as part of nursing curriculum.
10. Satisfactory completion of the requirements for the A.S. Degree in Nursing as specified in the current *General Catalog*.

► **Course Evaluations:**

Each clinical nursing course is composed of both theory and clinical hours as reflected in the course description. Passing a clinical course and progressing to the next nursing course requires passing grades in both the theory and clinical components. If the clinical portion of a course is failed, a grade of F is recorded for the entire course. See the Clinical Evaluation Policy in the Nursing Department Student Handbook.

* See Board of Registered Nursing Guidelines on substance abuse and mental illness, available in the Nursing Department.

Major in Nursing, A.S.

A minimum of 99 hours (115 hours including GE requirements)

► **Required Core Courses (70 hours):**

NURS 121	Nursing I	6
NURS 124	Nursing II	6
NURS 125	Nursing III	6
NURS 212	Pharmacology	3
NURS 221	Nursing IV	6
NURS 222	Nursing V	6
NURS 235	Health Assessment	4
NURS 254	Mental Health Nursing	6
NURS 255	Pediatric Nursing	5
NURS 256	Maternal-Newborn Nursing	6
NURS 325	Nursing VI	9
NURS 326	Management and Professional Practice	3
NURS 390	Pathophysiology	4

► **Required Cognate Courses (29-30 hours):**

BIOL 101	Human Anatomy	5
BIOL 102	Human Physiology	5
FDNT 235	Nutrition	3
MICR 134	General Microbiology	5
PSYC 121	General Psychology	4
PSYC 234	Human Development	4

At least one of the following courses: 3-4

ANTH 124	Cultural Anthropology (4)
NURS 376	Nursing Issues: Transcultural Care (3)
SOCI 121	Introduction to Sociology (4)
SOCI 214	The Family (4)
SOCI 232	American Social Problems (4)
SOCI 355	“Racial” and Ethnic Relations (3)

► **General Education Requirements:**

ENGL 101	College English	4
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At least one of the following courses: 3

COMM 105	Speech Communication (3)
COMM 226	Public Speaking (3)

At least 9 hours from the following: 9

Religion courses (Including at least 3 hours with prefix RELB)

Intermediate Algebra

A full year of Algebra II with semester grades of C or better at the secondary level or both of the following:

MATH 019	Introductory Algebra (or waiver test) and
MATH 096	Intermediate Algebra (or waiver test)

Introductory Chemistry or Physics

A full year of Chemistry or Physics with semester grades of C or better at the secondary level or one of the following:

CHEM 101	Introductory Chemistry
PHYS 105	Introduction to Physics

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SERVICE COURSE:

(Not applicable to a major or minor in this department)

NURS 110 **2 F, W, S** **Introduction to Nursing**

An overview of the profession of nursing, introducing participants to the philosophy and conceptual framework of the Nursing Department at Pacific Union College. Addresses the nature of nursing, historical and contemporary influences on nursing, guidelines for nursing practice, health practices and beliefs, and the scope of nursing within the healthcare system. Aims to provide participants with sufficient understanding of the nature and scope of nursing in order to better evaluate its fit with their goals and aptitudes. Required for applicants to the Associate of Science Degree in Nursing.

LOWER-DIVISION COURSES:

Note: In addition to the content described in each nursing course, the concepts of aging, communication, pharmacology, and therapeutic nutrition are integrated throughout the curriculum.

NURS 121 **6 F, W, S** **Nursing I**

Introduces students to basic concepts related to the individual (comfort, elimination, fluid and electrolytes, infection, inflammation, mobility, thermoregulation, tissue integrity, health-wellness-illness, spirituality, stress and coping), the profession (assessment, caring interventions, clinical decision making, communication, evidence based practice), and interpersonal/healthcare systems (ethics, legal, safety). Students achieve student learning outcomes by integrating knowledge, skills, and

attitudes in classroom, laboratory, and clinical settings. Three theory units (30 clock hours) and three clinical units (90 clock hours). Prerequisite: Admission to the Nursing Program. Corequisite: NURS 235.

NURS 124 **6 F, W, S** **Nursing II**

Reinforces and expands on concepts previously learned and introduces students to concepts related to the individual (acid-base balance, immunity, inflammation, metabolism, oxygenation, sensory perception, cognition, grief and loss), the profession (accountability, advocacy, collaboration, teaching and learning), and interpersonal/healthcare systems (culture, diversity). Students achieve student learning outcomes by integrating knowledge, skills, and attitudes in classroom, laboratory, and clinical settings. Three theory units (30 clock hours) and three clinical units (90 clock hours). Prerequisites: NURS 121, 235. Corequisite: NURS 212.

NURS 125 **6 F, W, S** **Nursing III**

Reinforces and expands on concepts previously learned and introduces students to concepts related to the individual (cellular regulation, perfusion), the profession (managing care, professional behaviors), and interpersonal/healthcare systems (quality improvement). Students achieve student learning outcomes by integrating knowledge, skills, and attitudes in classroom, laboratory, and clinical settings. Three theory units (30 clock hours) and three clinical units (90 clock hours). Prerequisites: NURS 124, 212. Corequisite: NURS 390.

NURS 212 **3 F, W, S** **Pharmacology**

Introduces students to major classifications of pharmacotherapeutic agents ad-

ministered to individuals receiving nursing care. An overview of the pharmacokinetics, indications, contra-indications, and drug interactions of commonly used medications provide a basis for safe and effective nursing care. Concepts related to the profession (accountability, communication, teaching and learning) and interpersonal/healthcare systems (culture, diversity, ethics, legal issues, safety) are addressed as they relate to pharmacology and the nursing role. Students achieve student learning outcomes by integrating new and prior knowledge in the classroom setting. Three theory units (30 clock hours). Prerequisites: NURS 121, 235. Corequisite: NURS 124.

NURS 221 **6 F, W, S** **Nursing IV**

Reinforces and expands on concepts previously learned and introduces students to concepts related to the individual (intracranial regulation). Students focus on managing care for patients with increasingly complex alterations in health and more fully integrating professional and interpersonal/healthcare concepts into nursing practice. Students achieve student learning outcomes by integrating knowledge, skills, and attitudes in classroom, laboratory, and clinical settings. Three theory units (30 clock hours) and three clinical units (90 clock hours). Prerequisites: NURS 125, 390. Corequisite: NURS 254.

NURS 222 **6 F, W, S** **Nursing V**

Reinforces and expands on concepts previously learned and introduces students to concepts related to the individual (sexuality). Students focus on managing care for patients with complex alterations in health and fully integrating professional and interpersonal/healthcare concepts into nursing practice. Students

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achieve student learning outcomes by integrating knowledge, skills, and attitudes in classroom, laboratory, and clinical settings. Three theory units (30 clock hours) and three clinical units (90 clock hours). Prerequisites: NURS 221, 254. Corequisite: NURS 256.

NURS 235 **4 F, W, S** **Health Assessment**

Introduces students to the nursing profession concept of assessment, including taking a full health history, collecting assessment data, and distinguishing normal from abnormal findings. Students achieve student learning outcomes by integrating knowledge, skills, and attitudes in classroom and laboratory settings. Three theory units (30 clock hours) and one clinical unit (30 clock hours). Prerequisite: Admission to Nursing Program. Corequisite: NURS 121.

NURS 254 **6 F, W, S** **Mental Health Nursing**

Reinforces and applies concepts previously learned to the mental health setting and introduces students to concepts related to the individual (addiction behaviors, development, mood and affect, self, violence), the profession (therapeutic communication), and interpersonal/healthcare system concepts unique to the setting of mental health nursing. Students achieve student learning outcomes by integrating knowledge, skills, and attitudes in classroom, laboratory, and clinical settings. Three theory units (30 clock hours) and three clinical units (90 clock hours). Prerequisites: NURS 125, 390. Corequisite: NURS 221.

NURS 255 **5 S** **Pediatric Nursing**

Reinforces and applies concepts previously learned to the pediatric setting and introduces students to interpersonal/healthcare system concepts unique to

the setting of pediatric nursing. Students achieve student learning outcomes by integrating knowledge, skills, and attitudes in classroom, laboratory, and clinical settings. Three theory units (30 clock hours) and two clinical units (60 clock hours). Prerequisites: NURS 124, 212. Corequisite: NURS 125, 221, or 222

NURS 256 **6 F, W, S** **Maternal-Newborn Nursing**

Reinforces and applies concepts previously learned to the perinatal setting and introduces students to concepts related to the individual (reproduction), and to professional and interpersonal/healthcare system concepts unique to the setting of perinatal nursing. Students achieve student learning outcomes by integrating knowledge, skills, and attitudes in classroom, laboratory, and clinical settings. Three theory units (30 clock hours) and three clinical units (90 clock hours). Prerequisites: NURS 221, 254. Corequisite: NURS 222.

NURS 271 **1-2 F, W, S; 1-6 Su** **Field Experience**

A work-study course offered through the Nursing Department in cooperation with selected clinical agencies. Students apply previously learned theory and clinical skills in assigned patient-care settings under direct supervision of selected RN preceptors. One quarter unit of academic credit requires 75 clinical hours. Repeatable to a maximum of 8 credits. Prerequisite: NURS 125 and approval by Nursing Department faculty.

UPPER-DIVISION COURSES:

NURS 325 **9 F, W, S** **Nursing VI**

Reinforces and expands on concepts previously learned. Students focus on managing care for multiple patients and fully integrating professional and inter-

personal/healthcare concepts into nursing practice. Students achieve student learning outcomes by integrating knowledge, skills, and attitudes in classroom and clinical settings. Three theory units (30 clock hours) and six clinical units (180 clock hours). Prerequisites: All 100 and 200 level nursing courses. Corequisite: NURS 326.

NURS 326 **3 F, W, S** **Management and Professional Practice**

Reinforces and expands on concepts previously learned with emphasis on professional and interpersonal/healthcare systems concepts essential to patient care management. Students achieve student learning outcomes by integrating knowledge, skills, and attitudes in classroom settings. Three theory units (30 clock hours). Prerequisites: All 100 and 200 level nursing courses. Corequisite: NURS 325.

NURS 390 **4 F, W, S** **Pathophysiology**

Expands on concepts learned in the biophysical and psychosocial sciences and focuses on concepts related to the individual that are prevalent in the major conditions identified by the CDC and IOM as leading causes of morbidity and mortality (cellular regulation, comfort, immunity, infection, inflammation, metabolism, mobility, oxygenation, perfusion). Concepts related to the profession (assessment, caring interventions, evidence based practice) are emphasized in relation to the nurses' role in helping individuals move toward optimum health. Students achieve student learning outcomes by integrating new and prior knowledge in the classroom setting. Four theory units (40 clock hours). Prerequisites: NURS 124, 212. Corequisite: NURS 125.

Bachelor of Science in Nursing, B.S.N. (Second-Step Program in Nursing)

The mission of the Bachelor of Science in Nursing program is to prepare registered nurses for professional practice within a broad liberal education in a context of Christian faith and human service. This mission is fulfilled by providing quality nursing education guided by the Nursing Department's philosophy.

This upper-division program for registered nurses leading to the Bachelor of Science in Nursing degree is designed to articulate with a two-year associate degree program. A registered nurse graduate of an Associate Degree program often will have completed most of the nursing prerequisites for the program. Prior nursing credit of associate degree or diploma program graduates will be evaluated and appropriate credit given.

A student enrolled in full-time study may sequence general education and nursing courses to complete degree requirements in three to six quarters. A flexible class schedule helps to accommodate the needs of those with limited access to nursing programs or who are unable to coordinate with traditional baccalaureate programs.

► Admission Requirements:

Admission requirements are those published in the General Catalog in effect during the year of the student's admission to the nursing program. The Nursing Department reserves the right to admit or deny admission to individuals applying for admission to the nursing program.

1. In addition to the requirements for admission to the college, the following criteria must be met:
 - a) Junior academic standing.
 - b) Completion of an associate degree, or equivalent, in nursing.
 - c) Completion of the following:
 - i. English 101 or equivalent
 - ii. Speech Communication
 - iii. Required cognates for the A.S. degree in Nursing
 - d) Students accepted for full-time enrollment in the fall quarter will lack no more than 8 hours of required general education (GE) courses; for winter or spring quarters the applicant will lack no more than 12 hours of GE. For part-time enrollment the applicant will lack no more than 24 hours of GE. *All applicants accepted into the BSN program must be able to demonstrate a feasible plan for completion of general education courses at a time consistent with completion of courses in the major.*
- e) Successful completion of the NCLEX exam and receipt of the RN license is required in order to register for any

practicum course and its corequisite courses if applicable. The practicum courses are NURS 432, NURS 462, and NURS 389 (under the practicum subtitle).

2. Applicants must submit an application for admission to the Nursing Department. Application packets are available from the Nursing Department and at the Pacific Union College website: www.puc.edu/nursing. A complete application includes:
 - a) Official transcripts.
 - b) Two acceptable professional/academic recommendations.
3. The Admissions Committee may request that the applicant participate in an admissions interview; applicants may also request an admissions interview.

After the applicant has completed all admissions requirements, the application will be processed according to department application deadlines and the student notified in writing of the action taken. *See B.S.N. Nursing Application Packet for details.*

► Requirements for registration for clinical courses:

1. Current California RN license.
2. Documentation showing current certification in cardiopulmonary resuscitation for healthcare professionals. Certification must be either AHA BLS Healthcare Provider or Red Cross Professional Rescuer.
3. Proof of current malpractice insurance.
4. Health and safety documents (see BSN Nursing Application Packet and *Nursing Department Student Handbook* for details on acceptable documentation):
 - a) Report of a full physical examination within the past 12 months that indicates acceptable health.
 - b) Evidence of immunity to measles (rubeola), mumps, rubella, and varicella- verified by titer or immunization.
 - c) Evidence of negative tuberculosis skin test within the last twelve months or appropriate radiologic documentation.
 - d) Hepatitis B immunization series is highly recommended.

► Clinical Placement:

Clinical placement is evaluated and approved by the nursing faculty.

► Transportation Policies:

Students are expected to provide their own transportation to, during, and from off-campus clinical labs. Faculty will not provide transportation. Students are advised not to transport clients in their own vehicles under any circumstances. This policy protects both the client and the student. State law requires proof of automobile liability insurance.

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► Academic Requirements for Continuation in and Graduation from the Second-Step Program in Nursing:

1. The BSN cognate and general education requirements are outlined below. The general requirements for a baccalaureate degree are outlined in the section entitled “The Baccalaureate Degree Program” in this catalog.
2. Students who receive a grade lower than a C- in a nursing course must repeat the course. Students are limited to a total of two nursing-course repeats in the program, including withdrawals for failing performance, with no course repeated more than once.

► Air Force ROTC

Air Force Reserve Officer Training Corps (Air Force ROTC) is available to Pacific Union College students through California State University, Sacramento. ROTC coursework is completed on the CSU Sacramento campus. Upon completion of ROTC requirements and coursework necessary for the degree objective (e.g., BSN in Nursing), cadets are commissioned as an officer in the US Air Force. Because of the firm scheduling requirements of the ROTC program, students should work closely with their academic advisor and the AF ROTC unit in planning their academic program. Air Force ROTC scholarships are available to qualified students. Contact the unit admissions officer in the Aerospace Studies Department at CSU Sacramento, telephone 916-278-7783, for information on the program.

Bachelor of Science in Nursing, B.S.N.

A minimum of 76 hours (45 upper-division hours) required for the major and cognates. All courses are to be selected in consultation with the nursing faculty advisor. Each practicum must be taken concurrently with the appropriate theory course.

► Required Core Courses (43-46 hours):

NURS 390	Pathophysiology	4
NURS 431	Community Health Nursing	4
NURS 432	Community Health Nursing Practicum	3
NURS 460	Health Education	4
NURS 461	Health Care Management	4
NURS 462	Health Care Mgmt/Educ Practicum	3
NURS 485	Introduction to Nursing Research	4

At least one of the following courses: 4

NURS 235 Health Assessment (4)

NURS 335 Advanced Health Assessment (4)

At least one of the following courses: 3-4

NURS “Special Topics” courses

At least three of the following courses: 10-12

NURS “Nursing Issues” courses

► Required Cognate Courses (33-34 hours):

BIOL 101	Human Anatomy	5
BIOL 102	Human Physiology	5
CHEM 101*	Introductory Chemistry	4
FDNT 235	Nutrition	3
MICR 134	General Microbiology	5
PSYC 121	General Psychology	4
PSYC 234	Human Development	4

At least one of the following courses: 3-4

ANTH 124 Cultural Anthropology (4)

NURS 376 Nursing Issues: Transcultural Care (3)

SOCI 232 American Social Problems (4)

SOCI 355 “Racial” and Ethnic Relations (3)

► General Education Requirements:

ENGL 101-102	College English	4-4
STAT 222	Introduction to Statistics	4

At least one of the following courses: 3

COMM 105 Speech Communication (3)

COMM 226 Public Speaking (3)

At least 8 hours from the following: 8

History courses

At least two courses from the following: 6-8

Humanities (Courses must come from at least 2 different areas)

1. Literature: ENGL 301

2. Art: ARTH 107, 108, 115, 116, or 278

3. Music: MUHL 105

4. Philosophy: Any course with a PHIL prefix

At least 18 hours from the following: 18

Religion courses, including at least 9 upper-division hours and 6 hours from RELB courses. This requirement may be prorated for transfer students.

RELB 341, RELT 345, and RELP 346 are offered in conjunction with nursing courses and are recommended.

Intermediate Algebra

A full year of Algebra II with semester grades of C or better at the secondary level or *both* of the following:

MATH 019 Introductory Algebra (or waiver test) *and*

MATH 096 Intermediate Algebra (or waiver test)

► Electives:

Additional coursework as necessary to complete 192 hours total and 60 upper-division hours total to meet the baccalaureate degree requirements. Students may take additional Nursing Issues and Special Topics courses if upper-division hours are needed.

* Students who have already completed a non-credit CHEM 101 equivalency may substitute CHEM 102 for this requirement.

UPPER-DIVISION COURSES:

The sequence of course offerings may vary on satellite campuses.

NURS 335 **4 W**
Advanced Health Assessment

Reinforces the nursing profession concepts of assessment, and builds upon these concepts focusing on further application and integration of skills of taking a full health history, collecting assessment data, and distinguishing normal from abnormal findings. Advanced assessment techniques are introduced and skills developed. Students achieve student learning outcomes by integrating knowledge, skills, and attitudes in classroom and laboratory settings. Three theory units (30 clock hours) and one clinical unit (30 clock hours). Prerequisite: Admission to BSN program.

NURS 375 **3 F**
Nursing Issues: End of Life Care

Reinforces individual concepts related to grief and loss, with a focus on grief response theories, and addresses common issues related terminal illness and death. Emphasis on the professional nursing role concepts of advocacy, assessment, caring interventions, collaboration, and communication as relevant to end of life care. System concepts are applied as pertinent to the issues discussed. Students achieve student learning outcomes by integrating knowledge, skills, and attitudes in real and/or virtual classroom settings. Three theory units (30 clock hours). Prerequisites: NURS 124, 212

NURS 376 **3 W**
Nursing Issues: Transcultural Care

Explores interpersonal system concepts related to culture, diversity, family, and perceptions of health, wellness, and illness. Emphasis on the professional nursing role concepts of advocacy, assessment,

caring interventions, collaboration, and communication as relevant to providing nursing care in an increasingly diverse world. System concepts are applied as pertinent to the issues discussed. Students achieve student learning outcomes by integrating knowledge, skills, and attitudes in real and/or virtual classroom settings. Three theory units (30 clock hours). Prerequisites: NURS 124, 212.

NURS 384 **3 - 4 S**
Special Topics: Health Care Delivery Systems

Explores organizational system concepts related to health care systems and health policy and the relationships among these systems and policies and the nation's health. Emphasis on the professional nursing role concepts of accountability and advocacy within the health care system as relevant to select national health care issues. Students achieve student learning outcomes by integrating knowledge, skills, and attitudes in real and/or virtual classroom settings. Three or four theory units (30-40 clock hours). Prerequisite: Admission to BSN program.

NURS 389 **3 - 5 S**
Special Topics: Various

Exploration of special topics with implications for nurses in various professional roles. Repeatable for credit under different subtitles, such as Informatics and Nursing Role Specialization Practicum. Students achieve student learning outcomes by integrating knowledge, skills, and attitudes in real and/or virtual classroom settings. Three or four theory units (30-40 clock hours) for each subtitle, with the following exception: Specialization Practicum includes individualized practical experience in various settings for three to five clinical units (80 clock hours/unit). Prerequisites: Admission to BSN program. Current California RN license required for practicum.

NURS 390 **4 W**
Pathophysiology

Expands on concepts learned in the biophysical and psychosocial sciences and focuses on concepts related to the individual that are prevalent in the major conditions identified by the CDC and IOM as leading causes of morbidity and mortality (cellular regulation, comfort, immunity, infection, inflammation, metabolism, mobility, oxygenation, perfusion). Concepts related to the profession (assessment, caring interventions, evidence based practice) are emphasized in relation to the nurses' role in helping individuals move toward optimum health. Students achieve student learning outcomes by integrating new and prior knowledge in the classroom setting. Four theory units (40 clock hours). Prerequisites: NURS 124, 212.

NURS 419 **4 F**
Nursing Issues: Professional

Exploration of current nursing issues focusing on professional concepts relevant to the evolving role of nurses in a dynamic health care environment. Special emphasis on developing an expanded awareness of opportunities to participate as a change agent, demonstrating and advocating for best practices related to select health care system concepts (health policy, legal issues, quality improvement). Students achieve student learning outcomes by integrating knowledge, skills, and attitudes in real and/or virtual classroom settings. Four theory units. (4 clock hours). Prerequisite: Admission to BSN program.

Nursing

NURS 420 **4 F** **Nursing Issues: Social**

Exploration of current nursing issues that involve interpersonal system concepts (culture, diversity, family, and health, wellness, and illness). Special emphasis on developing a better understanding of the sociocultural issues affecting the health of individuals, families, and communities, and the role of the nurse in facilitating wellness and supporting autonomy within various health care settings. Students achieve student learning outcomes by integrating knowledge, skills, and attitudes in real and/or virtual classroom settings. Four theory units (40 clock hours). Prerequisite: Admission to BSN program.

NURS 421 **3 - 4 S** **Nursing Issues: Various**

Exploration of current nursing issues with implications for the nursing profession. Repeatable for credit under different subtitles, such as Global. Students achieve student learning outcomes by integrating knowledge, skills, and attitudes in real and/or virtual classroom settings. Four theory units (4 clock hours). Prerequisite: Admission to BSN program.

NURS 431 **4 F** **Community Health Nursing**

Expands on professional nursing concepts applied to the community health care setting. Emphasis on promoting and maintaining health and preventing illness among individuals, families, and communities with a particular focus on issues identified by the CDC, IOM, and other organizations as health care priorities because of their potential to affect the Nation's health. Students achieve student learning outcomes by integrating knowledge, skills, and attitudes in the classroom setting. Four theory units (4 clock hours). Prerequisite: Admission to BSN program. Corequisite: NURS 432.

NURS 432 **3 F** **Community Health Nursing Practicum**

Provides for the application of community health nursing concepts. Students achieve student learning outcomes by integrating knowledge, skills, and attitudes in community health care settings. Three clinical units (90 clock hours). Prerequisites: Admission to BSN program; current California RN license. Corequisite: NURS 431.

NURS 460 **4 W** **Health Care Education**

Expands on the professional nursing concepts of teaching and learning and evidence based practice as a major strategy for health promotion and education. An overview of learning theories and educational strategies provides the basis for developing the role of nurse as educator. Students achieve student learning outcomes by integrating knowledge, skills, and attitudes in the classroom setting. Four theory units (4 clock hours). Prerequisite: Admission to BSN program.

NURS 461 **4 S** **Health-Care Management**

Expands on professional nursing and organizational system concepts relevant to the role of nurse as manager. Includes an overview of theories of leadership and management and an emphasis on strategies to implement initiatives that improve safety and quality in various healthcare settings. Students achieve student learning outcomes by integrating knowledge, skills, and attitudes in the classroom setting. Four theory units (4 clock hours). Prerequisites: Admission to BSN program

NURS 462 **3 S** **Health-Care Management and Education Practicum**

Provides for the application of health care education and management concepts. Students achieve student learning outcomes by integrating knowledge, skills, and attitudes in various health care settings. Three clinical units (90 clock hours). Prerequisites: NURS 460 or 461; RN license. Corequisite: NURS 460 or 461.

NURS 485 **4 S** **Introduction to Nursing Research**

Introduces the concepts and process of research and its implications for nursing and reinforces and applies the professional nursing concept of evidence based practice. Emphasis on becoming a consumer of nursing research by developing basic skills for interpreting and using research to inform practice. Students achieve student learning outcomes by integrating knowledge, skills, and attitudes in the classroom setting. Four theory units (40 clock hours). Prerequisite: Admission to BSN program. Recommended prerequisite: STAT 222.

NURS 495 **1-3 F, W, S** **Independent Study**

Individual research; for advanced students with adequate background in appropriate nursing studies. Three units maximum. One to three theory units (10-30 clock hours). Prerequisites: Permission of chair or program coordinator.



Faculty

Lloyd Best, chair; Vola Andrianarijaona, Bruce Ivey, James Robertson

Departmental Office: 238 Chan Shun Hall; 965-7269

Degrees and Programs

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PHYSICS is the search for the fundamental physical laws of nature. In particular, physics is the study of forces and motion of physical entities, seeking to find basic relations that synthesize these phenomena. The goal is to discover ways to control and predict natural occurrences and to understand and explain the physical universe. To achieve this goal involves observation and experimentation from which physical and mathematical models are developed that suggest concepts and theories. Although modern science limits itself to a naturalistic view of reality and to experimental ways of obtaining knowledge, this department takes the view that physical phenomena are consistent with the concept of an intelligent Designer and divine Creator.

Degrees offered include a four-year B.S. in Physics designed primarily to prepare students for graduate work or applied research; a four-year B.S. in Biophysics, which is popular for pre-medical and pre-dental preparation but is also suitable for secondary education; and a four-year B.S. in Natural Science with an emphasis in physics, which is primarily for those preparing for secondary teaching.

This department houses the first two years of the engineering program that is affiliated with the School of Engineering at Walla Walla University.

Major in Physics, B.S.

A minimum of 107 hours (37 upper-division hours)

► Required Core Courses (97 hours):

ASTR 115	Astronomy	5
CHEM 111-112-113	General Chemistry	5-5-5
CPTR 115	Intro. to Computer Programming	4
ENGR 216	Circuit Theory	4
MATH 131-132-133	Calculus I-II-III	4-4-4
MATH 265	Elementary Linear Algebra	4
MATH 267	Multivariable Calculus	4
MATH 269	Elementary Differential Equations	4
PHYS 211-212-213	Physics with Calculus I-II-III	4-4-4
PHYS 314	Elementary Modern Physics	4
PHYS 341-342	Classical Dynamics I-II	3-3
PHYS 361-362-363	Electromagnetic Theory I-II-III	3-3-3
PHYS 389L	Experimental Physics	1
PHYS 396	Seminar (4 quarters)	.5-.5-.5-.5
PHYS 445	Thermal Physics	4
PHYS 461-462	Quantum Physics I-II	3-3
PHYS 489L	Advanced Experimental Physics	1

► Required Core Electives (10 hours)

At least 4 hours from the following: 4
Additional upper-division PHYS courses laboratory, project and/or independent research

At least 6 hours from the following: 6
Additional non-service PHYS courses
CHEM 344 Nuclear Physics and Chemistry (3)

Recommended Proficiency:

Modern-language proficiency comparable to a one-year college course in French or German.

This course of study is adequate for the student who is preparing for graduate study in physics.

Major in Biophysics, B.S.

A minimum of 107 hours (41 upper-division hours)

► Required Core Courses (97 hours)

BIOL 111-112-113	Biological Foundations	5-5-5
BIOL 320	Cellular and Molecular Biology	4
BIOL 348	Systems Physiology	5
CHEM 111-112-113	General Chemistry	5-5-5
CHEM 371-372-373	Organic Chemistry	4-4-4
CHEM 381	Biochemistry I	4
ENGR 216	Circuit Theory	4
MATH 131-132-133	Calculus I-II-III	4-4-4
PHYS 314	Elementary Modern Physics	4
PHYS 321	Biophysics	3
PHYS 322	Medical Physics	3
PHYS 389L	Experimental Physics	1
PHYS 396	Seminar (4 quarters)	.5-.5-.5-.5
PHYS 489L	Advanced Experimental Physics	1

One of the following options: 12-16

PHYS 111-112-113 General Physics I-II-III (4-4-4)

PHYS 265 Applied Physics (4)

or

PHYS 211-212-213 Physics with Calculus I-II-III (4-4-4)

► Required Core Electives (10 hours)

At least 10 hours from the following: 10

(Including at least 2 upper-division hours) k

Additional non-service BIOL courses

Additional non-service PHYS courses

Additional CHEM courses chosen from the following:

CHEM 344 Nuclear Physics and Chemistry (3)

CHEM 450L Physical Chemistry Laboratory (1)

CHEM 451 Physical Chemistry: Thermodynamics (3)

CHEM 452 Physical Chemistry: Dynamics (3)

Recommended Courses:

CPTR 115 Intro. to Computer Programming (4)

MICR 134 General Microbiology (5)

PHYS 265 Applied Physics (4)

This program provides the additional emphasis in the physical sciences demanded for graduate study in biophysics, physiology, medicine, radiation biology and molecular biology, especially when a career in academic medicine or medical research is contemplated. This program is also recommended as a broad major for teaching at the secondary-school level.

Major in Natural Science, B.S. Physics Emphasis

A minimum of 100 hours (29 upper-division hours)

This major provides appropriate preparation for teaching science at the secondary level. The core requirement of 65 quarter hours of course work corresponds to science subjects commonly taught in California public schools, and the emphasis treats the subject matter at a depth more than adequate for teaching the higher-level secondary science courses in physics. Emphases may also be obtained in biology or chemistry. For further information, see the sections entitled "Biology" and "Chemistry" in this catalog.

ASTR 115	Astronomy	5
ASTR 173	Meteorology	1
BIOL 111-112-113	Biological Foundations	5-5-5
BIOL 331	Marine Science	4
BIOL 450	Philosophy of Origins	3
CHEM 111-112-113	General Chemistry	5-5-5
GEOL 233	Geology	4
PHYS 390	History and Philosophy of Science	3

At least one of the following courses: 3

ENVR 360 Conservation Biology (3)

ENVR 361 Energy and Climate Change (3)

ENVR 362 Pollution and Environmental Quality (3)

One of the following sequences: 4-4-4

PHYS 111-112-113 General Physics I-II-III (4-4-4)*

PHYS 211-212-213 Physics with Calculus I-II-III (4-4-4)

Physics Emphasis (35 hours)

MATH 131-132-133 Calculus I-II-III 4-4-4

PHYS 314 Elementary Modern Physics 4

At least one of the following courses: 4

ENGR 216 Circuit Theory (4)

PHYS 265 Applied Physics (4)

At least 15 hours from the following: 15

(Including at least 12 upper-division hours)

Additional non-service PHYS courses

CHEM 344 Nuclear Physics and Chemistry (3)

Teaching Credential

Students desiring to enter a program of studies leading to a California teaching credential in science with a concentration in physics should take the either the B.S. degree in Biophysics or

* Students who select this option are required to complete PHYS 265 for the physics emphasis.

the B.S. degree in Natural Science, Physics Emphasis. Students will need to pass the science (physics concentration) portion of the CSET exam one quarter prior to doing full-time student teaching. Students are invited to discuss the program with their major advisor in the Physics Department.

Those who plan to teach on the secondary level should consult with the credential analyst in the Education Department and should become acquainted with the specific requirements for admission to and successful completion of the Teacher Education Program as outlined in the Education section of this catalog.

Minor in Physics

A minimum of 30 hours (12 upper-division hours) chosen from physics, astronomy, and engineering courses (except ENGR 105).

Engineering

Engineering courses are offered for those who wish to begin studies in engineering that meet the requirements of the first two years of the engineering degree of Walla Walla University. Facul-

ty of the WWU School of Engineering visit Pacific Union College regularly for guidance and counseling of students. The Bachelor of Science in Engineering degree, of which this program is a part, prepares the student to enter professional practice in civil, mechanical or electrical engineering. The following courses may be taken at Pacific Union College to satisfy the requirements of the affiliation plan:

CHEM 111-112-113	General Chemistry	5-5-5
CPTR 115	Intro. to Computer Programming	4
ENGL 101-102	College English	4-4
ENGR 105	Introduction to Engineering	3
ENGR 131	Engineering Drawing	3
ENGR 211-212-213	Engineering Mechanics I-II-III	3-3-3
ENGR 216	Circuit Theory	4
MATH 131-132-133	Calculus I-II-III	4-4-4
MATH 265	Elementary Linear Algebra	4
MATH 267	Multivariable Calculus	4
MATH 269	Elementary Differential Equations	4
PHYS 211-212-213	Physics with Calculus I-II-III	4-4-4

Astronomy

LOWER-DIVISION COURSES:

ASTR 115 5 F, W Astronomy

An introduction for the general student to the basic elements of astronomy. Topics include models of the solar system, stars and their processes, clusters, galaxies, cosmology, and relevant physics topics such as light, spectroscopy, nuclear reactions, and relativity. Emphasizes the development of scientific ideas and models for the structure and contents of the universe and the effects of those ideas on western civilization. Laboratory activities emphasize personal observations of various astronomical objects, as weather permits. Four lectures and one evening laboratory per week. Prerequisite: MATH 096 or equivalent.

ASTR 173 1 F Meteorology

Helps explain various natural phenomena for a better understanding of the science of meteorology. Beginning with the basics of physics that control the atmosphere, the discussion extends to the causes of weather patterns, frost, snow, rain, sleet, tornadoes, and hurricanes.

UPPER-DIVISION COURSE:

ASTR 495 1-3 F, W, S Independent Study

With the approval of the department chair, qualified students may undertake the independent study of problems suited to their background and experience. Repeatable to a maximum of 3 credits.

Engineering

LOWER-DIVISION COURSES:

ENGR 105 3 F Introduction to Engineering

A survey of engineering as a profession: the main divisions; the work, functions and personal characteristics of the engineer; application of the sciences in engineering; design tools used by engineers; computer methods, basic skills for engineering problem-solving. Two lectures and one laboratory per week.

ENGR 131 3 W Engineering Drawing

Principles of and practice in engineering drawing. Applications to technical problems of CAD drafting techniques, orthographic, and pictorial views. Two lectures and one laboratory per week.

Physics & Engineering

ENGR 211-212-213 **3-3-3 F-W-S** **Engineering Mechanics I-II-III**

Statics and dynamics. Detailed analysis of equilibrium, kinetics and kinematics of particles and rigid bodies. Examples and problems relate to real engineering applications. Prerequisites: MATH 131-132. Corequisite: PHYS 211.

ENGR 216 **4 S** **Circuit Theory**

Introductory circuit analysis for engineering and physics students. Circuit variables and parameters; Kirchoff's laws and network solution; equivalent circuits, network theorems; natural and complete response; sinusoidal steady-state, phasors and impedance; frequency characteristics; power and power factor. Three lectures and one laboratory per week. Prerequisite: MATH 131-132. Corequisite: MATH 133

Physics

SERVICE COURSES:

(Not applicable to a major or minor in this department)

PHYS 105 **5 S** **Introduction to Physics**

Emphasizes the ideas and concepts of conventional topics in physics with illustrations from everyday living. Assumes no previous physics course. (Students who need this course to meet a curricular requirement may also need to register for PHYS 106L.) Prerequisite: MATH 096 or equivalent.

PHYS 106L **1 S** **Introduction to Physics Laboratory**

A laboratory emphasizing physical measurements for those curricula requiring an introductory physics course with laboratory. One laboratory per week. Prerequisite or corequisite: PHYS 105.

PHYS 111-112-113 **4-4-4 F-W-S** **General Physics I-II-III**

An introduction to the fundamental natural phenomena of the physical universe. Topics include Newtonian mechanics, waves, sound, heat, electricity and magnetism, optics, atomic and nuclear physics, special relativity, and elementary particles. Emphasis on fundamental principles and methods of physics. Suitable for preprofessional students and also acceptable as part of the general-education requirement in basic science. Three lectures and one laboratory per week. This sequence must be taken in order. Knowledge of algebra and trigonometry is required at the level provided by MATH 106, 130.

LOWER-DIVISION COURSES:

PHYS 211-212-213 **4-4-4 F-W-S** **Physics with Calculus I-II-III**

A calculus-based introduction to the study of the physical universe. Intended primarily for students majoring in the physical sciences, engineering, or mathematics, but also appropriate for other students with the necessary background in mathematics. Topics include Newtonian mechanics, waves, electricity and magnetism, optics, thermodynamics, and an introduction to modern physics. Three lectures and one laboratory per week. This sequence must be taken in order. Prerequisites: MATH 131-132-133.

PHYS 265 **4 S** **Applied Physics**

Applications of fundamental physical principles such as thermodynamics, solid state physics, and modern optics to selected technological and/or practical uses. Topics include atomic transport processes in condensed phases, solid state physics in semiconductor, and modern optics. Three lectures and one laboratory per week. Prerequisite: PHYS 113 or 213. Odd years.

UPPER-DIVISION COURSES:

PHYS 314 **4 F** **Elementary Modern Physics**

A continuation of PHYS 211-212-213. Offers an overview of the fundamentals of relativity and quantum physics and selected topics such as atomic and molecular physics, statistical mechanics, solid state physics, nuclear physics, and elementary particles. Three lectures and one laboratory per week. Prerequisites: MATH 269, PHYS 213 or PHYS 265.

PHYS 321 **3 W** **Biophysics**

For the upper-division physics student with adequate preparation in biology. Covers a variety of topics in which physical analysis and techniques are applied to study molecular and cellular phenomena. Prerequisites: BIOL 111-112-113, CHEM 113, PHYS 314. Even years.

PHYS 322 **3 S** **Medical Physics**

A continuation of PHYS 321. Includes the physical principles of radiology, diagnostic imaging, and nuclear medicine. Prerequisite PHYS 321. Even years.

PHYS 341-342 **3-3 F-W**
Classical Dynamics I-II

Classical mechanics including Newtonian mechanics and Lagrangian dynamics, which are used to solve problems associated with central-force motion, rigid object dynamics, oscillations, and wave motion. The theoretical bases of problems are emphasized, together with the development of different problem-solving techniques. Prerequisites: MATH 265, 267, 269, PHYS 213. Even years.

PHYS 361-362-363 **3-3-3 F-W-S**
Electromagnetic Theory I-II-III

Topics include electrostatics, magnetostatics, electromagnetism, electromagnetic radiation, and relativistic electrodynamics. The concepts of field and potentials are emphasized. Prerequisites: MATH 265, 267, 269, PHYS 213. Odd years.

PHYS 389L **1 F, W, S**
Experimental Physics

Provides experience with real science apparatus such as lasers, high field magnets, detectors, radioactive sources, and sophisticated electronics. Activities include experiments in mechanics, electromagnetism, optics, heat, and atomic and nuclear physics. One laboratory per week. Repeatable to a maximum of 5 credits. Prerequisites: ENGR 216. Corequisite: PHYS 314.

PHYS 390 **3 S**
History and Philosophy of Science
 (See also PHIL 390)

The historical roots of modern science, the nature of scientific knowledge, its development and methodology, the impact of science on culture (and vice versa), and the influence of philosophical and theological concepts on science. Prerequisites: PHYS 105 or CHEM 101; PHIL 101 or demonstrated preparedness for course. Even years.

PHYS 396 **.5 F, W, S**
Seminar

(See also BIOL 396, CHEM 396, CPTR 396, ENVR 396)

Single topics of current interest in the natural sciences are presented by guest lecturers. To pass, a student must be on time and attend all five course sessions. Repeatable to a maximum of 3 credits. Graded S/F.

PHYS 445 **4 S**
Thermal Physics

A statistical description of a system of particles. Different ensembles and their associated partition functions are emphasized and applied to various thermal systems. Prerequisites: MATH 265, 267, 269; PHYS 314. Even years.

PHYS 461-462 **3-3 W-S**
Quantum Physics I-II

Quantum mechanics and atomic physics. Topics include wave packets, Schrödinger's equation and its solutions, operator methods, angular momentum, matrix representation, spin, perturbation theory, the hydrogen atom, and radiation by atoms. Prerequisites: MATH 265, 267, 269; PHYS 314. Odd years.

PHYS 485 **3 S**
Issues in Science and Religion
 (See also PHIL 485)

The relationship and interaction between science and religion: epistemology, the methods, languages, scope and limitations of science and religion, problems of ethics and science. Two hours of credit may be applied toward the general-education requirement in religion. Prerequisites: PHYS 105, CHEM 101, or equivalent; PHIL 101 or demonstrated preparedness for course. Odd years.

PHYS 486 **1-4 Arr.**
Special Topics in Physics

A selected, physics-related topic of interest to the general student. Format and scheduling depend on the topic selected but usually consists of several lectures over a period of two or three weeks on a subject of current interest. Credit may be applied toward a physics major by approval of the department chair.

PHYS 489L **1 F, W, S**
Advanced Experimental Physics

Culminating educational experience for physics major students as the final experimental physics course required to complete the physics curriculum. In addition to continuing the experience and activities provided in PHYS 389L, students will communicate and/or publish their results. Prerequisite: PHYS 389L. Qualifies for IP grading.

PHYS 495 **1-3 F, W, S**
Independent Study

Properly qualified students majoring in physics may, with the approval of the department chair, undertake an independent study of a topic suited to their background and experience. Repeatable to a maximum of 3 credits.

PHYS 499 **1-3 F, W, S**
Independent Research

Properly qualified students majoring in physics may, with the approval of the department chair, undertake a directed research problem suited to their background and experience. Repeatable to a maximum of 9 credits.



Faculty

Monte Butler, chair; Bruce Bainum, Charlene Bainum, Fiona Bullock, Aubyn Fulton, Joellen Lee, Gregory Schneider
 Departmental Office: 109 Davidian Hall; 965-6537

Degrees and Programs

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The department offers two majors: Psychology and Social Work. The goals of the department are as follows:

- To encourage purposeful living in the service of God and humanity by helping students understand and apply principles of human behavior in personal and professional relationships.
- To provide a general background for a wide range of careers that involve working with people, such as law, medicine, nursing, education, business, and the ministry.
- To prepare students at the baccalaureate level in the generalist framework for employment in the profession of social work.
- To prepare students for successful graduate study in psychology and social work.

Major in Psychology, B.S.

A minimum of 79 hours (55 upper-division hours)

► Required Core Courses (57 hours):

PSYC 121	General Psychology	4
PSYC 122	Psychology Seminar*	3
PSYC 130	Introduction to the Psychology Major*	1
PSYC 322	Research Design	4
PSYC 323	Introduction to Experimental Psychology	4
PSYC 334	Child Development	3
PSYC 334L	Child Development Laboratory	1
PSYC 344	Psychology of Personality	4
PSYC 364	Social Psychology	4
PSYC 394	Colloquium**	3
PSYC 436	Physiological Psychology	4
PSYC 444	History and Systems of Psychology	4
PSYC 445	Learning and Memory	4
PSYC 490	Issues in Religion, Ethics, and the Human Sciences	4
PSYC 499	Systematic Issues in Psychology	4

At least one of the following courses:

PSYC 390	Gender Issues (3)	3
SOCI 355	“Racial” and Ethnic Relations (3)	3

At least one of the following courses:

PSYC 435	Psychology of Religion (3)	3
SOCI 435	Sacred and Profane in Society (3)	3

► Required Core Electives (11 hours):

At least 11 additional hours from the following:***

PSYC 240	Health Psychology (4)	11
PSYC 260	Death and Dying (4)	
PSYC 335	Adolescent Development (3)	

* Must be taken before the junior year.

** Must be taken each quarter of the sophomore and junior years.

*** Transfer courses (generally limited to upper-division hours) may be approved by the department.

Psychology & Social Work

PSYC 358	Abnormal Psychology (4)
PSYC 360	Psychopharmacology (3)
PSYC 368	Principles of Counseling (4)
PSYC 390	Gender Issues (3)
PSYC 399	Research Seminar (1-2)
PSYC 435	Psychology of Religion (3)
PSYC 457	Psychological Testing (4)
PSYC 481	Field Work in Psychology Seminar (1)
PSYC 491	Field Work in Psychology (1-2)

► Required Cognate Courses (11 hours):

ANTH 124	Cultural Anthropology	4
SOCI 121	Introduction to Sociology	4
STAT 322	Statistical Methods	3

Recommended Cognate Course:

Any college-level biology course with lab

This recommendation is usually met by BIOL 102 (Human Physiology) or by any one of BIOL 111-112-113 (Biological Foundations).

Major in Psychology, B.A.

A minimum of 68 hours (52 upper-division hours)

Core and cognate requirements are the same as those for the B.S. degree except the 11 hours of core electives are not required. B.A. students are required to complete the foreign language component of the general education package.

Bachelor of Social Work, B.S.W.

A minimum of 101 hours (63 upper-division hours)

The baccalaureate degree program in social work is fully accredited by the Council on Social Work Education. It is designed to prepare students at the baccalaureate level to enter the profession as generalist social work practitioners.

The Student Learning Outcomes (SLO's) of the social work program support its mission and goals to train students as competent generalist social workers, ready for beginning professional practice in accord with the standards of the Council on Social Work Education. These SLO's provide the standard by which the quality of education and professional competencies of students may be assessed.

Graduates of the social work program can:

1. Demonstrate respect for the core Department values of free inquiry, diversity, responsible citizenship, and service to God and Humanity.

2. Demonstrate recognition of the moral tensions, and appreciation of the common values, between the professions and the Christian faith.
3. Identify as a professional social worker and conduct oneself accordingly.
4. Apply social work ethical principles to guide professional practice.
5. Apply critical thinking to inform and communicate professional judgments.
6. Engage diversity and difference in practice.
7. Advance human rights and social and economic justice.
8. Engage in research-informed practice and practice-informed research.
9. Apply knowledge of human behavior and the social environment.
10. Engage in policy practice to advance social and economic well-being and to deliver effective social work services.
11. Respond to contexts that shape practice.
12. Engage, assess, intervene, and evaluate with individuals, families, groups, organizations, and communities.

Students interested in social work as a profession should make an advisement appointment with the Social Work Program Director. The *Social Work Student Handbook* contains detailed information on the admissions process.

1. Complete the program admissions packet, including admissions application, personal statement, and reference letters.
2. Complete the personal admissions interview.

The Program Admissions Committee applies the following criteria in evaluating applications:

- Successful completion of required prerequisite courses
- Satisfactory academic record
- Effective oral-communication skills
- Effective written-communication skills
- Attitudes, behaviors, and ethics appropriate to the social work profession

The Admissions Committee notifies each candidate of the action taken on his or her application. To remain in the program, students must continue to meet the same academic, ethical, and behavioral standards. (The *Social Work Student Handbook* contains further information on criteria for admission to the program, continuance in it, and the appeal process.)

► Required Core Courses (69 hours):

PSYC 322	Research Design	4
SOCI 355	“Racial” and Ethnic Relations	3
SOWK 121	Introduction to Social Work	3

SOWK 232	American Social Problems	4
SOWK 275	History and Philosophy of Social Welfare Institutions	3
SOWK 340	Writing for Program Evaluation I	1
SOWK 341	Program Evaluation	2
SOWK 368	Principles of Counseling	4
SOWK 376	Human Behavior in the Social Environment I	3
SOWK 377	Human Behavior in the Social Environment II	3
SOWK 382	Practice Theory I	4
SOWK 383	Practice Theory II	4
SOWK 394	Colloquium*	3
SOWK 465	Practice Theory III	4
SOWK 468	Social Welfare Policy and Contemporary Social Issues	3
SOWK 476	Field Experience I	5
SOWK 477	Field Experience II	4
SOWK 478	Field Experience III	5
SOWK 486	Integrative Field Seminar I	1
SOWK 487	Integrative Field Seminar II	1
SOWK 488	Integrative Field Seminar III	1
SOWK 490	Issues in Religion, Ethics, and the Human Sciences	4

► **Required Core Electives (8 hours):**

Electives must be selected in consultation with the Social Work advisor.

* Must be taken each quarter of the sophomore and junior years.

► **Required Cognate Courses (24 hours):**

ECON 261	Principles of Economics-Macroeconomics	4
PLSC 124	Introduction to American Government	3
PSYC 121	General Psychology	4
STAT 222	Introduction to Statistics	4
	<i>One of the following courses:</i>	5
BIOL 101	Human Anatomy (5)	
BIOL 102	Human Physiology (5)	
	<i>At least one of the following courses:</i>	4
PSYC 344	Psychology of Personality (4)	
PSYC 358	Abnormal Psychology (4)	

► **General Education Requirements:**

The general education requirements for the B.S.W. are the same as for the B.S. degree except that the health requirement (VI-A) is fulfilled by the major.

Recommended Courses:

Students who intend to seek employment in California are strongly urged to include Spanish as a second language. See especially SPAN 105 Spanish for Health Care Professionals and SPAN 111-112-113 Beginning Spanish.

Minor in Psychology

A minimum of 30 hours (12 upper-division hours)

► **Required Courses (7 hours):**

PSYC 121	General Psychology	4
PSYC 122	Psychology Seminar	3

► **Required Electives (23 hours):**

At least 23 hours from the following (12 upper-division): 23

LOWER-DIVISION COURSES:

PSYC 121 4 F, W, S
General Psychology

Survey of the field of psychology: social processes, biological psychology, learning, development, motivation, stress, personality, psychopathology, and therapies.

PSYC 121 is prerequisite to all other courses in Psychology except PSYC 126, 227, 240, 260, and 390.

Anthropology

LOWER-DIVISION COURSE:

ANTH 124 4 F
Cultural Anthropology

The nature and concept of culture, the learning and growth of culture, and the development of cultural patterns. Survey of economics, kinship, gender, political structures, languages, and religion in technologically simple and complex societies.

Psychology

SERVICE COURSE:

(Not applicable to a major or minor in this department)

PSYC 234 4 F, S
Human Development

Theory and research in developmental psychology, including an overview of the mental, emotional, physical, social, and moral development of the individual from conception to senescence.

Psychology & Social Work

PSYC 122 **3 W**

Psychology Seminar

An introductory seminar emphasizing the exploration and discussion of psychological issues. Includes critical analysis of psychological topics and religious, ethical, and social implications of psychological theory and data.

PSYC 126 **2 F, W, S**

Assertive Behavior

(See SOWK 126.)

PSYC 130 **1 W**

Introduction to the Psychology Major

Introduction to the basic skills needed for success in major courses and an overview of career and graduate school options. Includes PsychINFO, APA style, critical evaluation of research, research ethics, internet tools, and academic and professional options in psychology. Should be completed during the freshman or sophomore year.

PSYC 227 **3 F, W**

Conflict Resolution and Relationship Skills

(See SOWK 227.)

PSYC 240 **4 S**

Health Psychology

The scientific study of the psychological factors contributing to wellness, illness, recovery from and prevention of illness. A particular focus is on health promoting and compromising behaviors. Also considers the professional subdiscipline that applies knowledge about these factors in order to intervene to maximize wellness.

PSYC 260 **4 W**

Death and Dying

(See SOWK 260.)

UPPER-DIVISION COURSES:

PSYC 322 **4 F**

Research Design

Methods of inquiry in the behavioral sciences from conception of idea to analysis of data. Includes the experiment, survey research, observational methods, and program evaluation. Three lectures and one laboratory per week. The laboratory introduces the student to the Statistical Package for the Social Sciences (SPSS). Prerequisite: STAT 222.

PSYC 323 **4 W**

Introduction to Experimental Psychology

Research design and procedures in psychological research. Requires a major research project laboratory. Two lectures, a 30 minute individual appointment with the instructor, and 4.5 hours of laboratory per week. Prerequisite: PSYC 322.

PSYC 334 **3 F**

Child Development

(See also ECED 334.)

Theory and research in developmental psychology; their application in understanding and relating to children. Focus on learning, perception, and identification and on the development of intelligence, motivation, language, play, personality, self-concept, moral principles, and sex roles. Emphasis on interaction between innate development and environmental influences. Covers infancy through adolescence. Note: psychology majors must also take PSYC 334L.

PSYC 334L **1 F**

Child Development Laboratory

Review and actual practice of research methods in the study of preschool and elementary school age children.

PSYC 335 **3 W**

Adolescent Development

Theory and research in adolescent development. Focuses on the unique tasks and conflicts of adolescence, the role and function of adolescence in modern society, and the social and psychological problems and opportunities associated with adolescence.

PSYC 344 **4 F**

Psychology of Personality

Survey and analysis of major theoretical models of personality, personality classification systems, and empirical research.

PSYC 358 **4 W**

Abnormal Psychology

Overview of psychological disorders: description of symptoms, course of the disorder, etiology, and treatment. Includes survey of current biological and behavioral research in psychopathology and behavioral disorders. Recommended prerequisite: PSYC 344.

PSYC 360 **3 F**

Psychopharmacology

The drugs that affect behavior through action on the nervous system. Major psychoactive drug groups include anti-anxiety, antidepressant, antipsychotic, stimulant, and drugs of abuse. Related issues of drug distribution, administration, dosage, absorption and fate.

PSYC 364 **4 W**

Social Psychology

The psychological principles underlying group behavior and the effects of the group on individual behavior: attitude change, conformity, aggression, prejudice, and theories of interpersonal attraction, altruism and attribution. Three lectures and one laboratory per week.

PSYC 368 4 F
Principles of Counseling

(See also SOWK 368.)

A prepractice introduction to the work, ethical issues, and theories of counseling. Emphasis on establishing a beginning personal philosophy of counseling. Recommended prerequisite: PSYC 344 or 358.

PSYC 390 3 S
Gender Issues

(See also SOWK 390.)

Historical, biological, sociological, cultural, and psychological impacts on gender issues, both male and female. Significant emphasis on the effects on the individual, family, workplace, community, and society. Breaking stereotypes and barriers.

PSYC 394 .5 F, W, S
Colloquium

(See also SOWK 394.)

Topics of current interest in social work and psychology. Includes guest speakers, progress reports on student and faculty research, and presentations on current professional issues. Required for all department majors during each quarter of the sophomore and junior years. Repeatable to a maximum of 3 credits.

PSYC 399 1-2 F-W
Research Seminar

For students completing a research project with supervision by a research mentor. Emphasis on revision and submission of an APA-style manuscript for professional presentation. Prerequisite: Approval of the instructor. With approval of the instructor, repeatable to a maximum of 4 credits. Qualifies for IP grading.

PSYC 435 3 F
Psychology of Religion

Religious experience, behavior, and development from the perspective of dynamic and research psychologies. Two hours may be applied toward the general-education requirement in religion. Odd years.

PSYC 436 4 F
Physiological Psychology

The physiological explanations of behavior; brain-behavior relationships; sensory, neural and motor structures significant to human experience.

PSYC 444 4 W
History and Systems of Psychology

Greek and medieval background of psychology, the early modern period, the emergence of contemporary experimental work, and special fields of psychology; influential psychological systems.

PSYC 445 4 W
Learning and Memory

Comparison and integration of basic research in animal learning and human memory and cognition. Emphasis on the relative roles of mechanistic and mentalistic variables and on the plausibility of universal laws of learning. Three lectures and one laboratory per week.

PSYC 457 4 S
Psychological Testing

The purpose, contribution, and problems of psychological testing. Emphasis on understanding the psychometric and clinical characteristics of standardized tests. The major areas of testing, including ability, achievement, intelligence, interest, and personality. Three lectures and one laboratory per week. Recommended prerequisite: STAT 222.

PSYC 481 1 W
Field Work in Psychology Seminar

A weekly seminar focusing on ethical and professional issues in psychology; case presentations. Prerequisites: Completion of a Field Work Application by the last Friday before Thanksgiving Recess; completion of 60 hours of college credit; a grade of C- or higher in PSYC 122, 130, and one of the following: PSYC 344, 358, or 368 (concurrent registration is acceptable); and permission of the instructor. Corequisite: PSYC 491.

PSYC 490 4 S
Issues in Religion, Ethics, and the Human Sciences

(See also SOWK 490.)

Exploration of tensions in belief, conduct, and identity that arise from being both a Christian and a person changed through contact with the human sciences. Special attention to issues for Christians entering professions in psychology and social work. Open to senior majors in the Psychology & Social Work Department and to others by permission of the instructor.

PSYC 491 1-2 F, W, S
Field Work in Psychology

Placement in a local human service agency (for 3-6 clock hours per week). Prerequisite: Completion of PSYC 481 (concurrent registration is acceptable), and permission of the instructor. Repeatable to a maximum of 3 credits.

PSYC 495 1-3 F, W, S
Independent Study

Enrollment limited to department majors wishing to pursue independent investigations in psychology under the direction of the Psychology faculty. Repeatable to a maximum of 3 credits.

Psychology & Social Work

PSYC 499 **4 F** **Systematic Issues in Psychology**

A review of the psychology major, including an in-depth analysis of the experimental foundations of general psychology; orientation to the graduate school application process and preparation for the psychology GRE. Enrollment limited to senior psychology majors.

Sociology

LOWER-DIVISION COURSES:

SOCI 121 **4 W, S** **Introduction to Sociology**

The relationship of sociology to the total behavioral science field; orientation to the structure and functioning of society; development and social nature of personality; background and development of culture; basic social institutions.

SOCI 214 **4 S** **The Family** (See SOWK 214.)

SOCI 232 **4 F** **American Social Problems** (See SOWK 232.)

UPPER-DIVISION COURSES:

SOCI 355 **3 S** **"Racial" and Ethnic Relations**

History of ethnic groups in the United States. Ethnic groups studied include African Americans, Jewish Americans, American Indians, Asian Americans, Latin Americans, and European Americans. The nature of prejudice and discrimination, especially as evidenced in contemporary American racial problems; possible solutions of group conflict.

SOCI 435 **3 F** **The Sacred and Profane in Society**

Examination of the social-religious nature of humankind; description and use of concepts in the sociological study of religion; consideration of mainstream and marginal religious organizations and movements. Two hours may apply toward the general-education requirement in religion. Even years.

SOCI 495 **1-3 F, W, S** **Independent Study**

Enrollment limited to advanced students wishing to do independent research under direction of the department faculty.

Social Work

LOWER-DIVISION COURSES:

SOWK 121 **3 F, S** **Introduction to Social Work**

Introduction to the profession of social work and social interventions. Fields of practice, practice methods, and the knowledge, values, ethics, and skills of the profession. Focus on social work and populations-at-risk and issues of human diversity. Open to all students interested in the profession of social work and social interventions.

SOWK 126 **2 F, W, S** **Assertive Behavior** (See also PSYC 126.)

Emphasis on developing basic skills and confidence in clarifying one's desires or needs and communicating them to others in socially acceptable and effective ways. Learning through role playing, discussion, and setting personal goals.

SOWK 214 **4 S** **The Family**

(See also SOCI 214.)

Exploration of the meaning and functions of family systems. The adjustments of premarriage, marriage, and family living viewed as a system, with focus on skills designed to establish and maintain the family institution.

SOWK 227 **3 W** **Conflict Resolution and Relationship Skills**

(See also PSYC 227.)

Skill development in self-understanding and in relating effectively with others. Provides tools for effective communication and conflict resolution. Applicable to personal, work, and social relationships.

SOWK 232 **4 F** **American Social Problems**

(See also SOCI 232.)

An introduction to major social problems in current American society. Causality, current dynamics, and projections on the future climate of social change related to crime, violence, population, environment, family issues, discrimination, social and economic justice, and health care.

SOWK 260 **4 W** **Death and Dying**

(See also PSYC 260.)

Focuses on bio-psycho-social, cultural and spiritual factors related to death and dying. Includes a review of the physical aspects, agencies and institutions involved in the death process; legal issues; psychological theories of grief and mourning; and cultural, spiritual, and religious death rituals and beliefs. Also emphasizes support for professional crisis workers (e.g. police, firefighters, nurses, doctors, and ministers) and traumatic stress responses to disasters.

SOWK 275 **3 W**
History and Philosophy of Social Welfare Institutions

Exploration of changing value systems and philosophies and the attempts of society and social welfare institutions to meet human needs. Examination from both historical and current perspectives. Prerequisites: SOWK 121, PLSC 124 and HIST 101-102 or HIST 134-135.

UPPER-DIVISION COURSES:

SOWK 340 **1 F**
Writing for Program Evaluation I

Introduction to program evaluation with an emphasis on the writing process. Corequisite: PSYC 322. Enrollment limited to junior B.S.W. majors, or those who have permission of the instructor.

SOWK 341 **2 W**
Program Evaluation

Emphasis on the process of carrying out a program evaluation project and the dissemination of findings. Prerequisites: SOWK 340 and PSYC 322.

SOWK 342 **1 S**
Writing for Program Evaluation II

Extensive re-writing of a student's program evaluation project in preparation for presentation to program staff and the broader practice community. Prerequisite: SOWK 341.

SOWK 368 **4 F**
Principles of Counseling
 (See PSYC 368.)

SOWK 376 **3 F**
Human Behavior in the Social Environment I

The bio-psycho-social factors that impact or influence behavior from infancy through young adulthood from the person-in-environment perspective. Focus on the assessment process in generalist practice, with special attention to cultural awareness and factors of human diversity. Emphasis on research relevant to social work practice. Prerequisites: SOWK 275, BIOL 101 or 102, PSYC 121.

SOWK 377 **3 W**
Human Behavior in the Social Environment II

The bio-psycho-social factors that influence behaviors of individuals from young adulthood through the elder years from the person-in-environment perspective. Focus on the assessment process in generalist practice, with special attention to cultural awareness and factors of human diversity. Emphasis on research relevant to social work practice. Prerequisite: SOWK 376.

SOWK 382 **4 S**
Practice Theory I

Emphasis on the generalist model of practice with focus on work with individuals. The micro level of intervention as it relates to client engagement, problem assessment, data collection, goals, strategies, action, and evaluation to help the client or client system resolve problems. Three lectures and one laboratory per week Prerequisites: SOWK 368, 376, 377. Enrollment limited to B.S.W. majors.

SOWK 383 **4 F**
Practice Theory II

Emphasis on the generalist model of practice with small groups and family systems. The mezzo level of intervention as it relates to group goals, structure, dynamics and processes. Focus on development of basic group work skills and techniques in working with groups of various composition and age. Three lectures and one laboratory per week. Prerequisites: SOWK 368, 376, 377. Enrollment limited to B.S.W. majors.

SOWK 390 **3 S**
Gender Issues
 (See PSYC 390.)

SOWK 394 **.5 F, W, S**
Colloquium
 (See PSYC 394.)

SOWK 465 **4 W**
Practice Theory III

Basic knowledge at the macro level necessary for functioning effectively in generalist social work roles. Focus on problem-solving methods for desired change within generalist practice; organizations and communities as they promote, restore, maintain, and enhance social functioning. Emphasis on community organization with diverse populations and on research techniques. Prerequisite: SOWK 382, 383. Enrollment limited to B.S.W. majors.

Psychology & Social Work

SOWK 468 **3 S**

Social Welfare Policy and Contemporary Social Issues

Focuses on policy analysis, critical thinking and current political issues at the state and federal levels as they impact diverse client populations. Explores the active role of the generalist social worker in this process. Prerequisite: SOWK 275, ECON 261.

SOWK 476 **5 F**

Field Experience I

A placement of 150 clock hours in an approved social service agency with emphasis on integration and active use of content from all areas of the curriculum. Prerequisite: SOWK 382. Corequisites: SOWK 383 and 486. Enrollment limited to senior B.S.W. majors with full acceptance into the Social Work Program. Qualifies for IP grading.

SOWK 477 **4 W**

Field Experience II

A placement of 120 clock hours in an approved social service agency with emphasis on integration and active use of content from all areas of the curriculum. Prerequisite: SOWK 465 and 476. Corequisite: SOWK 487. Enrollment limited to senior B.S.W. majors with full acceptance into the Social Work Program. Qualifies for IP grading.

SOWK 478 **5 S**

Field Experience III

A placement of 150 clock hours in an approved social service agency with emphasis on integration and active use of content from all areas of the curriculum. Prerequisite: SOWK 477. Corequisite: SOWK 488. Enrollment limited to senior B.S.W. majors with full acceptance into the Social Work Program. Qualifies for IP grading.

SOWK 486 **1 F**

Integrative Field Seminar I

A seminar to facilitate the transition from theory to practice. Corequisite: SOWK 476. Qualifies for IP grading.

SOWK 487 **1 W**

Integrative Field Seminar II

A seminar to facilitate a continued integration of theory and practice issues. Corequisite: SOWK 477. Qualifies for IP grading.

SOWK 488 **1 S**

Integrative Field Seminar III

A seminar designed to provide opportunity for practicum students to exchange learning from their field settings. Emphasis on continued integration of theory and practice issues, with particular emphasis on team consultation skills. Corequisite: SOWK 478. Qualifies for IP grading.

SOWK 490 **4 S**

Issues in Religion, Ethics, and the Human Sciences

(See PSYC 490.)

SOWK 495 **1-3 F, W, S**

Independent Study

Enrollment limited to advanced students wishing to do independent research on a specific topic of current social work interest and its implication for integrative practice.



Faculty

Leo Ranzolin, chair; Angel Hernandez, Young-Chun Kim, Jean Sheldon, Myron Widmer, Ross Winkle
 Departmental Office: 16 Graf Hall; 965-6206

Degrees and Programs:

Theology, B.A.....	173
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Theology and Religion majors investigate the inspiring and life-changing truths of the Christian faith. Such exploration brings to life the Word of God in all its theological, historical, ethical, spiritual, and practical dimensions. The RELIGION DEPARTMENT offers two majors, Theology and Religion, and two minors, Religion and Biblical Languages.

The Theology major is recommended for those who want to enter Christian ministry, specifically pastoral ministry, youth ministry, lay ministry, chaplaincy, or the teaching of religion. This major fulfills all prerequisites for acceptance into the Master of divinity degree program at the Seventh-day Adventist Theological Seminary.

The Religion major is designed for those who want a solid background in religion but are planning careers in other fields, such as teaching, health professions, and law. Religion majors complete a set of core religion classes and do further in-depth study in a chosen subject by selecting one of three emphases: Biblical Studies, Health Professions, or Theology and Christian History.

The two minors, in Religion and Biblical Languages, provide a more formal framework for general students or education majors. Each minor incorporates the 18 hours of religion credit expected of every four-year graduate of the college.

Major in Theology, B.A.

A minimum of 98 hours (56 upper-division hours)

► *Required Core Courses (98 hours):*

*Biblical Studies**

RELB 125	Books of Moses	3
RELB 130	Life and Teachings of Jesus	3
RELB 335	Greek Exegesis	3
RELB 445	Hebrew Exegesis	3

At least one of the following courses: 3

RELB 370	Studies in Daniel (3)
RELB 371	Studies in Revelation (3)

At least 6 hours from the following: 6

Additional non-service RELB courses

Historical Studies

RELH 235	Life and Ministry of Ellen White	3
RELH 360	Adventist Heritage	4

At least two of the following courses: 6

RELH 320	Christian History: To 1054 (3)
RELH 321	Christian History: 1054 to 1600 (3)
RELH 322	Christian History: 1600 to the Present (3)

Biblical Languages

RELL 125-126-127	Beginning Greek I-II-III	3-3-3
RELL 235-236	Intermediate Greek I-II	3-3
RELL 427-428	Biblical Hebrew I-II	3-3

Applied Theology

REL P 235	Sharing Your Faith	3
REL P 324-325	Ministry Colloquium I-II	4**

* To fulfill seminary entrance requirements for the Master of Divinity, students must take at least 9 hours of Old Testament RELB courses and at least 9 hours of New Testament RELB courses. RELB courses should be chosen accordingly.

** Repeats fall & winter (.5-.5) for four years.

Religion

REL P 381-382	Biblical Preaching I-II (with labs)	3-3
REL P 391-392-393	Extern Program I-II-III (with labs)	2-2-2
REL P 475-476	Pastoral Ministry I-II	3-3

Theological Studies

REL T 235	Spiritual Formation	3
REL T 333	Seventh-day Adventist Theology	3
REL T 464	Seminar in Theology	3

At least one of the following courses: 3

REL B 315	Biblical Ethics (3)	
REL T 216	Introduction to Christian Ethics (3)	
REL T 355	Christian Ethics in Society (3)	
REL T 440	Christian Bioethics (3)	

At least one of the following courses: 3

REL T 331	Christian Theology: God and Humanity (3)	
REL T 332	Christian Theology: Salvation and the Church (3)	

At least 3 hours from the following: 3

Additional REL T courses

This major is designed for the student who is preparing for Christian ministry, including pastoral ministry, youth ministry, chaplaincy, and teaching religion. The major is particularly suitable for the student who plans to seek graduate education in the seminary.

Students who desire to take this major must progress through the following two stages:

Stage I: Admission into the Program.

Evaluation and guidance that is focused upon helping students make sure that they are entering upon the right career path, given their interests, capabilities, and personality. When this process is successfully completed at the end of the second year, the student is invited to join the Ministerial Studies Program. Admission into the program is a prerequisite for the junior year Extern Program (REL P 391-392-393).

Stage II: Advancement to Candidacy.

Assessment of the commitment and potential of senior theology majors for successful ministry, and preparation for effectively presenting themselves to hiring agencies. Acceptance for Advancement to Candidacy is required for graduation as a theology major and for inclusion in the senior hiring interviews.

Exceptions to these criteria are considered individually and may be approved by the Religion Department faculty.

Each student successfully completing the Ministerial Studies Program, the academic requirements of this major, and the required Summer in Ministry Internship is eligible for

recommendation by the Religion Department as a candidate for entrance into seminary and subsequent work in some branch of Christian ministry.

Major in Religion, B.A.

A minimum of 54 hours (36 upper-division hours)

This major is designed for those who want a broad background in religion but who plan careers in a variety of other professions, such as teaching, health professions, and law.

► Required Core Courses (33 hours):

REL B 125	Books of Moses	3
REL B 130	Life and Teachings of Jesus	3
REL B 310	Prophets of Israel	3
REL B 460	Paul and His Letters	3
REL H 311	World Religions	3
REL H 360	Adventist Heritage	4
REL P 324	Ministry Colloquium (4 quarters)	.5-.5-.5-.5
REL T 235	Spiritual Formation	3
REL T 331	Christian Theology: God and Humanity	3
REL T 332	Christian Theology: Salvation and the Church	3
REL T 333	Seventh-day Adventist Theology	3

► Emphases (choose one):

1. Biblical Studies Emphasis (23 hours)

At least 20 hours from the following: 20

(Including at least 9 upper-division hours)

REL B 230	Psalms and Wisdom Literature (3)	
REL B 250	Parables of Jesus (3)	
REL B 260	Heroes and Villains (3)	
REL B 265	Old Testament Historical Literature (3)	
REL B 270	Acts of the Apostles (3)	
REL B 315	Biblical Ethics (3)	
REL B 320	Women of the Bible (2)	
REL B 328	Gospels (3)	
REL B 342	Studies in Bible Interpretation (3)	
REL B 370	Studies in Daniel (3)	
REL B 371	Studies in Revelation (3)	
REL H 340	Biblical Culture and Archaeology (3)	
REL H 387	Story of the English Bible (3)	

At least 3 upper-division hours from the following: 3

Additional non-service REL B, REL H, REL P, and REL T courses

2. Health Professions Emphasis (21-22 hours)

REL P 350	Studies in Christian Ministry: Jesus' Ministry of Healing	3
REL T 350	Issues in Christian Faith: God and Human Suffering	3
REL T 440	Christian Bioethics	3

At least one of the following courses:
 PHIL 485 Issues in Science and Religion (3)
 RELH 329 American Denominations (3)
 RELP 235 Sharing Your Faith (3)
 RELT 216 Introduction to Christian Ethics (3)
 RELT 320 Philosophy of Religion (3)
 RELT 355 Christian Ethics in Society (3)

At least 6 hours from the following: 6
 (Including at least 3 upper-division hours)

Additional non-service RELB, RELH, RELP, and RELT courses

► **Required Cognate Course:**

At least one of the following courses: 3-4

EMER 225	Public Health (3)	
FDNT 235	Nutrition (3) (does not fulfill G.E.)	
PSYC 240	Health Psychology (4)	
PSYC 260	Death and Dying (4)	
PSYC 435	Psychology of Religion (3)	
SOWK 214	The Family (4) (does not fulfill G.E.)	
SPAN 105	Spanish for Health Care Professionals (3)	

3. Theology and Christian History Emphasis (21 hours)

At least one of the following courses: 3

RELH 320	Christian History: To 1054 (3)	
RELH 321	Christian History: 1054 to 1600 (3)	
RELH 322	Christian History: 1600 to the Present (3)	

At least 15 hours from the following: 15

Additional courses from RELH 320, 321, 322

RELH 235	Life and Ministry of Ellen White (3)	
RELH 329	American Denominations (3)	
RELH 340	Biblical Culture and Archaeology (3)	
RELH 350	Studies in Christian History (3)	
RELH 387	Story of the English Bible (3)	
RELT 320	Philosophy of Religion (3)	
RELT 335	Theology of the Sanctuary (3)	
RELT 337	Last Day Events (3)	
RELT 350	Issues in Christian Faith (3)	
RELT 464	Seminar in Theology (3)	

At least 3 hours from the following: 3
 Additional non-service RELB, RELH, RELP, and RELT courses

Teaching Credential

Students planning to obtain a Seventh-day Adventist teaching credential in religion should consult with the credential analyst in the Education Department and should become acquainted with the specific requirements for admission to and successful completion of the Teacher Education Program as outlined in the Education section of this catalog.

Minor in Religion

A minimum of 30 hours (6 upper-division hours)

► **Required Courses (15-16 hours):**

At least one of the following courses: 3

RELB 125	Books of Moses (3)	
RELB 130	Life and Teachings of Jesus (3)	

At least one of the following courses: 3

RELB 310	Prophets of Israel (3)	
RELB 460	Paul and His Letters (3)	

At least one of the following courses: 3

RELB 370	Studies in Daniel (3)	
RELB 371	Studies in Revelation (3)	
RELT 335	Theology of the Sanctuary (3)	

At least one of the following courses: 3-4

RELH 235	Life and Ministry of Ellen White (3)	
RELH 360	Adventist Heritage (4)	

At least one of the following courses: 3

RELH 311	World Religions (3)	
RELH 329	American Denominations (3)	
RELT 216	Introduction to Christian Ethics (3)	
RELT 320	Philosophy of Religion (3)	

► **Required Electives (14-15 hours):**

At least 14-15 hours from the following: 14-15
 Additional non-service RELB, RELH, RELP, and RELT courses

Minor in Biblical Languages

A minimum of 30 hours (15 upper-division hours)

► **Required Courses (30 hours):**

RELL 125-126-127	Beginning Greek I-II-III	3-3-3
RELL 235-236	Intermediate Greek I-II	3-3
RELL 427-428	Biblical Hebrew I-II	3-3
RELB 335	Greek Exegesis	3
RELB 445	Hebrew Exegesis	3
RELH 387	Story of the English Bible	3

This minor is not open to theology majors.

Religion

Philosophical Studies

LOWER-DIVISION COURSE:

PHIL 101 **4 F, W, S**
Introduction to Philosophy

Basic issues of philosophy, including methods and values, from the perspective of Western civilization.

UPPER-DIVISION COURSES:

PHIL 390 **3 F**
History and Philosophy of Science
(See PHYS 390.)

PHIL 451 **3 F**
History of Western Thought

Survey of philosophy in Western civilization from the pre-Socratic era to the present. Prerequisite: PHIL 101.

PHIL 470 **3 W**
Seminar in Philosophy

An analysis and critique of selected primary sources of Western philosophers from Plato to the 20th century. Prerequisite: PHIL 101. Odd years.

PHIL 485 **3 S**
Issues in Science and Religion
(See PHYS 485.)

Biblical Studies

SERVICE COURSES:

(Not applicable to a major or minor in this department)

RELB 100 **2 F**
Methods of Bible Study

Analysis of appropriate ways to approach the study of various types of written material found in the Bible.

RELB 114-115-116 **2-2-2 F-W-S**
Bible Themes I-II-III

Selected themes related to the problem of sin and the plan of redemption as presented in the Old and New Testaments. Open only to lower-division students with little exposure to Bible study. Admission by permission of the Department Chair.

LOWER-DIVISION COURSES:

RELB 125 **3 F, W, S**
Books of Moses

Literature, history, and theology of the first five books of the Old Testament.

RELB 130 **3 F, W, S**
Life and Teachings of Jesus

The life, work, and teachings of Jesus from selected portions of Matthew, Mark, Luke, and John.

RELB 230 **3 W**
Psalms and Wisdom Literature

Psalms, Proverbs, Song of Solomon, and other books of the Old Testament classified as "Writings." Emphasis on major themes and representative passages.

RELB 250 **3 F, W**
Parables of Jesus

The history and interpretation of the parables of Jesus in the context of the New Testament and with reference to their contemporary relevance.

RELB 260 **3 W**
Heroes and Villains

Analysis of Biblical narratives about famous and infamous characters to discover key truths about God and life-giving principles for humans.

RELB 265 **3 F**
Old Testament Historical Literature

An examination of selected chapters from the historical writings of the Old Testament: Joshua, Judges, Samuel, Kings, Chronicles, Ezra, Nehemiah, and Esther.

RELB 270 **3 S**
Acts of the Apostles

The development of the early church as depicted in Acts of the Apostles, with attention to background, purpose, theology, ethics, and relevance to present-day concerns.

UPPER-DIVISION COURSES:

RELB 310 **3 W**
Prophets of Israel

The origin and nature of the prophetic movement followed by an examination of the message of the Old Testament prophetic books.

RELB 315 **3 W**
Biblical Ethics

Major moral teachings of the Old and New Testaments in relation to contemporary moral issues.

RELB 320 **2 S**
Women of the Bible

Women in the Bible, in the light of their cultures and times, with attention to theological themes and their relevance for today.

RELB 328 **3 F**
Gospels

The distinctive theological portraits presented by Matthew, Mark, Luke, and John in the depiction of the life, death, and resurrection of Jesus of Nazareth.

RELB 335 **3 S**
Greek Exegesis

Translation and exegesis of selected passages from the Greek New Testament, involving analysis of their historical background, literature, and theology. Prerequisites: RELL 235 and 236.

RELB 341 **3 F**
Jesus as Healer

The role of Jesus as healer as seen in Matthew, Mark, Luke, and John. Enrollment limited to B.S.N. (nursing) students.

RELB 342 **3 F, S**
Studies in Bible Interpretation

Study of a book of the Old or New Testament, such as:

- Genesis*
- Isaiah*
- I Corinthians*
- Acts*
- Romans*
- Ephesians*
- Hebrews*

Repeatable for credit under different subtitles.

RELB 370 **3 F**
Studies in Daniel

The book of Daniel, with focused study on its prophetic chapters.

RELB 371 **3 W**
Studies in Revelation

The book of Revelation, with focused study on its prophetic messages.

RELB 445 **3 S**
Hebrew Exegesis

Translation and exegesis of passages from the Hebrew Bible. This will involve analysis of the historical background, literature, and theology of selected Old Testament passages. Prerequisites: RELL 427 and 428.

RELB 460 **3 W, S**
Paul and His Letters

Analysis and interpretation of selected portions from the letters of Apostle Paul.

RELB 495 **1-3 F, W, S**
Independent Study

With the approval of the department chair, properly qualified students may undertake an investigation of a topic suited to their background and experience. Repeatable to a maximum of 9 credits.

Historical Studies

LOWER-DIVISION COURSE:

RELH 235 **3 W**
Life and Ministry of Ellen White

An introduction to the life and ministry of Ellen White, including an overview of her writings, the biblical teaching on the gift of prophecy, and contemporary issues relating to Ellen White.

UPPER-DIVISION COURSES:

RELH 311 **3 F**
World Religions

An introduction to great traditions of world religions and to concepts for the study and comparison of these traditions. Emphasis on non-Judeo-Christian traditions. Includes an examination of these religions in relation to Christianity.

RELH 320 **3 F**
Christian History: To 1054
 (See HIST 320)

RELH 321 **3 W**
Christian History: 1054 to 1600
 (See HIST 321)

RELH 322 **3 S**
Christian History: 1600 to Present
 (See HIST 322)

RELH 329 **3 S**
American Denominations

Historical and theological dimensions of American religious identity, with a view toward broadening the understanding of the context of Adventism.

RELH 340 **3 F**
Biblical Culture and Archaeology

The Bible in its religious, cultural, geographical, and political environment as illuminated by discoveries of archaeology.

RELH 350 **3 W**
Studies in Christian History

An examination of a selected period or issue in Christian history, such as:

- Formation of the Christian Canon*
- Catholicism*
- Evangelicalism*
- Postmodernism*
- Contemporary Issues*

Repeatable for credit under different subtitles.

RELH 360 **4 S**
Adventist Heritage
 (See HIST 360)

RELH 387 **3 F**
Story of the English Bible

The history of the English Bible, including the production, canonization, transmission, and translation of the text as well as principles and methods for evaluating the text and modern English versions.

RELH 495 **1-3 F, W, S**
Independent Study

With the approval of the department chair, properly qualified students may undertake an investigation of a topic suited to their background and experience. Repeatable to a maximum of 9 credits.

Religion

Biblical Languages

No courses with the prefix RELL may apply as electives to the religion minor.

LOWER-DIVISION COURSES:

RELL 125-126-127 3-3-3 F-W-S **Beginning Greek I-II-III**

Basic grammar and translation of the Koine Greek of the New Testament, with attention to exegetical tools and methods. Must be taken in sequence.

RELL 235-236 3-3 F-W **Intermediate Greek I-II**

Intermediate grammar, translation, and exegetical exercises in the Koine Greek of the New Testament. Must be taken in sequence. Prerequisites: RELL 125, 126 and 127

UPPER-DIVISION COURSES:

RELL 427-428 3-3 F-W **Biblical Hebrew I-II**

Basic grammar, vocabulary, and syntax of Biblical Hebrew, including selected readings from various portions of the Old Testament text. Must be taken in sequence.

RELL 495 1-3 F, W, S **Independent Study**

With the approval of the department chair, properly qualified students may undertake an investigation of a topic suited to their background and experience. Repeatable to a maximum of 9 credits.

Applied Theology

LOWER-DIVISION COURSES:

RELP 210 3 S **Creative Worship**

Seeks to bring deep joy to one's worship of God; uses a "hands-on" approach. Students experience a variety of worship expressions, study the biblical and historical foundations for worship, and work in teams to create innovative ways of leading people into meaningful adoration of God. The "hands-on" portion also helps students understand contemporary culture and its worship patterns.

RELP 235 3 S **Sharing Your Faith**

The philosophy, principles, and methods of introducing God and the Gospel in a personal way. Students learn how to build genuine relationships with those of different faith backgrounds and to share the teachings of Scripture, including the distinctive teachings of Christianity and Adventism.

UPPER-DIVISION COURSES:

RELP 319 2 S **Church Missions in the Modern World**

A survey of contemporary mission theology and methodology, emphasizing personal motivation and preparation, comparative religions, cultural awareness, and interpersonal skills. Prerequisite to student missionary appointment. Enrollment limited to student missionary appointees; exceptions only by approval of the instructor.

RELP 324-325 .5-.5 F-W **Ministry Colloquium I-II**

Lecture/discussion series for majors in theology and religion. RELL 324 focuses on topics of general interest for majors in theology and religion. RELL 325 includes an increased focus on ministry topics particularly relevant for theology majors. Repeatable for credit. Graded S/F.

RELP 346 2 S **Spiritual Care for Patients**

Development of knowledge and skills for meeting spiritual needs that arise in patient care. Includes a survey of religious backgrounds to inform the caring ministry of the health-care professional. Enrollment limited to B.S.N. (nursing) students.

RELP 350 3 S **Studies in Christian Ministry**

The origins, theological foundations, and past and current practices of selected topics in Christian ministry, such as:

Jesus' Ministry of Healing
Youth Ministry
Worship
Public Evangelism
Preaching
Church Standards

Repeatable for credit under different subtitles.

RELP 381-382 3-3 F-W **Biblical Preaching I-II**

The art, discipline, and process of effective sermon preparation and delivery. Must be taken in sequence. Two hours lecture and one laboratory per week. Prerequisites: junior- or senior-year status; fulfillment of General Education requirement in oral communication. Even years.

RELP 391-392-393 2-2-2 F-W-S

Extern Program I-II-III

Field work in assigned churches and a weekly seminar. Enrollment limited to junior and senior theology majors who have been accepted into the Ministerial Studies Program. Must be taken in sequence.

RELP 475-476 3-3 F-W

Pastoral Ministry I-II

The theology, theory, and practice of pastoral ministry. Emphasis on understanding the biblical mandate and context for the local church and on learning how to lead effectively and build up the body of believers. Odd years.

RELP 484 1-3 F, W, S

Field Practicum

Instruction and experience in specialized ministries: hospital chaplaincy, youth ministry, prison ministry, etc. Prerequisite: approval of the instructor. Repeatable for credit. Qualifies for IP grading. Graded S/F.

RELP 495 1-3 F, W, S

Independent Study

With the approval of the department chair, properly qualified students may undertake an investigation of a topic suited to their background and experience. Repeatable to a maximum of 9 credits.

Theological Studies

LOWER-DIVISION COURSES:

RELT 216 3 F

Introduction to Christian Ethics

Moral decision-making involving the development and application of Christian principles to modern ethical issues.

RELT 235 3 F

Spiritual Formation

A theological and practical study of how to build and maintain a personal friendship with God, including the use of the classic disciplines used by Christians throughout the ages.

RELT 240 3 S

Eco-theology

Ecological theology, exploring the interrelationship of religion and nature in light of contemporary environmental concerns, from a Seventh-day Adventist perspective. Due to the interdisciplinary nature of the field, attention is given to various associated topics such as environmental ethics, philosophy, biblical and religious traditions, and social justice.

UPPER-DIVISION COURSES:

RELT 320 3 W

Philosophy of Religion

Issues raised by a rational analysis of religion. Emphasis on the nature and validity of Judeo-Christian world views.

RELT 330 2 W

The Christian and the Media

An Introduction to film from a Christian perspective. A number of films and contemporary television programs will be analyzed with a view of assessing their potential for shaping cultural and religious values. Ninety minutes lecture/discussion and ninety minutes viewing laboratory per week. Prerequisite: ENGL 102.

RELT 331 3 F, W, S

Christian Theology: God and Humanity

The nature and purpose of Christian doctrine; the doctrines of inspiration and revelation, God, humankind, sin, and the remedy for sin.

RELT 332 3 F, W

Christian Theology: Salvation and the Church

The doctrine of Christ—His nature and His work, the nature and purpose of the church, and the spiritual experience of its members.

RELT 333 3 F, S

Seventh-day Adventist Theology

The distinctive beliefs of the Adventist Church, including lifestyle and worship, the sanctuary, the law, Sabbath, death, the Second Coming, and heaven.

RELT 335 3 W

Theology of the Sanctuary

The plan of salvation as illustrated in the architecture, design, rituals, and theology of the tabernacle and various temples mentioned in Jewish history and literature and the Old and New Testaments.

RELT 337 3 S

Last Day Events

Final events of earth's history culminating in the return of Jesus Christ, with emphasis on how to be ready for His coming.

RELT 345 2 W

Christian Ethics in Patient Care

The study and application of ethical theory and Christian principles to ethical dilemmas facing the professional nurse. Enrollment limited to B.S.N. (nursing) students.

RELT 350 **3 W**

Issues in Christian Faith

An in-depth study of a topic important to Christian faith. Consideration of the theological and spiritual dimensions of the topic. Subtitles include:

God and Human Suffering

Women and the Church

The Death and Resurrection of Christ

Repeatable for credit under different subtitles.

RELT 355 **3 W**

Christian Ethics in Society

The moral implications of Christian faith for the organization or transformation of social institutions.

RELT 440 **3 S**

Christian Bioethics

Contemporary ethical issues in the biomedical sciences from the perspective of Christian ethics. Topics include abortion, euthanasia, eugenics, reproductive technologies, and human experimentation.

RELT 464 **3 S**

Seminar in Theology

Seminar for senior theology and religion majors. Others may be admitted with the consent of the instructor.

RELT 495 **1-3 F, W, S**

Independent Study

With the approval of the chair, properly qualified students may undertake an investigation of a topic suited to their background and experience. Repeatable to a maximum of 9 credits.



Faculty

Milbert Mariano, chair; Alexander Carpenter, Cheryl Daley, Thomas Morphis, Melissa Pratt, Cliff Rusch, Tom Turner, Rodney Vance

Departmental Office: 254 Fisher Hall; 965-6604

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In the VISUAL ARTS DEPARTMENT, the student has the opportunity to study visual arts either as a vocation or as a means of increasing cultural awareness. The department is keenly interested in students who choose visual art as their occupation and who want to devote themselves to the period of intensive training necessary for their profession. It is also concerned with those whose interests may be vocational rather than professional, who recognize the cultural advantages to be obtained from the study of visual art, or who find in artistic experience a high degree of personal enjoyment and satisfaction.

Major in Fine Art, B.S.

A minimum of 78 hours (39 upper-division hours)

►Required Core Courses (78 hours):

ARTD 124-125	Design and Composition I-II	3-3
ARTD 285	Color	2
ARTF 121-122	Drawing Fundamentals I-II	2-2
ARTF 210	Stained Glass	2
ARTF 211	Three-Dimensional Design	2
ARTF 212	Ceramics	2
ARTF 220	Acrylic Painting	2
ARTF 226	Collage and Assemblage	2
ARTF 310	Watercolor Painting	2
ARTF 315	Encaustic Painting	2
ARTF 320	Clay Sculpture	2
ARTF 325	Printmaking–Silkscreen	2
ARTF 326	Oil Painting	2
ARTF 330	Printmaking–Woodcuts and Etchings	2
ARTF 332	Monotype	2
ARTF 340	Intermediate Ceramics	2
ARTF 341	Advanced Ceramics	2
ARTF 346	Stone Sculpture	2
ARTF 394	Professional Practices in Art	2
ARTF 421-422	Life Drawing I, II	2-2
ARTF 423	Portrait Drawing	2
ARTF 447	Sculpture	2
ARTF 461	Figure Painting	2
ARTF 499	Thesis Project	3
ARTH 107	American Art	3
ARTH 115-116	History of Western Art	4-4
ARTH 370	Modern Art	4
ARTP 241	Photography I	3
<i>At least one of the following courses:</i>		3
ARTH 108	History of Far Eastern Art (3)	
ARTH 278	Women Artists (3)	

Visual Arts

Major in Fine Art, B.A.

A minimum of 58 hours (27 upper-division hours)

► **Required Core Courses (58 hours):**

ARTD 124-125	Design and Composition I-II	3-3
ARTD 285	Color	2
ARTF 121-122	Drawing Fundamentals I-II	2-2
ARTF 211	Three-Dimensional Design	2
ARTF 212	Ceramics	2
ARTF 325	Printmaking–Silkscreen	2
ARTF 330	Printmaking–Woodcuts and Etchings	2
ARTF 340	Intermediate Ceramics	2
ARTF 394	Professional Practices in Art	2
ARTF 421	Life Drawing I	2
ARTF 499	Thesis Project	3
ARTH 115-116	History of Western Art	4-4
ARTH 370	Modern Art	4

At least one of the following courses:

ARTH 107	American Art (3)	3
ARTH 278	Women Artists (3)	3

At least one of the following courses:

ARTF 210	Stained Glass (2)	2
ARTF 226	Collage and Assemblage (2)	2

At least one of the following courses:

ARTF 320	Clay Sculpture (2)	2
ARTF 341	Advanced Ceramics (2)	2

At least one of the following courses:

ARTF 332	Monotype (2)	2
ARTF 461	Figure Painting (2)	2

At least one of the following courses:

ARTF 346	Stone Sculpture (2)	2
ARTF 447	Sculpture (2)	2

At least one of the following courses:

ARTF 422	Life Drawing II (2)	2
ARTF 423	Portrait Drawing (2)	2

At least two of the following courses:

ARTF 220	Acrylic Painting (2)	4
ARTF 310	Watercolor Painting (2)	4
ARTF 315	Encaustic Painting (2)	4
ARTF 326	Oil Painting (2)	4

Major in Graphic Design, B.S.

A minimum of 88 hours (42 upper-division hours)

► **Required Core Courses (60-61 hours):**

ARTD 110	Design: Tools, Materials and Techniques	2
ARTD 124-125	Design and Composition I-II	3-3
ARTD 261	Fundamentals of Graphic Design	3
ARTD 262	Identity/Branding I	3
ARTD 263	Introduction to Typography	3
ARTD 266	Digital Studio I	3
ARTD 268	Illustration I	3
ARTD 285	Color	2
ARTD 317	Interactive Design	2
ARTD 362	Identity/Branding II	3
ARTD 364	Illustration II	3
ARTD 460	Self Promotion	1
ARTD 468	Publication Design	2
ARTF 121-122	Drawing Fundamentals I-II	2-2
ARTF 394	Professional Practices in Art	2
ARTF 499	Thesis Project	3
ARTH 264	History of Graphic Design	2
ARTP 241	Photography I	3
ARTP 446	Digital Photo Imaging	3

At least one of the following courses:

ENGL 224	Literary Theory (4)	4
ENGL 346	Creative Writing (4)	4

At least one of the following courses:

MKTG 351	Marketing (4)	3-4
MKTG 374	Advertising (3)	3-4

► **Emphases (Choose one):**

1. Design Emphasis (35 hours)

ARTD 318	Interactive Design II	2
ARTD 361	Visual Identity Systems	3
ARTD 365	Packaging Design	3
ARTD 415	Environmental Design	3
ARTD 440	Type: Expressive and Experimental	3
ARTD 463	Typography: Form and Communication	3
ARTD 464	Digital Studio II	3
ARTF 211	Three-Dimensional Design	2
ARTF 325	Printmaking–Silkscreen	2
ARTH 370	Modern Art	4
ARTP 243	Color Photography I	3

At least one of the following courses:

ARTF 220	Acrylic Painting (2)	2
ARTF 310	Water Color Painting (2)	2

At least one of the following courses: 2

ARTF 421	Life Drawing I (2)	
ARTF 422	Life Drawing II (2)	

Recommended Course:

ARTP 242	Photography II (3)	
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2. Illustration Emphasis (37 hours)

ARTD 365	Packaging Design	3
ARTD 463	Typography: Form and Communication	3
ARTD 464	Digital Studio II	3
ARTF 211	Three-Dimensional Design	2
ARTF 220	Acrylic Painting	2
ARTF 226	Collage and Assemblage	3
ARTF 310	Water Color Painting	2
ARTF 325	Printmaking–Silkscreen	2
ARTF 326	Oil Painting	2
ARTF 330	Printmaking–Woodcuts and Etchings	2
ARTF 421-422	Life Drawing I, II	2-2
ARTF 423	Portrait Drawing	2
ARTF 461	Figure Painting	3
ARTH 370	Modern Art	4

Recommended Courses:

ARTD 440	Type: Expressive and Experimental (3)	
ARTP 242	Photography II (3)	

3. Web Emphasis (28 hours)

ARTD 318	Interactive Design II	2
ARTD 353	Web Page Publication	3
ARTD 415	Environmental Design	3
ARTD 463	Typography: Form and Communication	3
ARTD 464	Digital Studio II	3
ARTH 370	Modern Art	4
ARTP 242	Photography II	3
ARTP 243	Color Photography I	3

At least one of the following courses: 2

ARTF 220	Acrylic Painting (2)	
ARTF 310	Water Color Painting (2)	

At least one of the following courses: 2

ARTF 421	Life Drawing I (2)	
ARTF 422	Life Drawing II (2)	

Recommended Course:

ARTD 253	Publication Technology (3)	
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Recommended Cognate Courses (for all emphases):

COMM 340	Visual Communication and Semiotics (3)	
JOUR 434	Media Law and Ethics (3)	
MGMT 160	Small Business Management (3)	
MKTG 360	Consumer Behavior (3)	

Major in Photography, B.S.

A minimum of 69 hours (43 upper-division hours)

► Required Core Courses (69 hours):

ARTD 124-125	Design and Composition I-II	3-3
ARTD 261	Fundamentals of Graphic Design	3
ARTD 285	Color	2
ARTD 317	Interactive Design I	2
ARTF 394	Professional Practices in Art	2
ARTF 495	Independent Study	3
ARTF 499	Thesis Project	3
ARTH 277	History of Photography	3
ARTH 370	Modern Art	4
ARTP 241-242	Photography I-II	3-3
ARTP 243	Color Photography I	3
ARTP 441	Portrait Photography	3
ARTP 443	Commercial Photography I	3
ARTP 444	Color Photography II	3
ARTP 446	Digital Photo Imaging	3
ARTP 452, 453	Fine Print I, II	3, 3
ARTP 454	Advanced Portraiture	3
ARTP 455	Architectural Photography	3
JOUR 242	Photojournalism	2
JOUR 434	Media Law and Ethics	3
MGMT 160	Small Business Management	3

Major in Film and Television Production, B.S.

A minimum of 81 hours (41 upper-division hours)

► Required Core Courses (81 hours):

ARTD 124-125	Design and Composition I, II	3-3
ARTP 241	Photography I	3
COMM 340	Visual Communication and Semiotics	3
JOUR 434	Media Law and Ethics	3
MDIA 131	Elements of Cinema	3
MDIA 140	Short Scriptwriting	2
MDIA 152	Introduction to Filmmaking	2
MDIA 158	Introduction to Television Production	2
MDIA 220	Producing	3
MDIA 231-232	Sound Design I, II	2-2
MDIA 241	Lighting	3
MDIA 256	Editing	3
MDIA 258	Motion Graphics	3
MDIA 260	Film History	3
MDIA 270	Cinematography	3
MDIA 341-342-343	Group Production I-II-III	3-3-3
MDIA 346	Screenwriting	4

Visual Arts

MDIA 350	Directing	3
MDIA 355	Marketing and Distribution	3
MDIA 380	Internship	3
MDIA 381	International Documentary Experience	3
MDIA 432	PSA Production	3
MDIA 451	Self Promotion	1
MDIA 487-488-489	Thesis Project I, II, III	2-2-2

Recommended Cognate Courses:

JOUR 242	Photojournalism (3)
MGMT 160	Small Business Management (3)

Major in Graphic Design, A.S.

A minimum of 49 hours

► *Required Core Courses (49 hours):*

ARTD 110	Tools, Techniques and Materials	2
ARTD 124-125	Design and Composition I-II	3-3
ARTD 261	Fundamentals of Graphic Design	3
ARTD 262	Identity/Branding I	3
ARTD 263	Introduction to Typography	3
ARTD 266	Digital Studio I	3
ARTD 268	Illustration I	3
ARTD 299	Thesis Project	3
ARTD 464	Digital Studio II	3
ARTF 121-122	Drawing Fundamentals I-II	2-2
ARTF 394	Professional Practices in Art	2
ARTH 370	Modern Art	4
ARTP 241	Photography I	3
ARTP 446	Digital Photo Imaging	3

At least two of the following courses: 4-6

ARTD 317	Interactive Design I (2)
ARTD 361	Visual Identity Systems (3)
ARTD 362	Identity/Branding II (3)
ARTD 365	Packaging Design (3)
ARTD 468	Publication Design (2)

Recommended Cognate Courses:

JOUR 434	Media Law and Ethics (3)
MGMT 160	Small Business Management (3)
MKTG 351	Marketing (3)
MKTG 360	Consumer Behavior (3)
MKTG 374	Advertising (3)

Major in Photography, A.S.

A minimum of 41 hours

► *Required Core Courses (41 hours):*

ARTD 124-125	Design and Composition I-II	3-3
ARTD 285	Color	2
ARTD 299	Thesis Project	3
ARTF 394	Professional Practices in Art	2
ARTH 277	History of Photography	3
ARTH 370	Modern Art	4
ARTP 241-242	Photography I-II	3-3
ARTP 243	Color Photography I	3
ARTP 441	Portrait Photography	3
ARTP 443	Commercial Photography	3
ARTP 444	Color Photography II	3
ARTP 446	Digital Photo Imaging	3

Recommended Cognate Courses:

JOUR 242	Photojournalism (2)
JOUR 434	Media Law and Ethics (3)
MGMT 160	Small Business Management (3)

Minor in Art

A minimum of 34 hours (10 upper-division hours)

► *Required Courses (34 hours):*

ARTD 124-125	Design and Composition I-II	3-3
ARTD 285	Color	2
ARTF 121-122	Drawing Fundamentals I-II	2-2
ARTF 211	Three-Dimensional Design	2
ARTF 421	Life Drawing	2
ARTH 370	Modern Art	4

At least one of the following courses: 4

ARTH 115	History of Western Art (4)
ARTH 116	History of Western Art (4)

At least two of the following courses: 4

ARTF 210	Stained Glass (2)
ARTF 212	Ceramics (2)
ARTF 226	Collage and Assemblage (2)
ARTF 320	Clay Sculpture (2)

At least two of the following courses: 4

ARTF 220	Acrylic Painting (2)
ARTF 310	Watercolor Painting (2)
ARTF 315	Encaustic Painting (2)
ARTF 326	Oil Painting (2)

At least one of the following courses: 2

ARTF 325	Printmaking- Silkscreen (2)
ARTF 330	Printmaking-Woodcuts and Etchings (2)

Minor in Film and Television Production

A minimum of 30 hours (6 upper-division hours)

➤ *Required Courses (23-26 hours):*

MDIA 131	Elements of Cinema	3
MDIA 140	Short Scriptwriting	2
MDIA 152	Introduction to Filmmaking	2

At least one of the following courses: 3

ARTD 125	Design and Composition II (3)
ARTP 241	Photography I (3)

At least three of the following courses: 7-9

MDIA 220	Producing (3)
MDIA 231	Sound Design I (2)
MDIA 232	Sound Design II (2)
MDIA 256	Editing (3)
MDIA 270	Cinematography (3)
MDIA 381	International Documentary Experience (3)

At least two of the following courses: 6-7

MDIA 346	Screenwriting (4)
MDIA 350	Directing (3)
MDIA 355	Marketing and Distribution (3)
MDIA 432	PSA Production (3)

➤ *Required Electives (4-7 hours):*

At least 4-7 hours from the following: 4-7
Additional MDIA courses

Minor in Art History

A minimum of 32 hours (6 upper-division hours)

➤ *Required Courses (32 hours):*

ARTD 124-125	Design and Composition I-II	3-3
ARTD 285	Color	2
ARTH 107	American Art	3
ARTH 108	History of Far Eastern Art	3
ARTH 264	History of Graphic Design	2
ARTH 277	History of Photography	3
ARTH 278	Women Artists	3
ARTH 370	Modern Art	4

At least one of the following courses: 4

ARTH 115	History of Western Art (4)
ARTH 116	History of Western Art (4)

➤ *Required Electives (2 hours):*

At least 2 hours from the following: 2
Upper division ARTD, ARTF, or ARTP courses

The Rasmussen Art Gallery

The Rasmussen Art Gallery, located in the heart of the campus mall, offers students and community a stimulating and enriching cultural dimension in the visual arts. The gallery's exhibitions provide exposure to contemporary work as well as to historically significant art.

Graphic Design

LOWER-DIVISION COURSES:

ARTD 110 2 F
Design: Tools, Materials and Techniques

Provides the student with fundamental experience and knowledge in the use of the basic materials, tools and processes

necessary for graphic designers. Emphasizes hand skills, with assignments covering construction, presentation, book-arts, and other basic techniques.

ARTD 124-125 3-3 F-W
Design and Composition I-II

The basic principles and elements of naturalistic and nonrepresentational design. Stresses creative use of line, color, shape, texture, and space.

ARTD 253 3 W
Publication Technology

Uses the Macintosh computer as hardware platform and Adobe InDesign®. Emphasis is on page layout. Introduction to formatting long documents. Use of multiple master pages; building color pages. Two lectures and one laboratory per week.

ARTD 261 3 F
Fundamentals of Graphic Design

A basic overview of the design process from conceptualization and visualization to the preparation of advertising and collateral materials for print.

ARTD 262 3 F
Identity/Branding I

Emphasizes conceptual problem-solving in the design of corporate identity and collateral materials. Prerequisites: ARTD 261, 263, 266. Recommended prerequisite: ARTD 268.

ARTD 263 3 W
Introduction to Typography

Study of letter forms with emphasis on typesetting and preparation of copy for typesetting and design. Prerequisite: ARTD 261.

Visual Arts

ARTD 266 **3 S** **Digital Studio I**

Preprint production techniques for print applications. Emphasis on presentation and technical skills and problem solving. Recommended prerequisite: ARTD 261.

ARTD 268 **3 W** **Illustration I**

To cultivate the process, resources, and skills needed to create fundamental illustrations in association with graphic design. Applied rendering and illustrations using Adobe Illustrator® to create illustrations and graphics for print and web media. Prerequisites: ARTF 121-122; Macintosh competency.

ARTD 285 **2 S** **Color**

The study and hand-on exploration of color, including color perception, properties of color, interaction of colors, color harmony, and color associations. Develops the student's ability to manipulate color for expressive and aesthetic purposes. Prerequisites: ARTD 124, 125

ARTD 299 **3 F, W, S** **Thesis Project**

Individual project required of all associate-degree art majors. Creation of a unified, accomplished body of work for exhibition in the Rasmussen Art Gallery or at another predetermined location on campus. Students completing more than one degree do a separate project for each degree earned. Qualifies for IP grading.

UPPER-DIVISION COURSES:

ARTD 317 **2 F** **Interactive Design I**

Designing World Wide Web personal home pages and Web sites for clients using the Web as a delivery platform.

Goes beyond development of a properly functioning site to emphasize creation of visually attractive and coherent presentations. For general students and art majors. Prerequisite: CPTR 105 or computer competency (Mac). Recommended prerequisites: ARTD 124, 125, 261.

ARTD 318 **2 W** **Interactive Design II**

Advanced exploration of the integration of components utilized in web and multimedia applications authoring. Students use industry standard software such as Dreamweaver®, Fireworks®, and Flash® for producing interactive projects for internet, CD-ROM, information kiosk, or DVD. Students practice interactive storytelling, navigation metaphors, technical constraints, and usability. Topics include basic animation techniques, transitions, user interactivity, basic scripting, and interactive development process. Prerequisite: ARTD 317.

ARTD 353 **3 W** **Web Page Publication**

Advanced level; for designers who already know basic HTML and web design. Students will learn how to build web pages that are XHTML (Extensible Hyper Text Markup Language) standards compliant with CSS (Cascading Style Sheets). This includes how to create a web-page from scratch and writing one's own CSS style sheets. Two lectures and one laboratory per week. Even years.

ARTD 361 **3 W** **Visual Identity Systems**

Advanced design and presentation as applied to art direction and collateral materials. Prerequisites: ARTD 262, 263, 266. Odd years.

ARTD 362 **3 W** **Identity/Branding II**

In-depth study of corporate identity and graphic standards programs. Includes identity design and usage in various print and collateral applications. Prerequisites: ARTD 262, 263, 266. Even years.

ARTD 364 **3 W** **Illustration II**

Emphasis on rendering images for editorial and commercial assignments. Media include pen and ink and ink wash. Prerequisites: ARTF 421, ARTD 268.

ARTD 365 **3 S** **Packaging Design**

The process of design and presentation as applied to packaging, the redesign of existing packaging and the creation of new product entries. Prerequisites: ARTD 262, 263, 266. Even years.

ARTD 415 **3 S** **Environmental Design**

Advanced study of how to plan and design the integration of visual communication into the three-dimensional environment. Students explore how static and interactive typography, graphics and images can be applied as both pragmatic and poetic solutions in accord with interior and exterior architecture, museum/gallery displays, retail and corporate environments. Even years.

ARTD 440 **3 S**

Type: Expressive and Experimental

Advanced study of typography concentrating on the expressive use of letterforms and text, and the exploration of experimental and progressive application of type and letterforms. Prerequisite: ARTD 463. Even years.

ARTD 460 **1 W**

Self Promotion

A concentrated review of the student's existing portfolio with specific attention given to refining and polishing the content, form, and packaging. Additional areas include developing a personal identity system and assembling a set of self-promotional materials. Prerequisite: ARTF 394.

ARTD 463 **3 S**

Typography: Form and Communication

Type styles, character, arrangement, and usage in the design of printed materials. Practical experience in preparation of type for print production. Prerequisites: ARTD 262, 263, 266. Odd years.

ARTD 464 **3 S**

Digital Studio II

Explores the preparation of digital files and desktop design. For advanced graphic design majors who understand the basic elements of design, typography, and print and who have good Macintosh competency. Prerequisites: ARTD 262, 266.

ARTD 468 **2 F**

Publication Design

An in-depth study of publication layout and design techniques. For advanced graphic design majors who understand the basic elements of digital file preparation, layout and design. Prerequisites: ARTD 464. Even years.

Fine Art

LOWER-DIVISION COURSES:

ARTF 121-122 **2-2 F, W**

Drawing Fundamentals I-II

Development of the student's ability to communicate and express creative ideas using line, shape, value, and texture. One lecture and one laboratory per week.

ARTF 210 **2 F**

Stained-Glass Design

Materials and Techniques of stained-glass design, including copper foiling and leading techniques. One lecture and one laboratory per week.

ARTF 211 **2 F**

Three-Dimensional Design

The perceptual, spatial, and structural principles of well-ordered three-dimensional forms. Includes assignments introducing techniques of modeling and assemblage. One lecture and one laboratory per week.

ARTF 212 **2 F, W, S**

Ceramics

Introduction to materials and techniques in creating hand-built and wheel-thrown ceramic forms. One lecture and one laboratory per week. Recommended prerequisite: ARTF 211.

ARTF 220 **2 F**

Acrylic Painting

Introduction to painting with acrylics. Exploration of color and brush techniques through a variety of subjects and styles. One lecture and one laboratory per week. Even years.

ARTF 226 **2 W**

Collage and Assemblage

The artistic use of papers, found objects, and other nontraditional media; historical examples and the creation of two- and three-dimensional projects. One lecture and one laboratory per week. Even years.

UPPER-DIVISION COURSES:

ARTF 310 **2 F**

Watercolor Painting

Fundamentals of watercolor in landscape, still-life, and nonrepresentational painting. Includes work both in studio and on location. One lecture and one laboratory per week. Recommended prerequisites: ARTF 121, 122 or 220. Odd years.

ARTF 314 **3 S**

Art for Children

Provides an understanding of children's art and a knowledge of art materials and teaching techniques applicable to the child's levels of learning. Designed to provide in the life of the child the thrill of the visual and tactile uses of line, shape, value, color, and texture.

ARTF 315 **2 W**

Encaustic Painting

Materials and techniques of using pigmented wax as a painting medium on wood, canvas and other supports. Emphasis on exploring and inventing techniques, including layering and collage. One lecture and one laboratory per week. Recommended prerequisites: ARTF 121, 122 or 220. Odd years.

Visual Arts

ARTF 320 **2 W** **Clay Sculpture**

The design and techniques of creating sculptural forms in clay with additive and subtractive processes. Figurative and abstracted subject matter. One lecture and one laboratory per week. Recommended prerequisite: ARTF 211. Odd years.

ARTF 325 **2 W** **Printmaking-Silkscreen**

The techniques of silkscreen printing including cut stencil and photostencil. One lecture and one laboratory per week. Prerequisite: ARTF 121 or 122.

ARTF 326 **2 W** **Oil Painting**

Transparent and opaque oil painting techniques are studied in rendering still-lives, landscapes, and abstractions. One lecture and one laboratory per week. Recommended prerequisite: ARTF 121, 122 or 220. Even years.

ARTF 330 **2 S** **Printmaking-Woodcuts and Etchings**

An introduction to the creation of prints through the relief process of woodcuts and the intaglio process of etchings. One lecture and one laboratory per week. Prerequisite: ARTF 121 or 122. Even years.

ARTF 332 **2 S** **Monotype**

Combines painting and printmaking techniques by painting images on metal and plexiglass plates, then transferring them to paper with a hand-operated printing press. One lecture and one laboratory per week. Prerequisite: one quarter of drawing, painting, or printmaking. Odd years.

ARTF 340 **2 W** **Intermediate Ceramics**

Ceramics techniques and processes at the intermediate level. One lecture and one laboratory per week. Prerequisite: ARTF 212. Even years.

ARTF 341 **2 S** **Advanced Ceramics**

Advanced study in creating ceramic forms, formulating glazes, and alternative firing techniques. One lecture and one laboratory per week. Prerequisite: ARTF 340. Even years.

ARTF 346 **2 S** **Stone Sculpture**

Creation of three-dimensional forms using subtractive methods in stone. One lecture and one laboratory per week. Recommended prerequisite: ARTF 211. Odd years.

ARTF 394 **2 F** **Professional Practices in Art**

Focuses on issues that graduating art majors will face whether practicing in the field of art or applying to graduate programs. Each student compiles a portfolio of artworks. Features guest speakers.

ARTF 421 **2 S** **Life Drawing I**

Improvement of visual skills and accurate portrayal of human surface anatomy. One lecture and one laboratory per week. Prerequisites: ARTF 121 or 122.

ARTF 422 **2 W** **Life Drawing II**

Advanced study in drawing the human figure. Emphasis on anatomy, expression, and development of a personal rendering style. One lecture and one laboratory per week. Prerequisite: ARTF 121 or 122. Odd years.

ARTF 423 **2 S** **Portrait Drawing**

Advanced study in drawing a realistic rendering of the human head and features. One lecture and one laboratory per week. Prerequisites: ARTF 121 or 122. Even years.

ARTF 447 **2 S** **Sculpture**

The materials and techniques of using various media to create sculptural forms, both representational and nonobjective. One lecture and one laboratory per week. Recommended prerequisite: ARTF 211. Even years.

ARTF 461 **2 S** **Figure Painting**

Advanced study of color and composition with the human figure as subject matter. Emphasis on communicating expression and vitality. One lecture and one laboratory per week. Prerequisite: one quarter of painting or ARTF 421, 422 or 423. Even years.

ARTF 491 **1-3 F, W, S** **Cooperative Education in Art**

An individualized contract agreement involving selected students, faculty, and employers to provide practical experience in art, art history, and graphic design in a professional setting. Approval of the department chair required in advance. Thirty clock hours of experience required for each hour of credit. Repeatable for credit.

ARTF 495 **1-3 F, W, S** **Independent Study**

Available in any area where additional study is desired. Approval of department chair and major advisor is required. Repeatable to a maximum of 6 credits.

ARTF 499 3 F, W, S

Thesis Project

Individual project required of all baccalaureate degree art majors. Students create a unified, original, and professional body of work for exhibition either in the Rasmussen Art Gallery or at another predetermined location on campus. Students completing more than one art degree do a separate thesis project for each degree earned. Qualifies for IP grading.

History of Art

LOWER-DIVISION COURSES:

ARTH 107 3 W

American Art

A study of architecture, graphic art, painting, photography, and sculpture in the United States from the colonial period to the present. Odd years.

ARTH 108 3 W

History of Far Eastern Art

An overview of art and architecture created in China, Japan, India, and Southeast Asia. Even years.

ARTH 115 4 F, S

History of Western Art

Examination of architecture, sculpture, painting and decorative arts in Europe from the period before written language to the end of the Middle Ages. Organized chronologically and geographically, the lectures explore art's relationship to different cultures' ideas of death, the divine, nature, and gender/ethnic identity.

ARTH 116 4 F, S

History of Western Art

Examination of painting, sculpture, architecture, photography, graphic and textile arts from the 15th century to the 21st century, primarily in Europe and the United States. Organized chronologically, the lectures will address themes of vision and representation, the canon, patronage, the artistic personality, and gender/ethnic identity.

ARTH 264 2 F

History of Graphic Design

The history of graphic design and visual communications from the development of ancient writing of the Sumerians progressing through 20th century advances in graphic design: major trends, developments, and influences. Students will be able to recognize, analyze, and understand important historical and world-wide cultural influences found in graphic design and visual communication. Odd years.

ARTH 277 3 F

History of Photography

Analysis of theories and techniques of major photographers in America and Europe from the inception of photography to the present.

ARTH 278 3 W

Women Artists

Female artists in the Western World from the Renaissance to the present, with particular focus on the 19th and 20th centuries. Even years.

UPPER-DIVISION COURSE:

ARTH 370 4 S

Modern Art

The Avant-garde in European and American art from Manet to the present. Includes architecture, graphic art, painting, performance, photography, and sculpture. Prerequisite: ARTH 116.

Photography

LOWER-DIVISION COURSES:

ARTP 100 2 Su

Digital Art Photography

Digital imaging as a means of visualizing ideas in the context of visual communication design. Students learn the creative use of 2-D image manipulation and transformation of photographic and non-photographic imagery on the computer. Offered only at Albion. Repeatable for credit.

ARTP 241-242 3 F, W

Photography I-II

The basic equipment, experimental manipulations, and photographic skills involved in producing black and white negatives, contact prints, and enlargements; the proper use of various films, papers, and chemicals. Ninety minutes lecture and four hours laboratory per week. Must be taken in sequence.

ARTP 243 3 S

Color Photography I

An introduction to color theory and practice; color slides and slide developing. Ninety minutes lecture and four hours laboratory per week.

Visual Arts

UPPER-DIVISION COURSES:

ARTP 441 **3 F** **Portrait Photography**

Development of fine art and commercial skills in black-and-white and color portraiture, including executive and group portraits, both in studio and outdoors. A 2 $\frac{1}{4}$ format camera is used. Ninety minutes lecture and four hours laboratory per week. Prerequisite: ARTP 243.

ARTP 443 **3 W** **Commercial Photography**

Use of 2 $\frac{1}{4}$ and 4 x 5 format cameras with studio lighting for product still life, architectural, and industrial applications. Ninety minutes lecture and four hours laboratory per week. Prerequisite: ARTP 243.

ARTP 444 **3 S** **Color Photography II**

Professionalism in color photography. Includes use of filters, business of photography and creating publishable photographs. Ninety minutes lecture and slide critique and four hours laboratory per week. Prerequisite: ARTP 243.

ARTP 446 **3 S** **Digital Photo Imaging**

Use of computer software tools and techniques to scan, alter and enhance photographs. Emphasis on artistic manipulation of digital images for graphic design and photographic applications. Prerequisites: (Mac competency), ARTP 241.

ARTP 452 **3 F** **The Fine Print I**

Advanced photography printing using a large format camera. Refined printing using cold-light enlargers and archival treatments. Ninety minutes lecture and four hours laboratory per week. Even years.

ARTP 453 **3 W** **The Fine Print II**

Second stage of refined printing with large format negatives. Ninety minutes lecture and four hours laboratory per week. Even years.

ARTP 454 **3 W** **Advanced Portraiture**

An advanced approach to what comprises a portrait. Both medium and large format cameras are used. Ninety minutes lecture and four hours laboratory/field work per week. Prerequisite: ARTP 441. Odd years.

ARTP 455 **3 W** **Architectural Photography**

Use of 2 $\frac{1}{4}$ and 4 x 5 cameras to record interiors and exteriors of architectural subjects. Lighting techniques blend natural light and flash. Ninety minutes lecture and four hours laboratory/field work per week. Odd years.

Film and Television Production

LOWER-DIVISION COURSES:

MDIA 131 **3 W** **Elements of Cinema**

Introduction to the basic elements of cinema and related motion-picture technologies. Emphasis on developing skills of critical analysis and appreciation of the "language" of cinema; craft, genre, style, and technique. Historical overview of cinema classics and innovative visionaries of the medium. Introduction to roles and responsibilities involved in motion-picture technologies (e.g., scriptwriting, directing, cinematography, editing, lighting, sound direction, etc.). Lectures, discussion, and intensive viewing labs.

MDIA 140 **2 S** **Short Scriptwriting**

Techniques and practice in writing the short media script. Fundamentals of short scripting, outline, structure, and brief theme development for PSA's, short film and video features, broadcast and infomercials. Includes practical development of the students' knowledge of screenwriting software programs. Student work will ideally be integrated into other media production courses requiring short scripts.

MDIA 152 **2 S** **Introduction to Filmmaking**

An overview of the filmmaking process from concept to distribution with emphasis on how to make an independent film. Students learn both the artistic and business principles of filmmaking. Intended for Film and Television majors and others interested in understanding how independent films are created. Students make their own short film projects during this class. Recommended: CPTR 105 or computer competency (Macintosh). One lecture and one laboratory per week.

MDIA 158 **2 S** **Introduction to Television Production**

Survey of three types of media production from a Christian perspective: broadcast production, documentary production, and digital film production. Includes an overview of the positions that make up the production team, and the technologies that make the production happen. One lecture and one laboratory per week.

MDIA 220 3 F
Producing

Provides a thorough understanding of the role of the producer in the development and production of narrative, documentary, and television projects. Emphasis on understanding the business side of filmmaking, including fundraising, budgeting, contracts, hiring a crew, insurance considerations, setting project timelines, and negotiating distribution deals. Prerequisites: MDIA 131, 140, 152, 158.

MDIA 231 2 F
Sound Design I

Introduction to audio recording theory and techniques for broadcast, film, and studio environments. Concepts such as multitrack mixing, voice-over recording, sound effects, editing, and wave-form processing are studied and practiced using current industry-standard audio equipment. Focus on learning industry-standard audio editing software. One lecture and one laboratory per week. Prerequisite: MDIA 158.

MDIA 232 2 S
Sound Design II

Focus on post-production sound. Includes audio dialogue replacement (ADR), sound effects recording (Foley), music mastering, pre-mix track preparation, final sound mixing and creation of a Dolby 5.1 surround mix using industry standard software and hardware. One lecture and one laboratory per week. Prerequisites: MDIA 131, 140, 152, 158, 231.

MDIA 241 3 W
Lighting

Theory of and practice in using professional lighting equipment and natural lighting, along with camera exposure control, to achieve various moods and effects. Two lectures and one laboratory per week. Prerequisite: MDIA 158.

MDIA 256 3 S
Editing

Explores the history, theories, and techniques of film and television editing. Students learn to create meaning and emotion through the juxtaposition of moving images and the art of making the edit. Practical training includes learning to log, digitize, edit, and prepare footage for distribution using a nonlinear editing system (Apple Final Cut Pro®). Macintosh computer proficiency is required. Two lectures and one laboratory per week. Prerequisite: MDIA 158.

MDIA 258 3 W
Motion Graphics

Using the latest off-the-shelf software, students learn to create still and animated two-dimensional graphics for show opens, title sequences, image enhancements, and compositing. Emphasizes understanding the tools available. Software taught: Photoshop®, Illustrator®, After Effects®, Motion® Chyron Lyric®. Two lectures and one laboratory per week.

MDIA 260 3 F
Film History

A history of motion picture technologies with emphasis on narrative cinema and the moving media. Covers the period of early expansion (1907-1918), D.W. Griffith and the development of narrative form, German, Soviet and Third World cinema and the theory of montage, the coming of sound and color, the ascent of Hollywood and the French New Wave. Also covers the current “digital mania.”

MDIA 270 3 S
Cinematography

Teaches students how to do production outside the studio. Skills taught include microphone selection and placement, working with available light, location management, expedition planning, and camera control. Job markets targeted are: news gathering, documentary, mission adventure videos, etc. Two lectures and one laboratory per week.

UPPER-DIVISION COURSES:

MDIA 341-342-343 3-3-3 F-W-S
Group Production I-II-III

A three-part series in which students work together as a collaborative team to create a film (narrative or documentary) or television project. The series is intended to allow students to apply their previously acquired skills to a project as a team and prepare them for their thesis project. Two lectures and one laboratory per week. Must be taken in sequence. Prerequisites: MDIA 220, 231, 241, 256, 260, 270.

Students choose from the following topics:

- Documentary Production*
- Film Production*
- Television Production*

Repeatable for credit under different topics.

MDIA 346 4 W
Screenwriting

(See also ENGL 346)

Fundamentals of screenwriting: structure, character and scene development, conflict, locale, theme, script outline and story conception. Includes practical development of the student’s knowledge of screenwriting software programs. Students produce one act of a feature-length screenplay. Prerequisite: ENGL 102.

Visual Arts

MDIA 350

3 W

Directing

Directing of an independent film, documentary, or episodic television program. Teaches the director's role in the filmmaking process, including preparing script for production, casting a project, working with actors during rehearsal, working with the crew on set, and understanding the director's role as "auteur" or author of a film. Two lectures and one laboratory per week. Prerequisites: MDIA 220, 241, 256, 260, 270.

MDIA 355

3 S

Marketing and Distribution

An exploration of film and television marketing and distribution with an emphasis on how to secure a distribution deal for an independent production. Alternative forms of distribution are examined including self-distribution, DVD creation, and online distribution. Students learn how to create their own DVDs using Apple DVD Studio Pro®. Two lectures and one laboratory per week. Macintosh computer proficiency is required.

MDIA 380

3 F, W, S, Su

Internship

Planned, coordinated, and supervised work experience in an industry allied with film or television production. A minimum of fifty hours of verified work experience required for each hour of credit. Repeatable to a maximum of 12 credits. For instructions and requirements, see department chair before registering. Qualifies for IP grading.

MDIA 381

3 Su

International Documentary Experience

Combines theoretical understanding of media for social awareness with hands-on production elements of international documentary filmmaking. In this intensive three-week course, students will research, produce, direct and edit short documentary films that emphasize story and issue in partnership with the advocacy arm of a grassroots-level NGO in an international setting. Prerequisites: MDIA 220, 256, 270.

MDIA 432

3 W

PSA Production

Provides an opportunity to apply technical skills to the production of Christian PSA's for potential broadcast. Emphasis on effective audience analysis, clear identification of desired outcome, and reduction of images and sounds to their most concentrated and effective form. Includes problem/audience-specific scripting, as well as production design and execution of 15, 30, and 60-second PSA's. Two lectures and one laboratory per week.

MDIA 451

1 S

Self Promotion

Final preparation for entry into the job market. Polishing the demo reel, preparing the resumé, business cards, etc. Survey of the job market and available opportunities. Lectures, discussion, field trip. All major courses should be completed or final ones concurrent with enrollment in this course.

MDIA 487-488-489

2-2-2 F, W, S

Thesis Project

A film or television project produced and completed during the senior year that incorporates the creative, technical, and business skills learned throughout the major. The film, documentary, or television project will be presented at the Senior Film Festival held at the end of the year. Proposals must be pitched to a department review panel for approval at the beginning of the senior year.

Pacific Union College is incorporated under the laws of the State of California as a nonprofit religious institution. A portion of its income is derived from gifts and grants. These sources of funding help keep your cost at the lowest possible level consistent with adequate facilities and competent instruction. Because of uncertain economic conditions, the college must reserve the right to increase tuition rates, rents, and fees during the school year.

Room Reservation Fee

A \$150 room reservation fee is required before a room assignment can be confirmed. The fee is refundable if a cancellation is received at least 21 days prior to the first day of classes. When an application to the college is withdrawn prior to the refund deadline, the room reservation fee is refunded in full upon written request to the appropriate residence hall dean. When residence hall occupancy is terminated, the fee is applied to the student account.

Current students in residence with a room reservation fee on file may designate a room preference before the end of the current school year. Specific room assignments for new students are made at the discretion of the residence hall dean with attention to class standing and the date the fee is received.

Financial Requirements for 2010-2011*

Tuition — Quarter Fee Schedule

The tuition rates reflect a charge of \$725 per quarter hour up to 11.5 hours. Tuition for 12 to 17.5 hours is \$8,332. All hours over 17.5 are charged at \$554 per hour.

Miscellaneous Fees

<i>ACT Residual Testing</i>	\$40.00
<i>Application Fee (first time only)</i>	\$30.00
<i>Automobile Campus Registration Fee</i>	
Community students,	
car, per year	\$30.00
Community students,	
additional car, per year	\$15.00
Community students,	
motorcycle, per year	\$10.00
Residence-hall students,	
car, per year	\$65.00
Residence-hall students with	
General Permit, car, per year	
.....	\$50.00
Residence-hall students,	
motorcycle, per year	\$20.00
<i>Course Waiver Exam</i>	\$25.00 per exam
<i>Credit by Exam</i>	\$25.00 per credit hour
<i>Examination Fees (standardized)</i>	
Fees are charged to cover costs of	
such standardized tests as may be	
required by individual departments.	
<i>Film and Television Production Fees</i>	
(See Film and Television Production	
Fees Section)	
<i>Flight Training Fees</i>	
(See Flight Training Fees Section)	

Laboratory and Class Fees

Fee varies with class. Breakage payment as circumstances may require.

Late Registration Fee \$25.00
(Payable in cash when you register;
\$35.00 if billed to your account)

Lost Residence-hall Key
 or Replacement..... \$50.00

Lost Student I.D.
 or Replacement..... \$12.00

Private Music Lesson Fee
(see Music Charges section)

Nursing Fees
(see Nursing Fees Section)

Senior Citizen (65 yrs. & older) Rates

Non-Participation	N/C
Audit Credit	\$75.00 per hour
Full Credit	\$100.00 per hour

These special rates are available to senior citizens on an "empty-seat" basis. Regular degree students paying full tuition have priority.

Skiing Fees Inquire at Exercise Science and Nutrition Department
TEAS Assessment (Nursing) \$40.00

Technology Fee (Angwin Campus)
..... \$75.00 per quarter

Transcript of Credits \$25.00
For this one-time fee, billed at first enrollment, a student may request up to twenty-five transcripts without additional charge. Additional copies beyond the first twenty-five are \$5.00 per copy.

*Note: A supplement with financial information for 2011-2012 will be available in Spring 2011.

Financial Information

Payment Information

Payment for the tuition, room, and board expenses is to be made by:

September 15	Fall Quarter
December 15	Winter Quarter
March 15	Spring Quarter

You may pay in person, by mail, or online at <https://webadvisor.puc.edu> with your Lantern user name and password. Electronic checks, American Express, Discover Card, MasterCard, and Visa are accepted.

Financial Clearance

Students who have been admitted to the college may register for classes in advance. A financial restriction is placed on the student's registration 30 days prior to the start of each quarter. During this period, students are required to obtain financial clearance from the Student Financial Services Office. Financial clearance is defined as completing a financial plan with the Student Financial Services Office and making the scheduled payment(s). A student who does not obtain financial clearance by 4:00 p.m. on the second day of classes for the current quarter will have their registration cancelled. For further information, see the section entitled "Academic Information and Policies" in this catalog.

Billing Procedure

As a student at Pacific Union College you have two accounts, your basic education account (covers tuition, room and board) and your miscellaneous account (covers other charges through the year, such as meal costs in excess of the minimum, private music lessons, course-overload charges, library fines, etc.).

You pay your basic education account charges on the basis of your payment plan with the school. Your miscellaneous account charges are to be paid each month upon receipt of the statement.

A late charge is assessed for any account that remains unpaid beyond 30 days.

Financing College

If you elect one of these plans, you should complete arrangements with your Pacific Union College financial counselor thirty days before the school term begins.

Tuition Guarantee Plan

Provisions of the Plan:

1. Under this plan, the tuition cost in effect at the time of the first payment agreement will remain in effect until graduation, provided you are enrolled full-time continuously (except summers). (Student missionaries and Taskforce workers may be granted a one-year leave of absence.) This discount is only available to students without need-based grants or loans.

Estimate of Expenses

The following amounts represent the estimated cost of full-time attendance during the fall, winter, and spring quarters of the 2010-2011 school year:

	One Year	Each Quarter
Tuition & fees* (12-17.5 hours)	\$24,996	\$8,332
Technology fee	225	75
Residence-hall Rent	4,134	1,378
Minimum Board	2,925	975
Total	\$32,280	\$10,760

Books and school supplies are purchased on a cash basis at the College Bookstore.

** For students enrolled for six credit hours or more, tuition and fee charges include tuition, a student medical assistance plan, Student Association fees, and graduation fees.*

2. Prior to or on September 15, you must pay total estimated costs (including room and board) for the year.

3. As a participant in this plan you are eligible only the first year of participation for a 2% cash discount on the total estimated costs.

4. The SDA Tuition Discount is available when applicable.

5. Any money you earn from campus employment is paid directly to you. These earnings do not qualify as a reduction in the amount to be paid.

6. Costs in excess of the total estimated costs paid will be billed monthly. You must pay them on a monthly basis.

7. Should your actual costs be less than the estimated amount paid, the credit will be refunded after June 25.

This plan guarantees *only the tuition rate*, not any other charges, including but not limited to the room and board charges and any fees assessed after the beginning of the school year. If you elect this plan, you (or your parents or sponsor) must prepay each year the total estimated costs, which include room and board and other fees at the current rate.

Cash Discount

Provisions of the Plan:

1. Cash discounts will be applied as follows: 2% discount of the total advance payment for each quarter in residence.

2. Cash discounts will be applied if total estimated costs, less SDA Tuition Discount (if applicable), are remitted by:

September 15	for Fall Quarter
December 15	for Winter Quarter
March 15	for Spring Quarter

Monthly Payment Plan

Provisions of the Plan:

1. After deduction of financial aid and scholarships from the total estimated costs, the remainder may be paid in nine equal payments beginning September

15th and on the 15th of each successive month through May.

2. The responsible party receives a monthly billing.

3. A late fee will be charged on accounts that remain unpaid beyond 30 days. Students/families who make the scheduled payments on a timely scheduled basis will not be charged the late fee.

4. Students are encouraged to complete the required forms for financial aid prior to the start of the quarter. Students who are granted provisional financial clearance will be given five (5) weeks after the start of the quarter to submit the required documents. If these documents are not received by the end of the five week period, then the student will be charged a late document fee of \$150. Required documents are:

- 1.** processed FAFSA,
- 2.** Pacific Union College Financial Aid Application, and
- 3.** any other documents required to process a financial aid award.

SDA Tuition Discount

Provisions of the Plan:

A subsidy toward the operation of the college is provided by the Seventh-day Adventist Church. Therefore:

- 1.** Seventh-day Adventist students receive a tuition discount of \$780 for the year (\$260 per quarter) for full-time students. Three-quarter time students receive a discount of \$585, and half-time students a discount of \$390 for the year.
- 2.** This discount is applied only to tuition charged at the rate of \$725 per hour.
- 3.** This discount is coordinated with other financial aid to fit into need determination.

Family Discount Plan

Provisions of the Plan:

- 1.** For a family with two dependent students attending the college at the same

time, a discount of \$200 per student per quarter is given; for a family with three or more, the discount is \$250 per student per quarter.

2. If you are in a family qualifying for this discount, you also receive the benefits of any of the other payment and discount plans offered by the college for which you qualify.

Financial Aid Programs

The basic premise of the federal and state student aid programs is that you and your family have the primary obligation to meet your cost of attendance to the extent that you and they are able to do so. If you have further financial need, you may apply for financial aid, which is generally made available through grants, loans, and student employment.

The following definitions are given to clarify financial aid:

Cost of Attendance: Tuition, fees, room and board, books and supplies, personal expenses (laundry, clothing, etc.), and required travel.

Financial Aid: Financial resources available to meet financial needs, resources such as scholarships and grants, which are not repaid; loans, usually at favorable interest rates and with extended repayment periods; and part-time student employment.

Expected Family Contribution (EFC): The information reported on your FAFSA is used to calculate your EFC. The formula used to calculate your EFC is established by law and is used to measure your family's financial strength on the basis of your family's income and assets. The EFC is used to determine your eligibility for federal student aid and indicates how much money you and your family are expected to contribute toward your cost of attendance.

Financial Need: The difference between cost of attendance and the EFC.

Scholarships: Outright gifts awarded for achievement and leadership.

Grants: Outright gifts, based on financial need.

Loans: Financial assistance which must be repaid, usually with favorable interest rates and long-term repayment schedules.

Independent Student: For federal and state student aid program purposes, you are considered independent if you

- 1.** are 24 years of age or older on or before December 31 of the award year,
- 2.** are a veteran of the U.S. Armed Forces,
- 3.** are an orphan or ward of the court,
- 4.** have a legal dependent other than a spouse,
- 5.** are a married student, or
- 6.** are a graduate/professional student.

Free Application for Federal Student Aid (FAFSA): The application form used to determine your financial need. The FAFSA is available from the Pacific Union College Student Financial Services Office, or at www.fafsa.ed.gov.

Financial Aid Application (FAA): Pacific Union College's supplemental form to apply for financial aid. This is available at the Student Financial Services Office, or at www.puc.edu.

Eligibility for Financial Aid

To receive aid from federal student aid programs, you must:

- 1.** demonstrate financial need (except for certain loans),
- 2.** have a high school diploma or equivalent,
- 3.** be accepted to attend Pacific Union College,
- 4.** be working toward a degree or certificate in an eligible program,
- 5.** be a U.S. citizen or eligible noncitizen,

Financial Information

- 6.** have a valid Social Security number (unless if you're from the Republic of the Marshall Islands, the Federated States of Micronesia, or the Republic of Palau), **7.** register with the Selective Service if required, **8.** maintain satisfactory academic progress once in school, **9.** certify that you are not in default on a federal student loan and do not owe money on a federal student grant, and **10.** certify that you will use federal student aid only for educational purposes.

Satisfactory Academic Progress. To be eligible to receive federal, state, and/or institutional financial aid at Pacific Union College, you must maintain satisfactory academic progress, which is defined as follows:

Course Load. To be a full-time student, you must register for at least 12 hours and complete at least 10 hours per quarter. To complete a bachelor's degree in four years, you must complete an average of 16 hours per quarter. (Financial aid is available during the summer if you are taking at least 9 hours and will graduate at the end of summer quarter.)

GPA. You must earn a minimum quarter GPA of 2.0 and a cumulative GPA of 2.0 to qualify for financial aid. To be eligible for campus grant money, bachelor's degree students must satisfactorily complete 39 hours in three consecutive quarters; two-year degree students must complete 36 hours in three consecutive quarters.

In calculating the GPA and evaluating progress toward completion of a degree:

"I" (Incomplete) and **"IP"** (in progress) carry no grade points and are not computed in the GPA.

"NR" (No grade reported) carries no grade points and is not computed in the GPA.

"W" (Withdrawal) is not computed in the GPA, nor is the course considered

For Four-year Degree

<i>By the end of</i>	<i>Credit to be completed:</i>
3 quarters	39 hours
6 quarters	78 hours
9 quarters	117 hours
12 quarters	156 hours
15 quarters	all degree requirements

For Two-year Degree

<i>By the end of</i>	<i>Credit to be completed:</i>
3 quarters	36 hours
6 quarters	72 hours
9 quarters	all degree requirements
12 quarters	all A.S. Nursing requirements

to be completed satisfactorily.

A course repeated at *Pacific Union College* to improve the GPA is counted only once toward the total credit hours required for graduation. Only the better grade is included in the GPA.

Time Frame for Progress Toward a Degree. If you receive financial aid, you should carefully adhere to the requirements of your major or other program to ensure completion on time. You must be in compliance with the tables above, which indicate the time for a first-year student to qualify for a degree. Financial aid for students in other classifications will be prorated.

Satisfactory Academic Progress Review. At the end of each quarter the Student Financial Services Office reviews the academic progress of each student. If while receiving financial aid you are

found to be in violation of the hour and/or GPA requirements, your financial aid could be immediately suspended. At the end of the third quarter, campus financial aid may be suspended if the 39/36 hour requirement has not been met.

If your financial aid is suspended, before it can be reinstated you must make arrangements with the Student Financial Services Office and with the Records Office to take the appropriate course load to satisfy the 39/36 hour and GPA requirements.

For any courses you take elsewhere, you must submit an official transcript to the Student Financial Services Office and the Records Office three weeks before the beginning of the quarter for which financial aid is sought, so that your eligibility may be determined.

Part-Time Students. Financial aid may be available to part-time students as follows: three-quarter time (9-11.5 hours) and half-time (6-8.5 hours). You must declare less than full-time status to your financial counselor prior to the beginning of the quarter. Pacific Union College Campus Grant money is available to full-time students only. Additional information is available from your financial counselor.

Transfer Students. Transfer students are eligible for financial aid during their first quarter at Pacific Union College and are subject to the same satisfactory academic-progress policies as other Pacific Union College students. Credits earned prior to enrolling at Pacific Union College are not considered when determining academic progress. Transfer credit may be accepted to make up a deficiency. Before registering as a transfer student, you must consult the Records Office to determine whether or not Pacific Union College will accept your transfer credits.

Appeal Procedures. The following appeal procedures are available if you

are ever deemed not to be making satisfactory academic progress. If you are in this category, you may receive aid for the coming quarter upon approval of a written petition to the Financial Aid Committee at the Student Financial Services Office. This petition must

1. describe the reasons for not making satisfactory progress,
2. outline a program for correcting the problem, and
3. list an approved, attainable class schedule, signed by your academic advisor and a representative from the Teaching and Learning Center, for the following quarter.

Financial Aid Suspension. If you do not make satisfactory academic progress for the petitioned quarter, you will be placed on Financial Aid Suspension, a status that terminates financial aid. If your financial aid is suspended, you may appeal the suspension in writing to the Financial Aid Committee at the Student Financial Services Office.

The Financial Aid Committee will review the appeal and determine whether the suspension is justified. You will be advised of the decision in writing.

If the appeal is approved and aid is reinstated for 1 additional quarter, you must:

1. begin the quarter with a minimum of 12 hours, complete at least 10 hours, and
2. attain a GPA for the quarter of at least 2.00 and sufficient to bring the cumulative GPA to at least 2.00.

If you do not meet the above requirements, financial aid will be suspended without recourse until you are able to demonstrate your ability to succeed with the appropriate course load and achieve the appropriate GPA.

Types of Aid

Financial aid consists of gift aid and self-help aid. Gift aid includes scholar-

ships and grants, which require no repayment. Self-help includes loans, which must be repaid, and your employment earnings.

Gift Aid: Scholarships and Grants From the Federal Government

Federal Pell Grant. The Pell Grant is a federally-funded grant program designed to help eligible undergraduates earn the first baccalaureate degree. The amount is based on your financial need and the number of hours for which you are enrolled.

FSEOG. The Federal Supplemental Educational Opportunity Grant program is a federal program for undergraduate students with exceptional financial need. An FSEOG award is automatically considered for students applying for financial aid through Pacific Union College.

ACG. The Academic Competitiveness Grant is a federally-funded grant program for first and second-year Pell Grant recipient students who have completed a rigorous secondary school program of study. A complete list of eligibility requirements may be found at <http://studentaid.ed.gov>.

SMART. The National Science & Mathematics Access to Retain Talent Grant is a federally-funded grant program for third and fourth-year Pell Grant recipient students who are pursuing a major in physical, life, or computer sciences, mathematics, technology, engineering, or a critical foreign language. A complete list of eligibility requirements may be found at <http://studentaid.ed.gov>.

BIA. Bureau of Indian Affairs grants help native American students meet their college costs. Applications for BIA grants and vocational assistance are available from the U.S. Bureau of Indian Affairs regional offices or from the Bureau's Office of Indian Education, 2800 Cottage Way, Sacramento, CA 95825.

From the State Government

The California Student Aid Commission. All Pacific Union College students who are California residents are encouraged to apply to the California Student Aid Commission for state-funded grant assistance. Eligibility requirements and application procedures are posted at www.calgrants.org. An annual application is required for all grants. Applications are due by March 2 for the school term starting in September.

Cal Grants are based on a combination of demonstrated financial need and academic achievement as evidenced by your GPA. Scholarship award amounts are determined by the CSAC. Both the FAFSA and the GPA Verification Form must be submitted by March 2.

From the College

Honor Awards

Contact the Enrollment Services Office or the Student Financial Services Office for information about College-awarded scholarships and honor awards.

A **Campus Grant** is a limited grant available to help meet a student's remaining financial need. Recipients must maintain satisfactory academic progress and carry a full course load; they may be required to live in College housing.

Self-Help: Loans

Most of the financial aid packages from the college's Student Financial Services Office include an expectation that the applying student will take a loan under one of several loan programs. Your student loan helps defray current costs until you can better afford to pay for them. Campus Grant money is available to you only if you also have a Federal Stafford, Federal Perkins, and/or Collegiate Loan.

Federal Stafford Loan Program. The most common type of loan for under-

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graduates is the Subsidized Federal Stafford Student Loan, provided by such private lending institutions as banks, savings and loan associations, and credit unions, and guaranteed by the federal or state government. To be eligible, you must qualify to receive federal student aid.

The interest rate is variable. Repayment begins six months after you complete college or drop below half-time attendance. The lender determines the repayment schedule. Interest rates and borrowing limits are posted at <http://studentaid.ed.gov>. Insurance and loan origination fees are charged by the lender.

If you have an undetermined financial need, you may apply for the Unsubsidized Federal Stafford Loan. The application process and loan amounts are the same as for the Subsidized Federal Stafford Loans. The difference between the two loan programs is that you are responsible for the interest accruing while in school if the loan is unsubsidized. You are not responsible for interest accruing for the subsidized loan.

Parent Loans for Undergraduate Students (PLUS). A PLUS loan is a federal loan available to parents who borrow on behalf of dependent students. Parents may borrow up to the full cost of education minus other financial aid. If a parent wishes the PLUS to be used for financial clearance, the completed PLUS application must be in the Student Financial Services Office to be certified prior to registration. If the PLUS is to be used to pay the entire cost of education, the Student Financial Services Office must have indication from the lender that the parent loan has been approved. Otherwise the parent is expected to make the required payments for financial clearance.

Federal Perkins Loans. The Federal Perkins Loan program is funded mainly by the federal government but administered by the Student Financial Services Office.

The loans are repaid directly to Pacific Union College. No interest is charged while you remain in school as an undergraduate or continue education in a graduate or professional school. When you cease to be a student, there is a grace period before repayment begins.

The total repayment period is not to exceed ten years. Minimum payments of \$40 are due on the first of each month during the repayment period and are delinquent if not received by the 15th, at which time the account becomes subject to a late fee. Regular collection procedures are employed, including accelerating the payment of the total loan and referrals to collection agencies when a loan account is in default.

Collegiate Loans. A collegiate loan is funded by a program established by Pacific Union College. The terms, interest rate, and payback requirements mirror the Federal Perkins Loan program.

Self-Help: Student Employment

College Employment. Many students work at the college to defray part of their school expenses by working an average of 15-18 hours per week in such service and industrial departments as Custodial Services, Dining Commons, Public Safety, Landscape, and Physical Plant. Others are employed as secretaries and readers in academic departments or as residence hall assistants.

The current levels of earnings are as follows:

Hrs./Wk.	Rate/Hr.	Minimum Income/Yr.
10	\$8.00	\$2,400
15	\$8.00	\$3,600
20	\$8.00	\$4,800

The college cannot guarantee how much you will earn.

Campus employment is arranged through the Student Employment Office in Financial Services. If you seek work

on campus, you must file an application with the Student Employment Office and be registered for at least eight hours of course work (except during the summer).

Electronic time clocks are used for recording hours worked. Student workers are paid by check or by electronic funds transfer every two weeks. Department directors employing students determine wage rates within ranges established by College management. Hourly rates are in compliance with state and federal laws.

You may assign a portion of your wages to your account by completing a form available at the Student Financial Services Office. You may also request that tithe and/or church expense offerings be deducted from your earnings.

Federal Work-Study Program. If you qualify, a portion of your wages may be subsidized through the Federal Work-Study Program. Federal Work-Study is designed to broaden the range of meaningful employment. In order for you to be employed on the Federal Work-Study Program, you must have applied for financial aid and must be receiving financial aid (i.e., a Federal Pell grant, a Federal Perkins Loan, a Federal SEOG, etc.) awarded by the Student Financial Services Office, and must have an unmet financial need. (If you are employed in the Religion Department, you are not eligible to participate in the Work-Study Program.)

The type of financial aid offered to you depends upon the amount of financial need and the resources available. After family resources and outside resources (Cal Grants, Rotary Scholarships, etc.) are taken into consideration, a financial award is built in the following order:

1. Federal Pell Grant

2. Federal Supplemental Educational Opportunity Grant
3. Cal Grant/Pacific Union College Scholarships/Tuition Assistance, etc.
4. Loan (Federal Stafford Student Loan, Federal Perkins Loan, or Collegiate Loan)
5. Pacific Union College Campus Grant

If your award letter from the Student Financial Services Office includes a Pacific Union College Campus Grant, you must take a loan in order to qualify for the grant.

Please note: It may be impossible for the college to fill your complete financial need. Also, it may be impossible for all of your Pacific Union College scholarship awards to fit into your FAFSA need figure.

Special Programs

Special programs are designed to help qualified students finance their costs of attendance. It is your responsibility to investigate and, if you qualify, to pursue these financial sources.

Veterans' Benefits. The Cal-Vet Educational Assistance Program may pay fees and a monthly stipend to students who qualify. For more information on these programs or on G.I. benefits, veteran's loans, or veteran's employment, contact the Department of Veterans Affairs or the veterans certifying official at Pacific Union College.

State Aid to the Physically Handicapped. Through its Bureau of Vocational Rehabilitation, the State of California provides financial assistance to students who have physical disabilities. This assistance may include an additional amount to help cover living costs. Students who may be entitled to this assistance should apply to the State Bureau of Vocational Rehabilitation.

How to Apply for Financial Aid

1. Complete and submit the FAFSA. The FAFSA is necessary for determining your EFC and applying for federal student aid. Select Pacific Union College as one of the colleges to receive your Student Aid Report (SAR) using the college's Federal School Code 00125800. Upon receipt, review your copy of the SAR for accuracy
2. To apply for a Cal Grant, legal residents of California must complete and submit the GPA Verification Form and the FAFSA by March 2. Obtain a Certificate of Mailing for each form to prove that you met the March 2 deadline. (Students currently receiving a Cal Grant do not need to file the GPA Verification Form.)
3. Complete a Pacific Union College Financial Aid Application (FAA) and return it to the Student Financial Services Office, if requested.
4. Send signed copies of 2009 Federal income-tax returns and W-2s to the Student Financial Services Office, if requested.
5. Apply for admission to the college.

March 2 is the filing deadline for the FAFSA and GPA Verification Forms. April 15 is the priority processing deadline for receipt of the items listed above by the Student Financial Services Office, Pacific Union College, One Angwin Avenue, Angwin, California 94508-9707. Aid awards for applications received after these dates will be based on funds available, but may not cover the determined need.

Delivery of Financial Aid

Cal Grant A, B and C tuition awards are placed as credit on student accounts each quarter.

Financial aid is posted directly to

student accounts. Grant aid is handled entirely by the college and is posted directly to individual accounts.

Students receiving Federal Perkins Loans will have an advance posted each quarter. Stafford and PLUS Loans are processed via electronic funds transfer directly to the student account.

Placing all monies on the student account provides an audit trail. Should any question arise regarding the account or the disposition of aid, the student account statements readily provide the necessary information.

If your aid exceeds the college charges, it is possible to arrange with the Student Financial Services Office for a cash withdrawal from the account at the end of the quarter.

Each quarter the same procedure is followed. Ordinarily, financial aid is credited at the beginning of each quarter. However, if you should have unforeseen financial problems with documented increased financial need, supplemental aid may be given.

A financial aid award packet will be sent to you if you have

1. completed financial aid applications (FAFSA, FAA) on file at the Student Financial Services Office;
2. been accepted for admission by the college;
3. sent requested supplemental financial documentation; and
4. responded to any further requests by the Student Financial Services Office.

The financial aid award packet contains your financial check sheet, an award letter indicating your financial aid and scholarships, appropriate loan documents, a lender choice list, and a payment agreement.

The payment agreement must be signed and returned to the Student Financial Services Office. This acceptance serves as authorization to prepare the federal student aid you will receive.

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If you are interested in applying for financial aid, or if you receive financial aid, you should be aware of the following:

1. You are encouraged to discuss any financial problems with your financial aid counselor. Staff members want to help you achieve your academic goals.
2. Financial aid is not intended to help with financial obligations incurred prior to coming to the college. Thus, if you have car payments or substantial credit card or loan debt, it would be best to liquidate such obligations before applying for aid and coming to school.
3. You are encouraged to discuss academic problems with your academic advisors at an early date, or to seek special help from the Counseling Center and/or the Teaching and Learning Center.
4. Students receiving financial aid are responsible for doing as well as possible in their classes. If you find it necessary to change or reduce your course load, you must consult with your financial counselor regarding how the change in your course load affects your financial aid.
5. If you must withdraw from the college, first contact the Student Financial Services Office for a determination of refunds to be made to the aid funds and for information regarding disposition of any loans you may have.
6. You are responsible, as long as there is an unpaid balance, to keep the Student Financial Services Office informed of your address and to make the minimum monthly payments.
7. If you have Perkins or Collegiate loans and transfer to another school, or return to Pacific Union College after being out for more than six months, you may request the Student Financial Services Office to defer your loan payments until you are not attending school again. A similar deferment is possible on Federal Stafford Student Loans, but you must contact the lender for the proper paperwork.

8. Completion of a two-year associate degree or a four-year baccalaureate degree is based on an average of 16 hours of course work per quarter. Although you may take as few as 12 hours per quarter and still receive full aid, that aid could terminate before you complete your degree requirements if you average fewer than 16 hours per quarter.
9. Although you may take half- or three-quarter-time course loads, if you are receiving financial aid it is to your advantage financially to take a full academic load (average of 16 class hours per quarter). It costs no more to take 17.5 hours than 12 hours and the mandated reduction in financial aid for less than 12 hours of course work will generally be more than the reduction in tuition charges.

Refund Policy

Tuition Refunds for a reduction in course load are made after you withdraw from a course through Lantern. When dropping all courses, you must complete a Notice of Withdrawal from School form. This form is available at the Records Office.

The amount of tuition refund to students who withdraw from any or all courses during a quarter is determined from the date the completed withdrawal form is filed with the Records Office.

The refund schedule is as follows:

1. First through fifteenth school day of the quarter - 100% refund;
2. Sixteenth school day of the quarter - 59% refund;
3. 3% less for each school day thereafter;
4. After the 29th school day - no tuition refund.

Residence Hall Room Refund

When a room is occupied less than one quarter, a charge is made for the actual number of days (60 days per quarter) on a pro-rata basis as follows:

1. First through seventh calendar days - 100% refund
2. Eighth calendar day - 86.67% refund;
3. Ninth through 60th calendar days - 1.67% reduction per day;
4. After the 60th calendar day - no refund.

Financial Aid Refunds

Since tuition, room, and board refunds are a reduction in your costs, a corresponding reduction must be made in financial aid that you may have received. (You may get a copy of the policy on specific aid refund procedures from the Student Financial Services Office.) Your account will be charged for the reduction in financial aid.

To be certain that all charges and credits have been entered on your account, the college reserves the right to withhold settlement of any balance due to you until the end of the next billing cycle (30 days after you leave campus).

G.I. Bill

Students qualifying for the G.I. Bill should make this fact known to the veterans certifying official in the Records Office at the time of application to the college. The certifying official will supply the necessary forms and advise you of the procedures you must complete in order to receive the benefits to which you are entitled. The Department of Veterans Affairs (VA) determines eligibility for the G.I. Bill.

By prior arrangement with the VA, veterans may have an advance payment check available on registration day. Monthly payments are made by the VA directly to the student, with the following exception: the school receives payments for tuition and fees directly from the VA for students receiving benefits under the Post-9/11 G.I. Bill. These payments will be placed directly on the student accounts.

Veterans are required to follow the regular payment plan as listed for other students. For further information, see the section entitled “Veterans” in this catalog.

International Students

International students are required to pay all costs for the upcoming quarter in advance. An additional \$150 fee is required from international students who plan to live in one of the residence halls. (See “Room Reservation Fee.”)

International students on student visas do not qualify for loans and grants as detailed in the financial section. Campus employment, however, may be available. International students are expected to meet required payments for miscellaneous charges at registration and throughout the quarter just as other students do.

To determine the parents’ or sponsor’s ability to meet the educational costs without the need for financial aid, the applicant must also submit for review a bank statement showing a balance of \$41,150 US dollars drawn on an international bank. Further information is available from the Student Financial Services Office.

Insurance for International Students

Because the cost of medical care in the United States is high in comparison to costs in other countries, *all international students must have and maintain major medical insurance coverage* while attending Pacific Union College. This insurance must have minimum coverage of at least \$150,000. The insurance may not discriminate on the basis of sex or age. The policy must be written in English.

Pacific Union College has a major medical insurance plan available for international students. At the time of registration students must purchase the medical insurance available through the college or provide a copy of the schedule

of benefits of their own medical insurance policy, meeting or exceeding the minimum requirements specified by the college.

Automobile insurance is required in the United States to cover liability for damages in the event of an accident. Severe penalties are imposed on the owner and driver of an uninsured vehicle should an accident occur. The international student advisor at Pacific Union College can provide information about purchasing automobile insurance.

Adventist Colleges Abroad (ACA)

Students considering enrollment in the ACA program should consult with their financial advisor at the Student Financial Services Office. Most scholarship and loan programs are available to students in the ACA program, especially those based on fund sources other than Pacific Union College. Financial aid, scholarships, or loans funded by Pacific Union College are not available to students in the ACA program. Educational scholarship assistance for denominational employees’ dependents is available for all ACA programs.

Dining Commons

The Dining Commons is operated on the cafeteria plan. If you live in one of the college residence halls, you are expected to take your meals in the Dining Commons. The quarterly minimum charge for board is \$975.

If you are a commuting student, or if you are enrolled in less than a half-time study load, you may pay cash or use your regular ID card when using the Dining Commons. (You may be asked to pay a deposit before your ID card is activated for use in the Dining Commons.) All meal charges must be paid by the end of the next billing cycle.

Residence Halls

Pacific Union College affirms the values to be gained from being primarily a residential college. Most students live in one of the seven gender-exclusive residence halls. Four women’s residence halls can accommodate approximately seven hundred students; three men’s halls, approximately six hundred.

By accepting admission, if you are an unmarried student aged 22 or younger you agree to live in a residence hall unless you apply for and are granted an exception (see “Student Housing”).

To apply for a room in a residence hall, complete and submit a Residence Hall Information Card along with a \$150 room reservation fee. Room assignments for new students are made on the basis of class standing, the date the fee is received, and the discretion of the residence hall dean. If you change your mind and do not enroll at Pacific Union College, your full room reservation fee will be refunded, provided you notify your residence hall dean of your decision at least 21 days prior to the first day of classes.

The standard room rate is \$1,378 per quarter for double occupancy in each residence hall. When a student can be accommodated only through overcrowding, there will be a 25% reduction in the rental rate for each student in the room. If you choose to room alone, provided space is available, you will be charged an additional \$689 per quarter.

When a room is occupied less than one quarter, a charge is made for the actual number of days on a pro-rata basis. (See “Refund Policy.”)

When you move out of the residence hall, the room will be inspected for reasonable cleanliness and normal wear. If necessary, charges for extra cleanup or repairs will be made at this time against your student account.

You will be issued a key upon

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occupancy of a residence hall room and will be expected to return it when you move out. Should the key be lost or not returned upon departure, a \$50 lost-key charge will be placed on your account.

Charges made to your long-distance telephone number cannot be billed on your monthly statement. (For further information, see the section entitled “Telephone Information” in this catalog.)

The College is not liable for loss of your personal belongings or damage to them. If you want insurance coverage for personal possessions, you should arrange for it with your personal insurance carrier.

Student Family Housing

Housing for married students and single parents is available on campus in two areas: Court Place and Brookside Park. To qualify for residence in these areas, applicants must be taking a regular course load and complete a minimum of 12 hours of class work with a GPA of 2.0 or above each quarter.

The Court Place apartments include fourteen one- and three-bedroom duplex units with a one-car carport space adjacent. Brookside Park includes forty one- to three-bedroom apartments with carport. All apartments are furnished with stove, oven, refrigerator, window coverings and carpet.

Assignments are made on a first-come, first-served basis, established by a \$10 nonrefundable deposit. Information about housing for married students or single parents is available from the Student Services Office, Pacific Union College, One Angwin Avenue, Angwin, CA 94508-9707.

The College is not liable for loss of your personal belongings or damage to them. If you want insurance coverage for personal possessions, you should arrange for it with your personal insurance carrier.

Student Medical Assistance Plan

Pacific Union College does not provide a primary health insurance plan for students. It is your responsibility to have a primary plan in place when you enroll. Health Services can provide information regarding primary plans you may wish to contact.

In the event of an accident, it is your responsibility to contact the Health Services Department. Accidents must be reported to the department unless the injury is an emergency needing immediate care from an emergency room. In this case, notification is needed as soon as the patient is treated and stable for the college to consider being a payer of outside services. All outside services without the prior authorization from health services staff will be the financial responsibility of the individual. (Please refer to our exclusion list on our website located at www.puc.edu/healthservices)

The college’s student medical assistance plan is not a student insurance plan. A portion of the college’s tuition income is allotted to the Health Services Department and, with prior approval, these funds can be accessed as an adjunct to your primary insurance plan. This is done in an effort to offset the costs of primary insurance plans which often cover only a portion of medical expenses. College funds are accessed only after you or your parent’s primary insurance plan has been billed.

Late Charge on Unpaid Accounts

If you have any account that remains unpaid beyond 30 days after the close of the quarter in which you left the college, a late charge will be assessed.

Billing/Collections

When you leave Pacific Union College your loans and any unpaid tuition balance are transferred from the Student Financial Services Office to the Student Loans and Accounts Office for billing and tracking of repayment. Pacific Union College contracts with a third-party provider for this billing. They are not a collection agency but accounts are automatically placed in collections at 180 days of delinquency.

Late Registration Fee

A late-registration fee of \$25 is assessed for failure to complete registration on time. This fee is paid at the Records Office in cash before you are considered fully registered. An additional \$10 is charged if you do not pay at the Records Office.

Film and Television Production Fees

There are fees associated with classes in the Film and Television Production program due to the specialized equipment and supplies needed for the program. Fee charges are generated when you register for a Film and Television Production course that has a fee associated with it. For current fee information, contact the Visual Arts Department.

Flight Training Fees

After you register for flight training, the amount needed to pay for ten hours of instruction per credit hour is applied to your flight account at the Parrett Field Flight Center. Expenses for the flight simulator, the airplane and the instructor may be charged to that account. When the tuition credit has been used, additional funds must be applied to the account to maintain a positive balance until the course curriculum has been completed. You may inquire at the

Flight Center for cost estimates for your course. Aviation majors may expect to pay approximately \$6,000 per year, in addition to tuition, for simulator time and airplane rental fees. (Rates may be adjusted during the school year if there is a significant change in the cost of fuel, insurance, etc.)

Because of reduced tuition for summer courses, one-half tuition credit is applied to the flight account for instruction during the summer session.

Music Charges

Private music lessons are offered on either a credit or no-credit basis. On a credit basis, all students except music majors and minors are charged the normal tuition charge as well as a private music lesson fee of \$200 per credit hour.

Fee waiver. The private music lesson fee will not be charged to those majors and minors who are enrolled in Theory I (MUTH 121-122-123) or who have already taken these courses and are continuing to enroll in courses normally expected of majors and minors.

This fee waiver normally applies only to the required number of hours of those lessons necessary to fulfill the degree requirements.

Private Music Lesson Fees Per Quarter

With credit:

Each credit hour of lessons: \$200
(tuition additional)

Without credit:

Each half-hour series of lessons: \$300

Each credit hour is based upon a minimum of nine one-half-hour private music lessons per quarter. Lessons missed because of a student's irregular attendance may not be made up.

If a student withdraws within the first two weeks of the quarter, the refund is prorated; after that no refunds are made.

Students enrolling as members of music organizations or ensembles register on a credit or audit basis. A limited number of ensemble scholarships are available through the Music Department for students who incur overload tuition charges as a result of enrolling in one of these courses.

Nursing Fees

Nursing fee charges are generated when you register for a course that has a fee associated with it. Repeating a course also generates the fee. Fees cover items such as skills lab equipment costs, background checks, malpractice insurance, graduation nursing pin, and the initial testing and evaluation for the national tests given across the program. For current fee information, contact the Nursing Department.

Skiing Class Fees

Skiing class fees are generated when you register for the course. For current rates, inquire at the Exercise Science Department. Recently the charges have been in the \$200-250 range.

Auditing

Lecture-type courses that are audited are charged at the half-tuition rate. Independent study, ensembles, and participation-type courses may be audited, but full tuition is charged.

Graduation in Absentia

It is expected that all graduates will participate in the commencement services unless the Records Office is notified in writing that the student plans to graduate *in absentia*. Written application for exemption should be made no later than one week prior to commencement. A fee of \$25 is assessed to any graduate who is absent from graduation without having given prior notice.

Technology Fee

Students enrolled for one or more credits on the Angwin campus pay a \$75 per-quarter technology fee.

Transcripts and Diplomas

Each student at first enrollment is billed a one-time transcript fee of \$25. For this payment the student may request up to twenty-five transcripts without additional charge. Additional copies beyond the first twenty-five are \$5 per copy.

Each graduate is provided with one diploma free of charge. Replacement diplomas are \$25 per diploma.

Any costs incurred for rush mailing of documents are added. Inquire at the Records Office to determine current rates.

ID Cards

Regular ID Cards provide identification for the following purposes: Dining Commons purchases, use of the college Library, transactions at the Financial Services Office and Records Office, special functions on campus, purchases by personal check at local businesses, and identification of students for campus security purposes.

Should a card be lost or stolen, notification must be made to the Financial Services Office before the student's obligation for any misuse of the card will end. A \$12 fee is charged to replace lost or stolen ID cards.

College Bookstore

Books and supplies may be obtained at the College Bookstore on a cash basis. Purchases made with a personal check require a driver's license or a DMV ID card. VISA, MasterCard, American Express, and the Discover group may also be used for Bookstore purchases. Students may charge Bookstore purchases to their College accounts.

Checks

Checks for a student's account should be made payable to Pacific Union College. Checks intended *for a student's personal use* should be made payable to the student and not to Pacific Union College. Returned checks are subject to a \$15 charge plus statutory penalties if action to collect becomes necessary.

Cash Withdrawals

Students are expected not to request cash withdrawals from their accounts. Exceptions are ordinarily considered only in emergency situations or when a credit balance exists.

Banking and Security of Personal Possessions

You are advised not to keep money in your residence hall room. *The College does not assume any responsibility for the loss of money or other personal belongings left in rooms or elsewhere on campus.* Provision is made for students to deposit money for safe keeping at the Financial Services Office. The College does not provide banking services, and no interest accrues. (A charge of \$2 is made for reissuing lost passbooks.)

You may use bank debit cards to get cash at the College Market.

The Silverado Credit Union is conveniently located in the Angwin Plaza; students are invited to take advantage of its wide variety of financial services. An ATM is located at the SCU.

Final Examinations

It is expected that all students take final examinations when scheduled, but students may petition the academic dean for exceptions. Exceptions are granted for documented emergency situations or arduous examination schedules (as defined by the academic dean). Any excep-

tions granted for other reasons will incur a charge of \$100 per rescheduled final examination.

Vehicle Registration

Students with vehicles to be parked on campus property are required to register each vehicle with the Public Safety Department. When registering a vehicle, information from the following documents is required: current DMV registration with state of residence, driver's license, and proof of current insurance. A parking permit will be provided upon completion of the registration process; this permit is unique to the registered vehicle and must be displayed properly at all times. A vehicle registration fee of \$65 is assessed on all student cars (prorated to \$50 for residence-hall students who receive a general permit and to \$30 for community students); a vehicle registration fee of \$20 is assessed on all student motorcycles (prorated to \$10 for community students).

Pacific Union College assumes no liability or responsibility for any personal property while on college property. Parking on the campus is at your own risk. Pacific Union College reserves the right to close any area on campus as needed. Parking privileges may be revoked for excessive violations of California or Campus Vehicle Codes. Pacific Union College reserves the right to search a person's vehicle with reasonable cause. Vehicle registration information may be disseminated to appropriate college personnel or law enforcement authorities as necessary without notice.

Pacific Union College Presidents

At Healdsburg

Sidney Brownsberger 1882-1886*
 William C. Grainger 1886-1894*
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 Roderick S. Owen 1897-1899*
 Marion E. Cady 1899-1903*
 Elton D. Sharpe 1903-1904*
 Warren E. Howell 1904-1906*
 Lucas A. Reed 1906-1908*

At Angwin

C. Walter Irwin 1909-1921*
 William E. Nelson 1921-1934*
 Walter I. Smith 1934-1943*
 Henry J. Klooster 1943-1945*
 Percy W. Christian 1945-1950*
 John E. Weaver 1950-1954*
 Henry L. Sonnenberg 1954-1955*
 Ray W. Fowler 1955-1963*
 Floyd O. Rittenhouse 1963-1972*
 John W. Cassell, Jr. 1972-1983
 D. Malcolm Maxwell 1983-2001*
 Richard C. Osborn 2001-2009
 Heather J. Knight 2009-

*Deceased

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***Ex Officio*

College Personnel

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Pacific Union College

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Rosemary L. Collins, M.A. Associate Director,
Student Persistence

Janet S. Ivey, M.A. Administrative Assistant
Jennifer J. Wareham Best, M.A. Director, Student Persistence

Academic Administration

Nancy Hoyt Lecourt, Ph.D. *Vice President*
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Jonathan S. Bradley, B.A. Assistant Registrar
Tanya J. Healy, B.A. Executive Assistant
Nancy R. Jacobo, M.P.H. Coordinator,
Learning Disabilities Support Services

Joellen Lee, M.S.W. Tutoring Coordinator
Maria G. Lopez, B.S. Director, Academic Computing
Kathleen S. Mattison, B.A. Assistant Registrar
John McDowell, Ph.D. Director, Honors Program
Edwin L. Moore, M.A. Associate Academic Dean
Cherith D. Mundy, M.S.Ed. Assistant to the Associate
Academic Dean

Jim Roy, Ed.D. Director, Graduate Division
Jennifer J. Wareham Best, M.A. Director,
Teaching and Learning Center

Marlo J. Waters, M.S. Registrar

Financial Administration

John I. Collins, Ed.D. *Vice President*
for Financial Administration

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Dorothy E. Bartholomew, B.S. Assistant Controller
Gayln L. Bowers, M.B.A. Director, Human Resources
William L. Cochran, M.B.A. Director,
Budgets and Fiscal Services

Douglas E. Ermshar, B.S. Controller
Rebecca J. Evans, B.S. Student Financial Services Counselor
Geraldine C. Glantz, B.A. Collections and Program Analyst
Brent R. Hannah, B.A. Student Financial Services Counselor
Hildet C. Madrid Student Financial Services Counselor
C. Jay Miller, M.B.A. New Student Financial Services
Counselor /Recruiter

Debbie S. Stewart, B.S. Executive Assistant
Laurie L. Wheeler, M.B.A. Director,
Student Financial Services

Student Services

Lisa Bissell Paulson, Ed.D. *Vice President*
for Student Services and Dean of Students

James I. Boyd, Jr., B.S. Dean of Men
Gena Cowen, B.A. Assistant Dean of Women
Hernan Granados, M.Div. Assistant Dean of Men
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Laurie Halversen, MSW Director, Counseling Center
Kristi R. Horn, M.S. Assistant Dean of Women
Roy Ice, M.Div. Campus Chaplain
Michael Jefferson, M.A. Counselor
Robert Kurtz, M.Div. Assistant Dean of Men
Susan Ranzolin, B.S.N. Programming Coordinator
Annette L. Riebe, M.A. Associate Dean of Women
Sandra Sargent, R.N. Director, Health Services
Karen G. Tempchin Executive Assistant and
International Student Advisor

Sean Westenrider, B.S. Director, Public Safety
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Janice R. Wood, M.A. Associate Dean of Students and
Dean of Women, Residence Life

Public Relations and Enrollment Services

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for Marketing and Enrollment Services

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Susanne Ermshar, B.S. Coordinator
Darren Hagen, B.S. Assistant to the Vice President
Nicholas Hubbard, B.S. Webmaster
C. Jay Miller, M.B.A. New Student Financial Services
Counselor /Recruiter

Dana Negro, B.S. Data Entry Specialist
Kay Parks, A.S. Executive Assistant
Craig E. Philpott, B.S.M. Associate Director, Admissions
Clifford M. Rusch, M.F.A. Art Director
Haley Wesley, B.F.A. Senior Designer
Cambria Wheeler, B.A. Enrollment Counselor

College Advancement

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for Advancement

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Donor and Alumni Relations
Jessica Smith, B.S. Advancement Coordinator

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Jon A. Falconer, B.A.	Internet Services
Roland Haylock, B.S.	Programmer
Rico D. Mundy, B.A.	Associate Director, Information Technology Systems and Services

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Adugnaw Worku, M.A., M.S.L.S.	<i>Chair, Library Services and Reference Librarian</i>
Gilbert Abella, M.A., M.S.L.S.	Electronic and Reference Librarian
Junior Artigas, B.S.	Director, Media Services
Patrick Benner, M.L.I.S.	Computer Systems and Reference Librarian
Joel H. Lutes, M.L.S.	Systems and Reference Librarian
Linda E. Maberly, M.L.I.S.	Cataloger and Collection Development Librarian

Auxiliary Enterprises and Services

Daniel A. Brown, B.S.	Director, Facilities and Physical Plant
Willie E. Cook, B.A.	Manager, Albion Field Station
Ada M. Funes, B.S.	Director, Discoveryland Children's Center, Angwin
Arthur B. Goulard, B.A.	Director, Landscape
Miguel A. Irula	Director, Custodial Service
Mark W. Pacini, A.S.	Housing Coordinator
Kaye L. Varney, B.S.	Director, Flight Center
Robert B. Wilson	Director, Copy Center and Mail Services
Julie A. Yamada, B.S., B.A.	Director, Discoveryland Children's Center, St. Helena
Allan L. Zehm, B.S.	Director, Land Management

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Rosalie A. Rose, B.S.	Supervisor, Chevron Station

Professors and Administrators Emeriti

Earl M. J. Aagaard, Ph.D., *Professor Emeritus of Biology*. B.A., Pacific Union College, 1969; M.A., Pacific Union College, 1971; Ph.D., Colorado State University, 1982. (1982)

Warren S. Ashworth, Ph.D., *Professor Emeritus of Religion*. B.A., La Sierra College, 1961; M.A., Andrews University, 1962, 1969; Ph.D., Andrews University, 1986. (1984)

Charles V. Bell, Ph.D., P.E., *Vice President Emeritus for Academic Administration and Academic Dean Emeritus*. B.S.E.E., Mississippi State University, 1956; M.S.E.E., Stanford University, 1957; Ph.D., Stanford University, 1960. (1984)

Ted W. Benedict, Ph.D., *Honorary Professor Emeritus of Communication*. B.A., Pacific Union College, 1942; M.A., University of Southern California, 1947; Ph.D., University of Southern California, 1958. (1947)

S. K. Benson, Ph.D., *Professor Emeritus of English*. B.A., Atlantic Union College, 1952; B.S., Loma Linda University, 1954; M.A., University of Redlands, 1963; Ph.D., University of Southern California, 1970. (1969)

Paul F. Bork, Ph.D., *Professor Emeritus of Religion*. B.A., Pacific Union College, 1950; M.A., Seventh-day Adventist Theological Seminary, 1952; B.D., Andrews University, 1961; Ph.D., California Graduate School of Theology, 1971. (1967)

Del W. Case, D.M.A., *Professor Emeritus of Music*. B.A., La Sierra College, 1960; M.Mus., University of Southern California, 1967; D.M.A., University of Southern California, 1973. (1964)

James D. Chase, D.Min., *Professor Emeritus of Communication*. B.A., Pacific Union College, 1969; M.Div., Andrews University, 1972; D.Min., Andrews University, 1977. (1983)

Lloyd E. Eighme, Ph.D., *Professor Emeritus of Biology*. B.A., Pacific Union College, 1951; M.A., Pacific Union College, 1953; Ph.D., Oregon State University, 1965. (1958)

Mary Margaret Eighme, M.S., *Professor Emerita of Family and Consumer Sciences*. B.S., Pacific Union College, 1950; M.S., Oregon State University, 1965. (1958)

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Herbert P. Ford, M.A., *Professor Emeritus of Journalism*. B.A., Pacific Union College, 1954; M.A., California State University, Northridge, 1974. (1974-1983; 1984)

College Personnel

Lorne E. Glaim, Ph.D., *Professor Emeritus of History*. B.A., Walla Walla College, 1964; M.A., Washington State University, 1966; Ph.D., Washington State University, 1973. (1986)

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Adolph G. Grams, M.Ed., *Dean of Men Emeritus*. B.S., Andrews University, 1961; M.Ed., Oregon State University, 1968. (1967)

Donald R. Halenz, Ph.D., *Professor Emeritus of Chemistry*. B.A., Emmanuel Missionary College, 1957; M.S., Ph.D., Virginia Polytechnic Institute, 1961. (1979)

William M. Hemmerlin, Ph.D., *Professor Emeritus of Chemistry*. B.A., Loma Linda University, 1968; M.A., Ph.D., University of California, Irvine, 1973. (1979)

Alice L. Holst, Ed.D., *Honorary Professor Emerita of Secretarial Studies*. B.A., Washington Missionary College, 1939; M.A., Columbia University, 1947; Ed.D., Columbia University, 1956. (1948)

Thomas N. Hopmann, M.B.A., *Vice President Emeritus for Financial Administration*. B.A., California State University, Sacramento, 1961; M.B.A., California State University, Sacramento, 1971. (1976)

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James A. Kempster, D.M.A., *Professor Emeritus of Music*. B.S., Portland State College, 1965; M.Mus., University of Oregon, 1968; D.M.A., University of Oregon, 1977. (1968)

Henry W. Kopitzke, J.D., M.B.A., CPA, *Professor Emeritus of Business Administration*. B.S., Loma Linda University, 1968; M.B.A., University of Wisconsin, 1972; CPA, State of Wisconsin, 1972; J.D., University of Idaho, 1980. (1973)

W. James McGee, Ph.D., *Professor Emeritus of Music*. B.A., Andrews University, 1961; M.Mus., Indiana University, 1973; Ph.D., University of Arizona, 1982. (1974)

Marvin K. Mitchell, Ed.D., *Professor Emeritus of Education*. B.A., Loma Linda University, 1963; M.Ed., Walla Walla College, 1976; Ed.D., University of the Pacific, 2000. (1990)

James R. Mercer, Ph.D., *Professor Emeritus of Music*. B.A., Andrews University, 1952; M.A., University of Minnesota, 1962; Ph.D., University of Colorado, 1972. (1965)

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H. Susi Mundy, M.A., *Registrar Emerita*. B.A., Southern Missionary College, 1966; M.A., J. F. Kennedy University, 1983. (1978)

William C. Mundy, Ph.D., *Professor Emeritus of Physics*. B.S., Southern Missionary College, 1962; M.A.T., Vanderbilt University, 1963; Ph.D., Iowa State University, 1972. (1975)

Gilbert J. Muth, Ph.D., *Professor Emeritus of Biology*. B.A., Pacific Union College, 1961; M.A., Pacific Union College, 1967; Ph.D., University of California, Davis, 1976. (1966)

Sherman A. Nagel, Jr., M.D., *Professor Emeritus of Biology*. B.A., Pacific Union College, 1939; M.D., D.N.B., Loma Linda University, 1940. (1969)

Vernon P. Nye, Lit. D., *Professor Emeritus of Art*. Professional studies: Rochester Art Institute; Corcoran Art School; Ted Kautzky, Vermont; Eliot O'Hara, Washington, D.C.; Rex Brandt, Corona Del Mar. Member, Western Art Association. Lit.D., *honoris causa*, Pacific Union College, 1992. (1955)

LeRoy H. Peterson, M.Mus., *Professor Emeritus of Music*. B.A., Columbia Union College, 1961; M.Mus., Peabody Conservatory, 1963. (1983)

Jessie V. Pluhovoy VanDeusen, *Dean of Women Emerita*. (1975)

Paul E. Plummer, Ed.D., *Professor Emeritus of Education*. B.A., Pacific Union College, 1949; M.A., Pacific Union College, 1959; Ed.D., University of Southern California, 1975. (1980)

Burton A. Pontynen, Ed.D., *Professor Emeritus of Industrial Education*. B.S., Stout Institute, 1951; M.S., Stout Institute 1953; Ed.D., Arizona State University, 1973 (1953)

William R. Price, M.A., *Associate Professor Emeritus of Technology*. B.A., Pacific Union College, 1967; M.A., Pacific Union College, 1969. (1976)

Gary W. Shearer, M.L., *Librarian Emeritus*. B.A., Union College, 1965; M.L., Emporia State University, 1969. (1983)

Wallace L. Specht, M.A., *Associate Professor Emeritus of Physical Education*. B.S., Union College, 1958; M.A., Arizona State University, 1965. (1965)

John M. Staples, D.Th. [P], Professor Emeritus of Religion. B.A., Pacific Union College, 1954; M.A., Andrews University, 1955; B.D., Andrews University, 1957; Th.M., Princeton Theological Seminary, 1966; D.Th. [P], Fuller Theological Seminary, 1969. (1969)

Paul Stauffer, Ph.D., Professor Emeritus of English. B.A., Pacific Union College, 1941; M.A., Pacific Union College, 1944; Ph.D., Harvard University, 1952. (1942)

N. Gordon Thomas, Ph.D., Professor Emeritus of History. B.A., Andrews University, 1956; M.A., Ohio University, 1958; Ph.D., Michigan State University, 1967. (1967)

Kenneth A. Thomson, Ph.D., Professor Emeritus of Physics and Computer Science. B.Sc., London University, 1954; Dip.Ed., Melbourne University, 1959; Ph.D., Newcastle University, 1969. (1977-1979; 1982)

E. Wayne Tillay, Ph.D., Professor Emeritus of Chemistry. B.A., Pacific Union College, 1950; M.S., Stanford University, 1952; Ph.D., Louisiana State University, 1967. (1960)

Ivilyn R. Traver, M.A., M.L.S., Instructor Emerita of Violin, Paulin Center for the Creative Arts. B.A., Pacific Union College, 1953; M.A., San Francisco State College, 1961; M.L.S., San Jose State University, 1983. (1953)

Terrence L. Trivett, Ph.D., Professor Emeritus of Biology. B.A., Southern Missionary College, 1964; Ph.D., University of Oregon, 1969. (1968)

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James R. Van Hise, Ph.D., Professor Emeritus of Chemistry. B.S., Walla Walla College, 1959; Ph.D., University of Illinois, 1963. (1972)

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Faculty Directory

Gilbert V. Abella, M.S.L.S., Librarian. B.A., Loma Linda University, 1980; M.A., Loma Linda University, 1982; M.S.L.S., University of Southern California, 1983. (2003)

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David R. Bell, M.S.B.A., M.I.S., Associate Professor of Business Administration. B.S.E., Walla Walla College, 1987. M.S.B.A.: M.I.S., California State University Sacramento, 1999. (1987-89; 1990)

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Roy A. Benton, Ph.D., Professor of Mathematics. B.A., Andrews University, 1971; Ph.D., University of Michigan, Ann Arbor, 1985. (2004)

Rachelle M. Berthelsen Davis, D.M.A., Associate Professor of Music. B.S., Pacific Union College, 1994; M.M., Indiana University, Bloomington, 1998; D.M.A., University of Texas, Austin, 2003. (2005).

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Lisa Bissell Paulson, Ed.D., Assistant Professor of Education. B.A., Walla Walla College, 1981; M.Ed., Walla Walla College, 1983; Ed.S., Loma Linda University, 1987; Ed.D., Loma Linda University, 1990; M.A., California Polytechnic Institute, Pomona, 1995. (1995)

College Personnel

Janet S. Borisevich-Mezenov, M.A., *Associate Professor of English*. B.S., Pacific Union College, 1978; M.A.T., University of Washington, 1979; M.A., Northern Arizona University, 2000. (1991)

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Fiona E. Bullock, M.S.W., *Associate Professor of Social Work*. B.S.W., Pacific Union College, 1983; M.S.W., University of California, Berkeley, 1990. (1991)

Susan M. Bussell, R.N., M.S., *Assistant Professor of Nursing*. B.S., Loma Linda University, 1993; M.S., University of California, San Francisco, 1999. (2005)

Monte D. Butler, Ph.D., *Professor of Social Work*. B.S., Pacific Union College, 1988; M.S.W., University of Utah, 1990; Ph.D., University of Utah, 2003. (1996)

Rosario Caballero-Chambers, M.A., *Associate Professor of Modern Languages*. B.A., M.A., University Pedro Ruiz Gallo (Peru), 1973. (1997)

Alexander Carpenter, B.A., *Instructor of Visual Arts*. B.A., Andrews University, 2003. (2008)

Richard E. Clark, Ph.D., *Professor of Chemistry*. B.A., Union College, 1979; Ph.D., Kansas State University, 1992. (2000)

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Marsha L. Crow, M.A., *Associate Professor of Education*. B.S., Pacific Union College, 1972; M.S., California State University, Sacramento, 1996. (1992-04, 2007)

Cheryl P. Daley, B.A., *Instructor of Art*. B.A., Pacific Union College, 1963. (2004)

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John C. Duncan, Ph.D., *Professor of Biology*. B.S., Andrews University, 1991. Ph.D., Loma Linda University, 1998. (2000)

Hilary E.L. Elmendorf, M.A., *Assistant Professor of History*. B.A., Walla Walla College, 2002; M.A., Washington State University, 2004. (2007)

Charles G. Evans, M.A., *Associate Professor of Physical Education*. B.S., Pacific Union College 1977; M.A., Pacific Union College, 1980. (1989)

Aubyn S. Fulton, Ph.D., *Professor of Psychology*. B.S., Pacific Union College, 1981; M.A., Fuller Theological Seminary, 1990; Ph.D., Fuller Theological Seminary, 1990. (1985-1986; 1988)

Linda L. Gill, Ph.D., *Professor of English*. B.A., Andrews University, 1984; M.A., La Sierra University, 1986; Ph.D., University of California, Riverside, 1992. (1993)

Beverly R. Glover, M.S., *Assistant Professor of Nursing*. B.S.N., Pacific Union College, 1987; M.S., Sonoma State University, 1994. (2010)

Levi B. Gore, B.S.N., *Instructor of Nursing and Emergency Services*. B.S.N., Pacific Union College, 2008. (2010)

Rodney O. Hardcastle, M.B.A., CPA, *Professor of Business Administration*. B.S., Pacific Union College, 1977; M.B.A., Golden Gate University, 1989; CPA, State of Washington, 1980; CPA, State of California, 1984. (1989)

Margo A. Haskins, Ph.D., *Associate Professor of Education*. B.A., University of California, Berkeley, 1967; M.A., Ph.D., Claremont Graduate School, 1986. (2005)

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Michael L. Hellie, M.A., *Assistant Professor of Physical Education*. B.S., Walla Walla College, 1983; M.A., California State University, Chico, 1990. (1990)

Angel M. Hernandez, Ph.D., *Professor of Religion*. B.A., Antillian College, 1975; M.A., Andrews University, 1977; Ph.D., Andrews University, 2002. (1994)

Georgina P. Hill, Ph.D., *Professor of English*. B.A., Atlantic Union College, 1977; M.A., Andrews University, 1979; Ph.D., Purdue University, 1988. (2010)

Joan P. Hughson, R.N., M.S.N., *Assistant Professor of Nursing*. B.S., Loma Linda University, 1969. M.S.N., California State University, Sacramento, 2008. (1998)

Bruce E. Ivey, Ed.D., *Professor of Computer Science and Physics*. B.A., Andrews University, 1969; M.S., Montana State University, 1988; Ed.D., Montana State University, 1992. (1992)

- Sara Kakazu, M.A.**, *Assistant Professor of English*. B.A., Walla Walla College, 2002; M.A., Western Washington University, 2004. (2008)
- Young-Chun Kim, M.Div.**, *Assistant Professor of Religion*. B.A., Andrews University, 2000; M.Div., Andrews University, 2004. (2010)
- Heather J. Knight, Ph.D.**, *Professor of English*. B.A., Oakwood University, 1982; M.A., Loma Linda University, 1984; Ph.D., Stanford University, 1991. (2009)
- Joellen E. Lee, M.S.W.**, *Assistant Professor of Social Work*. B.S., Union College, 1976; M.S.W., Portland State University, 1992. (2010)
- Thomas D. Lee, M.S.**, *Associate Professor of Education*. B.A., Union College, 1975; M.S., Walla Walla College, 1988. (2006)
- Nancy Hoyt Lecourt, Ph.D.**, *Professor of English*. B.A., Loma Linda University, 1973; M.A., Loma Linda University, 1974; Ph.D., University of New Hampshire, 1999. (1979-1981; 1984)
- Wally D. Lighthouse, J.D., C.P.A.**, *Associate Professor of Business Administration and Economics*. B.S., Pacific Union College, 1985; J.D., Southwestern University School of Law, 1991; C.P.A., Catonsville Community College, 1998. (2007)
- Helene Linzau, B.S.N.**, *Instructor of Nursing*. B.S., Loma Linda University, 1996; B.S.N., Pacific Union College, 2000. (2009)
- Joel H. Lutes, M.L.S.**, *Librarian*. B.A., Pacific Union College, 1981; M.L.S., San Jose State University, 1982. (1982)
- Linda E. Maberly, M.L.I.S.**, *Librarian*. B.A., Walla Walla College, 1977; M.L.I.S., University of California, Berkeley, 1982. (1987)
- Milbert C. Mariano, M.F.A.**, *Professor of Art*. B.S., Pacific Union College, 1991; M.F.A., Academy of Art College, 2000. (1995)
- John McDowell, Ph.D.**, *Professor of English*. B.A., Atlantic Union College, 1978; M.A., Loma Linda University, 1980; Ph.D., University of Calgary, 1989. (2001)
- Paul E. McGraw, Ph.D.**, *Professor of History*. B.A., Columbia Union College, 1983; M.Div., Andrews University, 1990; M.A., George Mason University, 1996; Ph.D., George Washington University, 2003. (2000)
- Tammy McGuire, Ph.D.**, *Associate Professor of Communication*. B.A., Union College, 1984; M.A., Eastern Washington University, 1998; Ph.D., University of Missouri, Columbia, 2006. (2006)
- Doris Morgan, M.P.H.**, *Assistant Professor of Nursing*. B.S.N., University of Phoenix, 2001; M.P.H., Loma Linda University, 2008. (2010)
- Edwin L. Moore, M.A.**, *Associate Professor of English as a Second Language*. B.S., Pacific Union College, 1971; M.A., University of Hawaii, 1974. (1997)
- Thomas G. Morphis, M.F.A.**, *Professor of Art*. B.F.A., Pacific Northwest College of Art, 1980; M.F.A., Cranbrook Academy of Art, 1984. (1986)
- Gladys Muir, C.N.M., M.S.N.**, *Assistant Professor of Nursing*. B.S., Pacific Union College, 1983; M.A., Loma Linda University, 1986; C.N.M., Baylor College of Medicine, 1992; M.S.N., Samuel Merritt College, 1992. (2007)
- Keith Neergaard, Ph.D.**, *Professor of Marketing*. B.B.A., Pacific Union College, 1984; Ph.D., University of California, Irvine, 1994. (1988)
- Bryan D. Ness, Ph.D.**, *Professor of Biology*. B.S., Walla Walla College, 1983; M.S., Walla Walla College, 1985; Ph.D., Washington State University, 1992. (1989)
- Elaine P. Neudeck, M.A.**, *Assistant Professor of Physical Education*. B.A., Pacific Union College, 1976; M.A., Pacific Union College, 1978. (1991)
- Roberto D. Ordonez, M.S.**, *Assistant Professor of Computer Science*. B.A., B.S., Southern Adventist University, 1995; M.S., Andrews University, 1997. (2004)
- Marie Pak, Ph.D.**, *Professor of Chemistry*. B.S., Indiana University, 1988; M.S., Ph.D., Albert Einstein College of Medicine, 1993. (1999)
- Laurie Parson, B.S.N.**, *Instructor of Nursing*. B.S., Utah State University, 1993; B.S.N., Walla Walla College, 1996. (2009)
- Robert A. Paulson, Jr., Ph.D.**, *Associate Professor of Physical Education*. B.S., Andrews University, 1981; M.A., Sonoma State University, 1999; Ph.D., Andrews University, 2010. (1994)
- Melissa Henry Pratt, M.F.A.**, *Assistant Professor of Visual Arts*. B.A., University of California, Santa Barbara, 2000; M.F.A., University of Texas, Austin, 2004. (2008)
- Asher Raboy, M.F.A.**, *Resident Artist of Music*. B.A., State University of New York, Binghamton, 1978; M.F.A., Carnegie-Mellon University, 1981. (2008)
- Michelle L. Rai, M.S.**, *Assistant Professor of Communication*. B.A., Pacific Union College, 1993; B.S., Pacific Union College, 1997; M.S., Golden Gate University, 2007. (2006)

College Personnel

Ray Rajagukguk, B.S., *Assistant Professor of Chemistry.*

B.S., Harding University, 1999; Ph.D. candidate, University of Arkansas, 2006 (2006)

Bonnie D. Ramos, M.S., *Assistant Professor of Nursing.* B.A.,

Pacific Union College, 1977; B.S., Andrews University, 1980; M.S., Loma Linda University, 1985, (2007).

Maria S. Rankin-Brown, Ph.D., *Associate Professor of English.*

B.S., Pacific Union College, 1995; M.A., University of Northern Colorado, 1997; Ph.D., Indiana University of Pennsylvania, 2005. (2006)

Leo S. Ranzolin, Jr., Th.D., *Professor of Biblical Studies.* B.S.,

Columbia Union College, 1981; M.Div., Andrews University, 1987; Th.M., Duke University, 1993; Th.D., Boston University, 2001. (1998)

Sylvia B. Rasi Gregorutti, Ph.D., *Professor of Modern*

Languages. B.A., Andrews University, 1989; M.S., Georgetown University, 1991; Ph.D., Georgetown University, 2002. (1993)

Bruce E. Rasmussen, M.Mus., *Associate Professor of Music.*

B.Mus., Andrews University, 1982; M.Mus., Andrews University, 1988. (2005)

G. Rosalie Rasmussen, M.Mus., *Assistant Professor of*

Music. B.Mus., Andrews University, 1980; M.Mus., Andrews University, 1981. (2005)

Amy Rebok Rosenthal, Ph.D., *Associate Professor of History.*

B.S., Pacific Union College, 1999; M.A., Indiana University, 2001; Ph.D., Indiana University, 2010. (2003)

Heather A. Reid, M.A., *Assistant Professor of English.* B.A.,

Canadian Union College, 1997; M.A., University of Victoria, 2003. (2008)

James Robertson, M.S., *Assistant Professor of Physics.* B.S.,

Southern College of Seventh-day Adventists, 1991; M.S., Florida State University, 1994. (2003)

Richard D. Rockwell, Ph.D., *Professor of Mathematics.*

B.S., B.A., Pacific Union College, 1967; M.A., University of California, Berkeley, 1969; Ph.D., University of California, Berkeley, 1973. (1969)

James H. Roy, Ed.D., *Professor of Education.* B.S., Pacific

Union College, 1977; M.A.T., Andrews University, 1978; Ed.S., La Sierra University, 1989; Ed.D., La Sierra University, 2006. (2000)

Shana L. Ruggenberg, R.N., Ed.D., *Associate Professor of*

Nursing. A.S., Pacific Union College, 1983; B.S., Pacific Union College, 1989; M.S.N., University of California, Los Angeles, 1993. Ed.D., University of San Francisco, 2008. (2000)

Clifford M. Rusch, M.F.A., *Associate Professor of Graphic*

Design. B.S., Pacific Union College, 1980; M.F.A., Academy of Art University, 2004. (1987)

Leticia Russell, M.A., *Assistant Professor of General Studies.*

B.S., Pacific Union College, 1993; M.A., University of California, Davis, 1998. (2007)

A. Gregory Schneider, Ph.D., *Professor of Religion and Social*

Science. B.A., Columbia Union College, 1971; M.A., University of Chicago, 1973; Ph.D., University of Chicago, 1981. (1977)

Kathryn S. Schneider, R.N., M.S., *Assistant Professor of*

Nursing. B.S., Southern College of Seventh-day Adventists, 1969; M.S., Loma Linda University, 1976. (1984)

L. Jean Sheldon, Ph.D., *Professor of Religion.* B.A., Andrews

University, 1982; M.A., Loma Linda University, 1984; Ph.D., Graduate Theological Union and University of California, Berkeley, 2002. (1995)

Donna Stretter, R.N., M.S., *Assistant Professor of Nursing.*

A.S., Pacific Union College, 1967; B.S., Andrews University, 1970; M.S., Sonoma State University, 1996. (1999)

Lary J. Taylor, M.B.A., *Associate Professor of Business*

Administration. B.S., Union College, 1969; M.B.A., University of Maryland, 1976. (1978)

Mei Ann Teo, B.B.A., *Resident Artist of English.* B.B.A., Pacific

Union College, 2002. (2008)

Lynne E. Thew, B.A., *Instructor of Communication.* B.A.,

Pacific Union College, 1978. (2007)

Tamara Tirado, R.N., M.S., *Assistant Professor of Nursing.*

A.S. Pacific Union College, 2000; B.S.N., Pacific Union College, 2001; M.S., Sonoma State University, 2004. (2008)

Marcia L. Toledo, M.Ed., *Associate Professor of Business*

Administration. B.S., Atlantic Union College, 1974; M.Ed., Boston University, 1980. (1984)

C. Thomas Turner, M.A., *Professor of Art.* B.S., Loma Linda

University, 1969; M.A., Central Michigan University, 1976. (1984)

Robin E. Vance, Ph.D., *Professor of Biology.* B.S., Loma Linda

University, 1981; M.S., Loma Linda University, 1984; Ph.D., Loma Linda University, 1988. (2001)

Rodney Vance, M.A., M.F.A., *Associate Professor of Visual*

Arts. B.A., Loma Linda University, 1978; M.A., Andrews University, 1981; M.F.A., Catholic University of America, 1988. (2008)

Kaye L. Varney, B.S., *Instructor of Aviation*. B.S., Pacific Union College, 2002. (2009)

J. Patrick Vogelpohl, M.A., *Assistant Professor of Communication*. B.A., Bradford College, 1998; M.A., Boston University, 2000. (2010)

Jennifer J. Wareham Best, M.A., *Associate Professor of Speech Pathology*. B.S., Pacific Union College, 1974; M.A., Humboldt State University, 1975. (1977)

Steven R. Waters, D.A., *Professor of Mathematics*. B.S., Pacific Union College, 1979; M.S., Idaho State University, 1980; D.A., Idaho State University, 1983. (1982)

Cynthia Westerbeck, Ph.D., *Professor of English*. B.A., Walla Walla College, 1990; M.A., Washington University, 1992; Ph.D., Washington University, 2000. (2004)

C. Lynn Wheeler, D.M.A., *Professor of Music*. B.Mus., Walla Walla College, 1966; M.Mus., Catholic University of America, 1970; D.M.A., University of Oregon, 1976. (1971)

Myron K. Widmer, D.Min., *Professor of Religion*. B.A., Pacific Union College, 1971; M.Div., Andrews University, 1978; D.Min., Fuller Theological Seminary, 2004. (1996)

Debra L. Winkle, R.N., M.S., *Assistant Professor of Nursing*. A.S., Walla Walla Community College, 1978; B.S., Walla Walla College, 1981; M.S., University of Phoenix, 2003. (1997)

Ross E. Winkle, M.Div., *Associate Professor of Religion*. B.A., Walla Walla College, 1983; M.Div., Andrews University, 1987. (2005)

Brian Yuen-Yau Wong, Ph.D., *Professor of Biology*. B.A., Hong Kong Adventist College, 1981; B.A., Loma Linda University, 1983; M.A. (2), Loma Linda University, 1985; Ph.D., Loma Linda University 1992. (2006)

Adugnaw Worku, M.A., M.S.L.S., *Librarian*. B.A., Avondale College, 1975; M.A., Andrews University, 1977; M.A., Andrews University, 1978; M.S.L.S., University of Southern California, 1984. (1985)

Aimee C. Wyrick-Brownworth, M.Sc., *Assistant Professor of Biology*. B.S., Pacific Union College, 1996; M.Sc., Loma Linda University, 1998; M.Sc., The University of Montana, 2004. (2004)

Walter C. Utt Professors of History

Harry H. Leonard, Ph.D., *Walter C. Utt Professor of History*, 2002. B.A. (Honors), University of London, 1955; P.G.C.E., University of London, 1956; Ph.D., University of London, 1970.

Benjamin McArthur, Ph.D., *Walter C. Utt Professor of History*, 1998. Ph.D., University of Chicago, 1979.

Malcolm Russell, Ph.D., *Walter C. Utt Professor of History*, 2000. B.A., Columbia Union College, 1970; M.A., Johns Hopkins University, 1972; Ph.D., Johns Hopkins University, 1977.

A. Gregory Schneider, Ph.D., *Walter C. Utt Professor of History*, 2006. B.A., Columbia Union College, 1971; M.A., University of Chicago, 1973; Ph.D., University of Chicago, 1981. (1977)

David J. Trim, Ph.D., *Walter C. Utt Professor of History*, 2008. B.A., Andrews University, 1995; Ph.D., University of London, 2003; FRHistS, 2003.

Field Instructors in Social Work Practicum

Linda Bradas, M.S.W., California State University, Sacramento, 1992.

Claudia Cortes, M.S.W., San Francisco State University, 1998.

Meg Easter-Dawson, M.S.W., Indiana University, 1997.

James Featherstone, L.C.S.W., M.S., Columbia University, 1974.

Daniel Garcia, M.S.W., LCSW, Walla Walla College, 1990.

Clarence Hall, M.S.W., LCSW, University of Texas, 1963.

Rachel Hart, M.S.W., California State University, Sacramento, 1998.

Blanch Hilman, M.S.W., Columbia University, 1987.

Nick Honey, M.S.W., San Francisco State University, 1990.

Diane Kaljian, M.S.W., LCSW, San Diego State University, 1981.

Tracy Lamb, B.S.W., Western Michigan University, 1983.

Joellen Lee, M.S.W., Portland State University, 1992.

Kerry Locklear, LCSW, California State University, Sacramento, 1972

Mark Perkins, M.S.W., LCSW, Fresno State University, 1980.

Celine Regalia, M.S.W., San Jose State University, 1998.

Loretta C. Silvagni, LCSW, San Diego State University, 1976.

Randy Storm, M.S.W., LCSW, Simmons College, 1983.

Lisa Tremain, M.S.W., California State University, Sacramento, 2000.

College Personnel

Kristen Wagner, M.S.W., University of Chicago, 1992.

Maya Webb, M.S.W., California State University, Sacramento, 2001.

Janlee Wong, M.S.W., San Francisco State University, 1977.

Church Partners in Ministerial Training

Calistoga SDA Church

Elmshaven SDA Church

Middletown SDA Church

Napa Community SDA Church

Napa Spanish SDA Church

Napa Valley Korean SDA Church

Pacific Union College SDA Church

Rohnert Park Korean SDA Church

Rohnert Park SDA Church

St. Helena SDA Church

St. Helena Spanish SDA Church

Santa Rosa SDA Church

Yountville Signs Memorial SDA Church

School Partnerships in Supervised Instruction

Calistoga Joint Unified School District

City of Santa Rosa School District

Fairfield-Suisun Unified School District

Fortuna Unified School District

Foothills Adventist Elementary School

Healdsburg School District

Howell Mountain School District

Konocti Unified School District

Middletown Unified School District

Napa Valley Unified School District

Pacific Union College Elementary School

Pacific Union College Preparatory School

Pope Valley Unified School District

St. Helena Unified School District

Vallejo Unified School District

Windsor Unified School District

Field Supervisors in Education

Dee Abate, B.A., San Jose State University, 1958.

Donna Altes, B.A., University of Los Angeles, 1967.

Nancy Cross, B.A., California State University, Northridge, 1968.

Lolita Davidson, Ed.D., Loma Linda University, 1991.

Betty McCune, Ed.D., University of Southern California, 1983.

Richard Perkins, B.S., Chico State University, 1967.

Peggy Prescott, B.A., University of California, Berkeley, 1961.

Tom Prescott, M.Ed., University of Arizona, 1969.

Jill Richards, M.A., Andrews University, 1993.

John Sidorski, B.S., Humboldt State University, 1968.

Rowena Turner, B.A., Western Baptist Bible College, 1961;
Teaching Credential, California State College, Hayward, 1964.

Paulin Center for the Creative Arts

G. Rosalie Rasmussen, M.Mus., *Director, Piano*. B.S., Andrews University, 1980; M.Mus., Andrews University 1981. (2005)

Nanci Bargas, *Piano*. Pacific Union College. (2003)

Charles V. Bell, Ph.D., P.E., *Oboe*. B.S.E.E., Mississippi State University, 1956; M.S.E.E., Stanford University, 1957; Ph.D., Stanford University, 1960. (1984)

John Bennett, *Cello*. San Francisco Conservatory of Music. (1997)

Rachelle M. Berthelsen Davis, D.M.A., *Strings*. B.S., Pacific Union College, 1994; D.M.A., University of Texas, Austin, 2004. (2003)

Anita Cavagnaro-Ford, A.S., *Piano*. A.S., Mills College 1950. (1984)

Peter Estabrook, M.F.A., *Trumpet*. B.Mus., Berklee College, 1987; M.F.A., California Institute for the Arts, 1991. (2009)

Joy Fackenthall, M.Mus., *Piano*. B.Mus., Pacific Lutheran University, 2001; M.Mus., Western Washington University, 2005. (2009)

Dennis Hunt, M.Ed., *Percussion*. B.Mus., Southern Adventist College, 1976; M.Ed., University of Maryland, 1990. (2009)

Jin-Hee Kim, D.M.A., *Voice*. B.Mus., Seoul National University, 1993; M.Mus., University of Minnesota, 1995; D.M.A., University of Minnesota, 1998. (1999)

Jacob Kramer, M.Mus., *Guitar*. B.Mus., San Francisco Conservatory, 2000; M.Mus., San Francisco Conservatory, 2005. (2005)

Bobbi Michaelson, B.Mus., Flute. B.Mus., La Sierra University, 2009 (2010)

John Milholland, Brass. (1997)

Katy Raboy, B.A., Violin. B.A., North Carolina School of the Arts, 1981. (2008)

Bruce Rasmussen, M.A, Organ, Voice. B.Mus., Andrews University, 1982; M.Mus., Andrews University, 1988. (2005)

Asher Raboy, M.F.A, Piano. B.A., State University of New York, Binghamton, 1978; M.F.A., Carnegie-Mellon University, 1981. (2008)

Katy Raboy, B.A., Violin. B.A., North Carolina School of the Arts, 1981. (2008)

Judit Rüfenacht, A.S., Piano. A.S., Pacific Union College, 2010. (2010)

C. Lynn Wheeler, D.M.A., Piano. B.Mus., Walla Walla College, 1966; M.Mus., Catholic University of America, 1970; D.M.A., University of Oregon, 1976. (1971)

Karen Zimmerman, M.Mus., Bass. B.Mus., Julliard School of Music, 1981; M.Mus., Julliard School of Music, 1986. (2004)

Integrity is expected of every student in all academic work. The guiding principle of academic integrity is that the work one presents as one's own is one's own.

Students shall not violate the Code of Academic Integrity and shall avoid situations likely to compromise academic integrity. Students shall observe the provisions of the Code of Academic Integrity whether or not faculty members establish special rules of integrity for particular courses. Failure of faculty to prevent academic dishonesty does not excuse students from compliance with the Code.

Those who engage in academic dishonesty diminish the quality and value of their education and bring discredit to the academic community.

Categories of Academic Dishonesty

Academic dishonesty includes, but is not limited to, the following:

1. **Cheating**—Using, or attempting to use, unauthorized materials in any academic exercise; or having someone else do one's own academic work. Examples of cheating include looking at another student's paper during a test, bringing notes to a test, obtaining a copy of a test prior to the test date, and presenting homework prepared by someone else.
2. **Fabrication**—Inventing or falsifying information. Examples of fabrication include "dry-labbing" (inventing data for an experiment not done or not done correctly), making references to sources not actually used in a research paper, forging advisors' signatures on registration forms, forging letters of recommendation, and falsifying credentials in an application.
3. **Facilitating Academic Dishonesty**—Helping someone else to commit an act of academic dishonesty. This includes giving someone a paper or homework to copy from and allowing another to cheat from one's test paper.
4. **Plagiarism**—Using the words or ideas of another writer without attribution, so that they appear as if they were one's own. Plagiarism includes copying someone else's work word for word, rewriting someone else's work with only minor word changes, and paraphrasing or summarizing work without acknowledging the source.
5. **Multiple Submissions**—Presenting work done in previous courses as if it were new and original work. Although professors are sometimes willing for a student to use previous work as the basis for new work, they expect the student to do new work for the current course. A student who wants to submit a piece of academic work in more than one course should seek the approval of the instructors.
6. **Abuse of Academic Materials**—Harming, appropriating, or disabling academic resources so that others cannot use them. This includes removing

tables and illustrations from books and journals to use in a paper, stealing books or articles, and deleting and damaging computer files intended for the use of others.

7. **Misrepresentation**—Lying about or misrepresenting one's work, academic records, or credentials. Examples include claiming ownership of another's work, several students submitting copies of the same computer document and taking credit for group work to which a student did not contribute significantly or fulfill his or her obligations.
8. **Electronic Dishonesty**—Using network access inappropriately, in a way that affects a class or other students' academic work. Examples of electronic dishonesty include using someone else's authorized computer account to send and receive messages, breaking into someone else's files, gaining access to restricted files, disabling others' access to network systems or files, obtaining a computer account under false pretenses, and knowingly spreading a computer virus.

These general definitions may be supplemented or modified by additional policies stated in course syllabi.

Procedures for Addressing Academic Dishonesty

1. When an instructor believes that a student has acted dishonestly, a conversation on the incident in question occurs between the instructor and the student. The instructor should notify the department chair of the incident and the conversation about it.
2. If the instructor is not satisfied with the student's explanation, the instructor documents the incident in writing. The documentation includes definition of disciplinary action. A copy is filed in the Academic Dean's office. These files are available to the Pre-professional Recommendations Committee, the Admissions Committee of the Nursing Department, and to any teacher who is asked for a recommendation.
3. If a second incident occurs in any class, the Academic Dean may give the student *an F in the class* where the second incident occurred. A third incident may result in *suspension* from the college for one quarter. A fourth incident may call for *permanent dismissal*.
4. Students who wish to appeal the decision of the Academic Dean may appeal to the Academic Standards and General Education Committee. Students should submit a written appeal and may appear before the committee if they choose.
5. The decision of the committee is final. However, if any student believes that the final decision is unjust, he or she may follow the grievance procedure outlined in the *Student Handbook*.
6. Students are entitled to add a written rebuttal to their personal files in the Academic Dean's Office.

Student Rights under FERPA

In maintaining student records, Pacific Union College complies with the Family Educational Rights and Privacy Act of 1974 (FERPA). This act affords students certain rights with respect to their education records.

FERPA rights extend to any student who has attended Pacific Union College. Your FERPA rights begin on the first day that you attend class at the college and expire upon your death. These rights include:

1. The right to inspect and review your education records.

If you wish to review your education record, you should *submit to the Registrar a completed "Request to Inspect and Review Education Records" form*, available at the Records Office. Requests will be processed within forty-five days from the date the request is filed. The Registrar will make arrangements for access and will notify you of the time and place where the records may be inspected.

2. The right to request an amendment of your education records that you believe to be inaccurate, misleading, or otherwise in violation of your privacy rights under FERPA.

If you wish to request an amendment to your record, you should *submit to the Registrar a completed "Request to Amend Education Records" form*, available at the Records Office. If Pacific Union College decides not to amend the record as requested, you will be notified of the decision in writing and will be given a right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to you when you are notified of the right to a hearing.

3. The right to suppress the disclosure of directory information, provided that the request is submitted while you are an enrolled student.

If you wish to exercise this right, you should *submit to the Registrar a completed "Request to Suppress Directory Information" form*, available at the Records Office.

At Pacific Union College directory information consists of the following: 1. Name; 2. Address (local and home); 3. E-mail address; 4. Telephone number (local, home, and cellular); 5. Date of birth; 6. Photograph; 7. Most recent educational institution attended; 8. Participation in officially recognized activities and sports; 9. Weight and height of members of athletic teams; 10. Academic program of study; 11. Dates of attendance; 12. Enrollment status (full-time, part-time, etc); 13. Class standing (freshman, sophomore, etc); 14. Expected date of graduation; 15. Degrees conferred and date of conferral; and 16. Academic honors and awards received (dean's list, cum laude, etc).

4. The right to provide written consent before Pacific Union College discloses information from your education records, except to the extent that FERPA authorizes disclosure without consent.

Pacific Union College discloses *directory or public information* without your prior written consent, unless if you exercise your right to refuse disclosure as described above.

Pacific Union College discloses information from you education records without your prior written consent *under the FERPA exception for disclosure to school officials with legitimate educational interests*. A school official is: 1. A person employed by Pacific Union College as an administrator, faculty, or staff member; 2. A student employed by Pacific Union College to assist an administrator, faculty, or staff member in fulfillment of his/her professional duties; 3. A person employed by, or under contract to, Pacific Union College to perform a special task, such as an attorney or an auditor; 4. A person or organization acting as an official agent of Pacific Union College and performing a business function or service on behalf of Pacific Union College; 5. A member of a Pacific Union College committee (may include student members); or 6. A person serving on the Pacific Union College Board of Trustees. A school official has a legitimate educational interest if the official needs to review your education record in order to: 1. Perform appropriate tasks that are specified in his/her position description or by a contract agreement; 2. Perform a task related to your education; 3. Perform a task related to your discipline; or 4. Provide a service or benefit relating to you as a student such as health care, counseling, job placement, or financial aid.

Upon request, Pacific Union College may disclose information from your education records *to officials of another school in which you seek or intend to enroll*.

Upon request, Pacific Union College may disclose information from your education records *to your parents if you are a dependent student as defined by the IRS code*, provided that proper documentation is on file at the college to establish dependency.

Pacific Union College may disclose information from your education records *under additional FERPA provisions authorizing disclosure without consent*. A full description of all authorized exceptions for disclosure may be obtained from the Registrar.

5. The right to file a complaint with the U.S. Department of Education concerning alleged failures by Pacific Union College to comply with the requirements of FERPA.

The Family Policy Compliance Office administers FERPA and any complaints may be filed *at the following address*:

Family Policy Compliance Office- U.S. Dept of Education
400 Maryland Avenue, SW- Washington, D.C. 20202-5901

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Campus Directory & Map

Numerical Legend

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Ace Hardware
Angwin Teen Center
College Bookstore
Market
Washette
- 2. Post Office**
- 3. Career and Counseling Center**
- 4. Dental Building**
- 5. Credit Union**
- 6. Tennis Courts**
- 7. Athletic Field:**
Hardball and Softball Fields
Sand Volleyball Courts
- 8. Brookside Park:**
Student Family Housing
- 9. Service Station:**
College Chevron
- 10. Athletic Track & Field**
- 11. Press Building:**
Copy Center
Estate Planning
Mail Services
- 12. Custodial:**
Lost and Found
- 13. Heating Plant**
- 14. Church and Sanctuary**
- 15. Alumni Park**
- 16. Fisher Hall:**
Visual Arts
- 17. Sabbath School Rooms**
- 18. Church Complex:**
Campus Chaplain
Campus Ministries
Church Office
Fireside Room
Scales Chapel
- 19. Paulin Hall:**
Music
- 20. Pacific Auditorium:**
Fitness Center
Gymnasium
Exercise Science, Health, &
Nutrition
Weight Room
- 21. Swimming Pool**
- 22. Public Safety**
- 23. Chan Shun Hall:**
Academic Administration
Academic Advising
Chemistry
Computer Science
Mathematics
Physics
President's Office
- 24. Davidian Hall:**
Nursing
Psychology & Social Work
- 25. Teaching and Learning Center**
- 26. Dining Commons:**
Cafeteria
Campus Center
Student Association Offices
- 27. Rasmussen Art Gallery**

- 28. Library:**
E.G. White/SDA Study Center
Information Technology
Systems and Services
Media Services
Pitcairn Islands Study Center
- 29. Preparatory School**
- 30. Elementary School**
- 31. Advancement / Alumni**
- 32. Financial Services:**
Accounting Services
Financial Administration
Human Resources
Student Financial Services
- 33. West Hall:**
Education
Health Services
- 34. West Hall Annex**
- 35. Stauffer Hall:**
Alice Holst Theater
English
- 36. Amphitheater**
- 37. Storage Area**
- 38. Newton Hall:**
Men's Residence
- 39. Grainger Hall:**
Men's Residence
- 40. Clark Hall:**
Biology
Wilmer Hansen Collection
- 41. Irwin Hall:**
Business Administration
Communication
History
Modern Languages
- 42. Ambs Hall**
- 43. Graf Oval**
- 44. Graf Hall:**
Academic Records
Admissions
Enrollment Services
KNDL Radio
Public Relations
Religion
Student Services
Visitor Center
Women's Residence
- 45. Dauphinee Chapel**
- 46. Andre Hall:**
Women's Residence
- 47. Winning Hall:**
Women's Residence
- 48. Discoveryland Preschool**
- 49. Land Management**
- 50. Recycling Center**
- 51. Plant Services**
- 52. Mobile Manor**
- 53. Landscape**
- 54. Court Place Apartments:**
Student Family Housing
- 55. Nichol Hall:**
Men's Residence
- 56. McReynolds Hall:**
Women's Residence
- 57. Virgil O. Parrett Field:**
Flight Center

- 58. Young Observatory**
- 59. Commencement Grove**
- 60. Prayer Chapel**
- 61. Cogeneration Plant**

Alphabetical Legend

- 23. Academic Administration
- 23. Academic Advising
- 44. Academic Records
- 32. Accounting Services
 - 1. Ace Hardware
- 44. Admissions
- 31. Advancement / Alumni
- 35. Alice Holst Theater
- 15. Alumni Park
- 42. Ambs Hall
- 36. Amphitheater
- 46. Andre Hall
 - 1. Angwin Plaza
 - 1. Angwin Teen Center
- 10. Athletic Track & Field
- 40. Biology
 - 8. Brookside Park
- 41. Business Administration
- 26. Cafeteria
- 26. Campus Center
- 18. Campus Chaplain
- 18. Campus Ministries
 - 3. Career & Counseling Center
- 23. Chan Shun Hall
- 23. Chemistry
- 18. Church Complex
- 18. Church Office
- 14. Church & Sanctuary
- 40. Clark Hall
- 61. Cogeneration Plant
 - 1. College Bookstore
 - 9. College Chevron
- 59. Commencement Grove
- 41. Communication
- 23. Computer Science
- 11. Copy Center
- 54. Court Place Apartments
 - 5. Credit Union
- 12. Custodial
- 45. Dauphinee Chapel
- 24. Davidian Hall
 - 4. Dental Building
- 26. Dining Commons
- 48. Discoveryland Preschool
- 28. E.G. White/SDA Study Center
- 33. Education
- 30. Elementary School
- 35. English
- 44. Enrollment Services
- 11. Estate Planning
- 20. Exercise Science, Health, and
Nutrition
- 32. Financial Administration
- 32. Financial Services
- 18. Fireside Room
- 16. Fisher Hall
- 20. Fitness Center
- 57. Flight Center
- 43. Graf Oval
- 44. Graf Hall
- 39. Grainger Hall
- 20. Gymnasium
 - 7. Hardball and Softball Fields
- 33. Health Service
- 13. Heating Plant
- 41. History
- 32. Human Resources
- 28. Information Technology Systems
& Services
- 41. Irwin Hall
- 44. KNDL Radio
- 49. Land Management
- 53. Landscape
- 28. Library
 - 12. Lost and Found
- 11. Mail Services
 - 1. Market
- 23. Mathematics
- 56. McReynolds Hall
- 28. Media Services
- 52. Mobile Manor
- 41. Modern Languages
- 19. Music
- 38. Newton Hall
- 55. Nichol Hall
- 24. Nursing
- 20. Pacific Auditorium
- 19. Paulin Hall
- 23. Physics
- 28. Pitcairn Island Study Center
- 51. Plant Services
 - 2. Post Office
- 60. Prayer Chapel
- 29. Preparatory School
- 23. President's Office
 - 11. Press Building
- 24. Psychology & Social Work
- 44. Public Relations
- 22. Public Safety
- 27. Rasmussen Art Gallery
- 50. Recycling Center
- 44. Religion
- 17. Sabbath School Rooms
 - 7. Sand Volleyball Courts
- 18. Scales Chapel
 - 9. Service Station
- 35. Stauffer Hall
- 26. Student Association Offices
- 32. Student Financial Services
- 44. Student Services
- 21. Swimming Pool
- 25. Teaching and Learning Center
 - 6. Tennis Courts
- 44. Visitors' Center
 - 1. Washette
- 20. Weight Room
- 33. West Hall
- 34. West Hall Annex
- 40. Wilmer Hansen Collection
- 47. Winning Hall
- 57. Virgil O. Parrett Field
- 16. Visual Arts
- 58. Young Observatory



Campus Directory & Map

Contact Information

The telephone area code for Angwin is 707.

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Registrar 965-6673
Fax.....965-6432
Transcripts965-6553

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Dean of Women965-6315
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Graf Hall 965-6520
McReynolds Hall 965-6149
Winning Hall965-6313
Dean of Men965-7203
Grainger Hall 965-6491
Newton Hall 965-6487
Nichol Hall965-6101

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