

BULLETIN

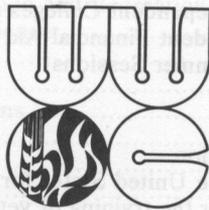
1984 1985

WALLA WALLA COLLEGE

The bulletin cover was created by Walla Walla College student Douglas Garner while enrolled in Fine Arts Design class. A junior art major from Calgary, Alberta, Garner also has a strong interest in architecture. He chose a heavily stylized but recognizable form, that of the College Church, to dominate the composition and to symbolize the central Christian commitment of Walla Walla College. Garner then sought to develop an aesthetically pleasing design by repeating and combining modifications of various geometric shapes: circles, triangles, rectangles, parallelograms and trapezoids.

WALLA WALLA COLLEGE

BULLETIN



1984-85

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1912.

BULLETIN
WALLA WALLA COLLEGE
VOL. 32, NO. 1
SEPT. 1984

Walla Walla College

is accredited by

The Northwest Association of Schools and Colleges
Seventh-day Adventist Board of Regents
The Washington State Board of Education

offers programs accredited by

Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology, Inc., (Bachelor of Science in Engineering degree program)
Council on Social Work Education
Department of Baccalaureate and Higher Degree Programs of the National League for Nursing
National Association of Schools of Music

is a member of

American Association of Colleges for Teacher Education
American Association of Collegiate Registrars and Admissions Officers
American Council on Education National Commission on Accreditation
American Society for Engineering Education
Council of Member Agencies, Department of Baccalaureate and Higher Degree Programs of the National League for Nursing
National Association of Independent Colleges and Universities
National Association of Student Financial Aid Administrators
National Association of Summer Sessions

is approved by

American Dietetic Association
The Attorney General of the United States for nonimmigrant students
State Approving Agency for the training of veterans under the U.S. Code, Title 38, Chapters 31, 32, 34 and 35
Washington State for training in Vocational Rehabilitation

Equal Opportunity Commitment

Walla Walla College maintains a policy of equal educational opportunity for all applicants without regard to sex, race, color, handicap, national and/or ethnic origin, and in administration of its educational and admissions policies, financial affairs, employment programs, student life and services, or any other college-administered program.

Information contained in this publication is hereby certified as true and correct in content and policy as of the date of publication, in compliance with the Veterans Administration DVB Circular 20-76-84 and Public Law 94-502.

**BULLETIN
WALLA WALLA COLLEGE
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AREAS OF STUDY

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*Concentration available

†Option available

ASSOCIATE DEGREES (Two Years)

Agriculture	General Contracting
Auto Body Technology	Graphics Technology
Automotive Technology	Management Information Systems
Aviation Technology	Nursing (3 years)
Business	Plant Maintenance Technology
Computer Programming	Two-Year Secretarial Program
Construction Technology	**Legal Secretary
Data Entry	**Medical Secretary
Early Childhood Education	**Office Secretary
Electronics Technology	**Secretarial Accounting

CERTIFICATE PROGRAMS (One Year)

Auto Body Repair	Electricity/Electronics
Auto Mechanics	Offset Copy Preparation
Aviation	Plant Maintenance
Carpentry	Printing

PREPROFESSIONAL CURRICULA

Architecture (2)*	Occupational Therapy (2)
Chiropractic (2)	Optometry (2)
Dental Assistant (1)	Osteopathy (3)
Dental Hygiene (2)	Pharmacy (2)
Dentistry (2)	Physical Therapy (2)
Dietetics (2)	Public Health (4)
Law (4)	Radiological Technology (1)
Medicine (4)	Respiratory Therapy (1)
	Veterinary Science (2)

*Numbers in parentheses indicate the years of study normally required on the WWC campus before entrance into a professional school.

**Area Concentration available

GRADUATE PROGRAMS

(See *Graduate Bulletin*)

Master of Arts

Education
Counseling and Guidance
Curriculum and Instruction
Educational Foundations
School Administration

Master of Education

Counseling and Guidance
Elementary Instruction
Junior High Instruction
School Administration
Secondary Instruction in:
Biology, Biophysics, Business,
Chemistry, English, Health & PE,
History, Industrial Arts, Language
Arts, Mathematics, Physics, Social
Science

Master of Science

Biology

Teaching Credentials available in the
areas mentioned above

FOR INFORMATION

ADMISSIONS AND FINANCIAL AID	Sergio Hernandez, Director
Application Blanks	509/527-2327
Bulletins	or
Financial Aid	509/527-2314
Loans and Grants	
RECORDS	Orpha Osborne, Director
Academic Information	509/527-2811
General Information	
Transcripts	
FINANCES	Kathleen (Cassie) Ragenovich, Director
General Financial Information	509/527-2815
Work Opportunities	
Student Accounts/Employment	
RESIDENCE HALL LIVING	Lynn Prohaska, Dean of Men
General Information	Sittner Hall
Room Reservations	509/527-2111
	or
	Paula Chapman, Dean of Women
	Conard Hall
	509/527-2661
	or
	Ilo Hutton, Resident Hall Dean
	Portland Campus
	503/239-6118
STUDENT AFFAIRS	Edward Boyatt, Vice President
Automobile Registration	Student Affairs
Off-Campus Housing	509/527-2511
Student Life	
COLLEGE ADDRESS	Walla Walla College
	College Place, WA 99324
Portland Campus	10345 SE Market
	Portland, OR 97216
GENERAL TELEPHONE NUMBER	509/527-2615
Portland Campus	503/239-6115
RESIDENCE HALL TELEPHONE NUMBERS	
Conard Hall	527-2662, 2663
Foreman Hall	527-2532, 2533
Sittner Hall	527-2111
Sittner East	527-2661
Portland Campus Residence Hall	503/257-2500

Administrative offices are closed from Friday noon until Monday morning and on legal holidays. The administrative officers are available on Sundays by appointment.

WALLA WALLA COLLEGE ACADEMIC CALENDAR 1984-85

AUTUMN QUARTER

September 21-24	F-M	Freshman Orientation, Testing
	25	T Registration
	26	W Instruction Begins
October 3	W	Last Day to Register
	10	W Last Day for Registered Students to Add a Class or Change to Audit
November 21	W	Last Day to Drop Classes
	21	W Thanksgiving Vacation Begins (noon)
	25	S Thanksgiving Vacation Ends (10:00 p.m.)
Dec. 9, 10, 11, 12	SMTW	Final Examinations

WINTER QUARTER

January 7	M	Registration
	8	T Instruction Begins
	16	W Last Day to Register
	23	W Last Day for Registered Students to Add a Class or Change to Audit
February 6	W	ASWWC Snow Frolic
	27	W Last Day to Drop Classes
Mar. 17, 18, 19, 20	SMTW	Final Examinations

SPRING QUARTER

March 26	T	Registration
	27	W Instruction Begins
April 3	W	Last Day to Register
	10	W Last Day for Registered Students to Add a Class or Change to Audit
May 1	W	Spring Campus Day
	15	W Last Day to Drop Classes
June 3, 4, 5	MTW	Final Examinations
June 9	S	Commencement (10:00 a.m.)

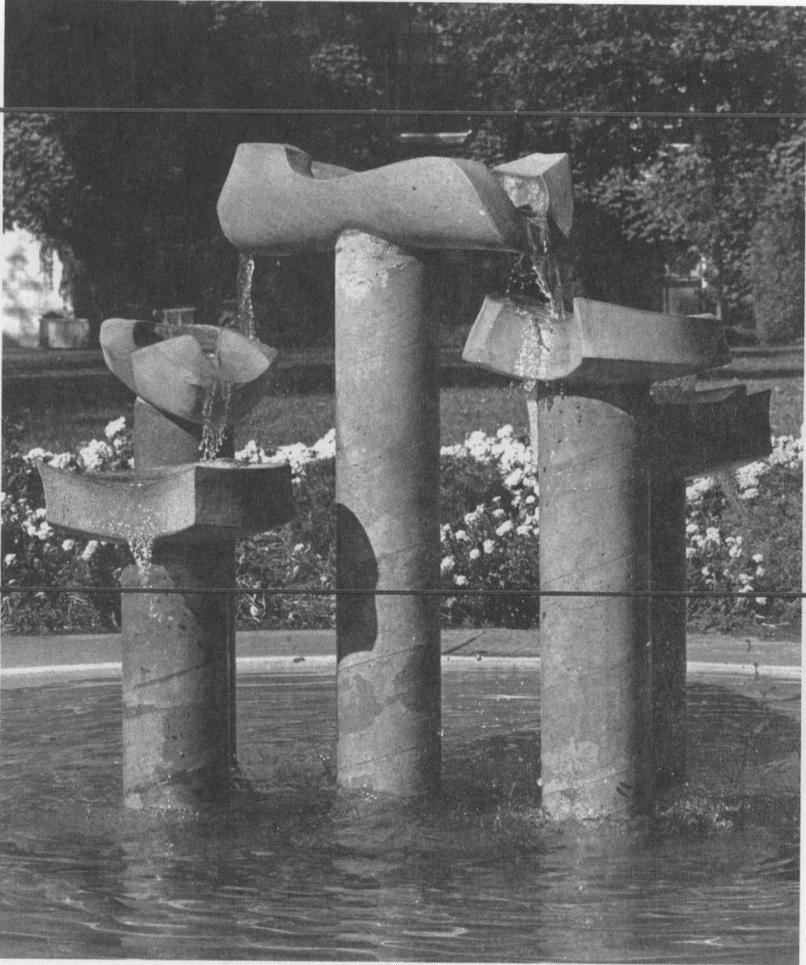
SUMMER QUARTER

June 16	S	Registration
	17	M Instruction Begins
July 4	Th	Independence Day Holiday
August 10	Sa	Commencement (9:00 p.m.)

WALLA WALLA COLLEGE ACADEMIC CALENDAR 1984-85

AUTUMN QUARTER	
September 27-28	Registration
September 29	Instruction Begins
October 3	Last Day to Register
October 10	Last Day for Registered Students to Add a Class or Change to Audit
October 21	Last Day to Drop Classes
October 25	Thanksgiving Vacation Begins (10:00 p.m.)
October 25	Thanksgiving Vacation Ends (10:00 p.m.)
December 9, 10, 11, 12	Final Examinations
FINANCES	
General Information	527-2532
Work Study	527-2532
Registration	527-2532
Instruction Begins	527-2532
January 7	Registration
January 8	Instruction Begins
January 14	Last Day to Register
January 23	Last Day for Registered Students to Add a Class or Change to Audit
February 6	ASWC Snow Pledge
February 14	Last Day to Drop Classes
March 17, 18, 19, 20	Final Examinations
SPRING QUARTER	
April 7	Registration
April 8	Instruction Begins
April 14	Last Day to Register
April 21	Last Day for Registered Students to Add a Class or Change to Audit
April 25	Last Day to Drop Classes
May 1	Spring Campus Day
May 15	Last Day to Drop Classes
June 3, 4, 5	Final Examinations
June 9	Commencement (10:00 a.m.)
SUMMER QUARTER	
June 16	Registration
June 17	Instruction Begins
July 4	Independence Day Holiday
August 10	Commencement (9:00 p.m.)

Administrative offices are closed from Friday noon until Monday morning and on legal holidays. Administrative officers are available on Saturdays by appointment.



Aims and Objectives

1. A thorough instruction in a specified field.

2. A thorough instruction in a number of technical and industrial areas;

and natural sciences and the physical, biological, and social sciences.

3. A sound general education in the arts, humanities, mathematics, social sciences, and languages.

4. To accomplish the goals in the above, West Virginia College seeks, more specifically, to provide:

academic goals in dignity and grace.

culture, race or nationality, students can meet and pursue their

*For a more complete statement of the fundamental beliefs of Seventy-day Advantists, see the Seventy-day Advantist Church Manual (Washington, D.C.: 1971).

AIMS AND OBJECTIVES

Walla Walla College is operated in harmony with the beliefs, practices and educational philosophy of the Seventh-day Adventist Church.* The College determines its academic policies and offerings in accordance with the following assumptions:

1. That the central mission of the church remain central to the concerns of the College, however variously it may express itself;
2. That a college at best is a community of teachers and students engaged in a search for truth;
3. That a college should be a place where teachers and students from among all peoples can meet and work together in peace for their good, the good of all men, and the glory of God;
4. That a college education should help develop the individuality of each student.

Cognizant of the power of a good education to cultivate the best that man, under God, is capable of, Walla Walla College strives to meet the needs of individuals and of society, keeping the following as its basic objectives:

1. To provide conditions that will encourage physical, social, intellectual and spiritual development, and to teach principles that stress the interdependence of these aspects of man's life and the need for proper balance among them;
2. To present the ideals and principles of Christianity in a manner that will promote the development of a Christian life characterized by understanding, integrity, responsibility and tolerance, as well as commitment to God and service to man;
3. To make the college community a place where, regardless of sex, creed, culture, race or nationality, students can meet and pursue their academic goals in dignity and peace;
4. To encourage independent thinking.

To accomplish the goals listed above, Walla Walla College seeks, more specifically, to provide:

1. A sound general education in the arts, humanities, mathematics, social and natural sciences and the Christian heritage;
2. A thorough instruction in a number of technical and industrial areas;
3. A thorough instruction in a specified field.

*For a more complete statement of the fundamental beliefs of Seventh-day Adventists, see the *Seventh-day Adventist Church Manual* (Washington, D.C.: 1971).

PETERSON MEMORIAL LIBRARY. The Student Life program at Walla Walla College. Research facilities include a computer system, a periodical room and a listening room. The Peterson Memorial Library, located on the campus of Walla Walla College, is a modern library building. The Peterson Memorial Library, located on the campus of Walla Walla College, is a modern library building. The Peterson Memorial Library, located on the campus of Walla Walla College, is a modern library building.



Student Life

MARINE STATION. This facility occupies 40 acres of beach and timberland at Rosano Beach adjoining Decatur Park. Activities include: Washington State Park, Anacortes, Washington. The physical plant includes five laboratory buildings, a kitchen and assembly hall, shop and 28 cabins for student and staff housing.

STUDENT LIFE

OBJECTIVES

The College is concerned with the education of the total person for happy and effective campus living. It provides a broad range of cultural, social, religious and recreational activities to add depth and maturity for a Christ-centered life.

THE COLLEGE CAMPUS

Walla Walla College is located in the City of College Place, in the historic, fertile Walla Walla Valley of southeastern Washington. The Old Oregon Trail, near the campus, leads directly to the site of the old mission which was conducted by Marcus Whitman from 1836 to 1847. It has been reconstructed by the federal government as the Whitman Mission National Historic Site. The scenic Blue Mountains to the east and the Snake and Columbia Rivers to the north and west are but a few minutes' drive from the campus, and offer unusual opportunities for recreation and relaxation.

The College, in successful operation since December 7, 1892, was established in harmony with a resolution unanimously adopted at the General Conference of Seventh-day Adventists held in Battle Creek, Michigan, in 1891.

The college buildings are situated on a 55-acre campus dotted with maple and sycamore trees. Other buildings belonging to the College are located on adjoining lots of land, totaling 22 additional acres.

KGTS. The college operates a 1,000 watt stereo radio station. It programs primarily a good music and sacred music format. Students fill most of the functions of the station including announcing and newscasting. KGTS is federally licensed as an educational, non-commercial station serving primarily the Walla Walla Valley. Translators carry the program to other parts of Southeastern and Central Washington.

PORTLAND CAMPUS. In addition to the College Place campus, Walla Walla College also uses the large plant of Portland Adventist Medical Center, located at Portland, Oregon, where the students in nursing complete their upper division nursing courses.

Academic and residence hall buildings provide Portland campus students with modern and comfortable facilities. Ample classrooms, a large library, skills laboratory and faculty offices are housed in the academic building. The residence hall provides living and recreational accommodations for 134 students.

MARINE STATION. This facility occupies 40 acres of beach and timberland at Rosario Beach adjoining Deception Pass State Park, Anacortes, Washington. The physical plant includes five laboratory buildings, a kitchen and assembly hall, shop and 29 cabins for student and staff housing.

PETERSON MEMORIAL LIBRARY. The library is a vital part of the educational program at Walla Walla College. Reading room accommodations, the open-shelf system, a periodical room and a listening/viewing facility contribute to the study and enjoyment of learning materials. Microreaders make accessible microforms of scholarly material. The curriculum library, located in Smith Hall, contains a large selection of textbooks and children's literature books. A collection of mounted pictures, filmstrips, tapes and phonorecords supplement those held by the main library. The library on the Portland campus serves specifically the students of nursing assigned there to obtain their clinical practice. The combined libraries contain approximately 140,000 volumes. An average of 3,250 volumes is accessioned annually. There are about 850 currently received periodicals. Periodical indexes and other bibliographical aids are also available. Resources in other libraries are available to students and faculty members through the library's participation in the Resource Sharing Program, which serves as a clearinghouse for interlibrary loans. The library is a participating member of the Washington Library Network, using its facilities for the cataloging of materials and for location of materials for interlibrary loan.

PUBLIC INFORMATION

The Family Educational Rights and Privacy Act of 1974 provides that the College will make every effort to maintain student records in confidence. With the exception of faculty and administrative officers who have legitimate need to use student records, no student information other than public information will be given to any third party without the consent of the student.

Students have the right to withhold the disclosure of any or all of the "Directory information" listed below.

CATEGORY I Name, address, telephone number, class standing, major, class schedule.
(In Student Directory)

CATEGORY II Parents' names, address, and telephone number. Month and day of student's birth.
(Available only upon specific request.)

The above information is released except when students indicate *in writing* that the information is to be withheld.

Copies of the Act, amendments subsequent to this Act and HEW guidelines are available in the Office of Student Affairs. Students have the right to inspect and review official records, files and data directly related to them kept by any office of the College. This request should be made in writing to the administrator responsible for the record. Requests will be processed within 45 days from the date the request is filed.

STUDENT RIGHTS AND RESPONSIBILITIES

To maintain a proper atmosphere for Christian growth and maturity and to ensure that the rights of all students are respected, the college expects students to act as responsible citizens, abiding by local, state, and federal laws and to conduct themselves honorably. Although students of all religious persuasions are welcome, the college does expect students to live as members of a Christian community in accord with the ideals of the Seventh-day Adventist church, as detailed in the *Student Handbook*.

RELIGIOUS ACTIVITIES

CHAPEL. Chapel, held each Tuesday, and assemblies, held twice each quarter, are regarded as a vital part of the total education program at Walla Walla College, and all undergraduate students are required to attend.

CHURCH AND SABBATH SCHOOL. The Walla Walla College Church with a membership of approximately 1,500 provides opportunities for group worship and offers training in missionary endeavor and church organization.

The Sabbath School provides leadership training and teaching experiences for college students who wish to develop their abilities in religious education.

CAMPUS MINISTRIES. Campus Ministries is a student-operated organization that promotes religious understanding and activity both on and off campus. Besides providing Friday evening programs, typical activities include providing tutors for labor camps, arranging a variety of Sabbath afternoon service projects, conducting weekend lecture series and sponsoring student missionaries.

SABBATH OBSERVANCE. The seventh-day Sabbath is observed at Walla Walla College from sunset Friday to sunset Saturday, and all students are expected to conduct themselves in harmony with the sacred nature of the day. This includes attendance at the Friday evening devotional service, as well as Sabbath School and church service on Sabbath morning.

Walla Walla College sponsors several organizations and activities which aid in training the students for Christian service.

HOUSING FOR STUDENTS

APARTMENTS. The College owns 50 units of one- and two-bedroom apartments which are available for married students. These apartments rent for reasonable amounts. Apartments in the community, furnished and unfurnished, are also available for married students. For information, write to the Director of College Services.

COUNSELING AND CAREER DEVELOPMENT CENTER, THE CAMPUS

RESIDENCE HALLS. All unmarried students taking six hours or more are required to live in one of the college residence halls and to board in the college cafeteria, unless they live with their parents.

Under special circumstances, students may make application to the Student Affairs Committee for permission to live off the campus in an officially approved home. Such applications are filed with the office of student affairs and will be processed only at the beginning of a quarter. Failure to secure official approval to reside in the community or to withdraw from a college residence hall will invalidate the registration of the student. Students who have received approval for off-campus living may be called into the college residence halls at any time.

Conard Hall. Conard Hall offers comfortable accommodations for 250 women, and includes such features as a large worship room designed in church style, a recreation room and attractive parlors.

Foreman Hall. Foreman Hall houses 206 upper-division women. The building provides elevator service and has individual floor parlors.

Hallmark Apartments. This 49-unit complex provides residence hall housing for married students.

Residence Hall, Portland Campus. Completed in 1978, this is a residence hall for unmarried students located adjacent to the School of Nursing and the Portland Adventist Medical Center.

Sittner Hall. Sittner Hall, which accommodates approximately 400 resident men, includes lounges, a recreation room and health club facilities.

Sittner East. This is the front wing of Conard Hall and accommodates 100 upper-division men.

STUDENT SERVICES

CURRICULUM ADVISEMENT. The Curriculum Advisement Center coordinates all advisement activities, assigning advisers, with the aid of each department chairman. Students will consider the chairman of the department in which they major to be their faculty adviser in all matters relating to their academic program unless the chairman designates another faculty member as the academic adviser. Students planning to teach on either the elementary or secondary level should also consult with the chairman of the Department of Education and Psychology.

Freshman Advisement. The freshman advisement program is designed to assist freshmen toward making maximum use of their college experience beginning with freshman orientation and continuing throughout the school year. Each freshman is assigned an adviser by the coordinator of the program prior to the beginning of freshman orientation.

Preprofessional Advisement. Certain faculty members have been appointed to serve as the academic advisers to students preparing for careers in various professional vocations (see the Preprofessional Program section of this bulletin).



GENERALIST ADVISORS: The Generalist Advisers are those who advise all freshmen in their assigning advisors with the aid of each department chairman. Students will consult the chairman of the department in which they major to select their faculty advisor. Each advisor is assigned an academic program unless the chairman requests another faculty member as the academic advisor. Students planning to teach or enter the elementary or secondary level should also consult with the chairman of the Department of Education and Psychology.

FRESHMAN ADVISORS: The freshman advisers in the college are chosen to assist freshmen toward making maximum use of their college experience beginning with freshman orientation and continuing throughout the first year. Each freshman is assigned an advisor by the coordinator of the program. The beginning of freshman orientation is a student orientation program for freshmen. Certain faculty members have been appointed to serve as the academic advisers to students preparing for careers in various professional vocations (see the Professional Program section of this bulletin).

COUNSELING AND CAREER DEVELOPMENT CENTER. The Center seeks to assist students toward effective use of their personal resources and to develop self-understanding. Counseling appointments for personal, academic and occupational concerns may be made through the secretary. Each student is entitled to ten free sessions per year, a small charge is made thereafter. Staff members are available for crisis intervention. Groups and enrichment seminars are offered. The Center strictly honors confidentiality. Referrals to area professionals are available.

Career Development. This part of the Center is located on the main floor of Village Hall in Room 20. The Career Development Center assists students in three general areas: 1) it can help you in early career exploration when you are trying to decide what career might suit you; 2) it offers valuable information about specific career fields, as well as opportunities to get valuable work experience that will help you narrow your career options and make informed decisions; and 3) it provides job search and placement assistance to help you land that first full-time job when you graduate or decide on a graduate or professional school program. Career decision-making services include: 1) a career library with books and pamphlets of up-to-date information on occupations and professions; 2) career information presented by representatives from several fields who come to our campus to talk with students; 3) career planning workshops which help students learn to identify interests and career values and develop goal-setting and decision-making skills; and 4) the Guidance Information System (GIS) which is a computerized service to give a printout of information about occupations, schooling and sources of financial aid.

Placement Services. Placement services include assistance for full-time career positions after graduation, continuing placement service for alumni, as well as appointments for interviews with various companies and professional organizations. Seniors seeking employment assistance should apply for placement services at the beginning of the senior year. A placement bulletin for the Education Department is published yearly and distributed to all educational administrators of Seventh-day Adventist institutions in North America. This bulletin includes a picture and personal resumé of each graduation candidate. All graduates may utilize the computerized placement service network. Individual placement files are established and maintained (for five years) at the request of the student.

Testing Service. Individual and group interest, aptitude and personality tests are administered by the Counseling Center. The College also serves as an official testing center for professional school admissions tests such as the Graduate Record Examination (GRE), the Law School Admissions Test (LSAT) and the Graduate Management Admissions Test (GMAT). Tests are also administered for Home Study International correspondence work. Information and administration dates may be procured from the Counseling Center.

TEACHING LEARNING CENTER. All Walla Walla College students may use the Teaching Learning Center services free of charge to improve mathematics, writing, language, and study skills. Students enrolled in freshman and sophomore classes may apply for free individual or group tutoring for up to three classes per quarter. The center also offers developmental reading classes for elective credit, as well as a variety of noncredit seminars to help students improve their academic skills.

EDUCATIONAL COMPUTER CENTER. Walla Walla College offers computer services to a wide variety of college users through its Educational Computer Center. Computer services are available for instructional use by all faculty, staff and students from all segments of the campus including both the sciences and the humanities, using over two dozen terminals located primarily in large conveniently located terminal clusters. These facilities are used as laboratories in classes teaching computer concepts and languages, as tools in classes requiring data manipulation, and as instructional aids in any discipline offering tutorial assistance and testing.

The novice user may communicate with the computer in easy, Englishlike language or use stored sophisticated routines requiring no knowledge of specialized computer languages. The more experienced user may use any of a large number of standard languages including BASIC, FORTRAN, RPG II, COBOL and PASCAL in addition to powerful assemblers, editors and utility languages. Time sharing allows large numbers of users to simultaneously use the computer. Each may choose any of the available languages independent of which language others are using. A batch mode is also available for noninteractive use.

STUDENT ORGANIZATIONS AND ADVISERS

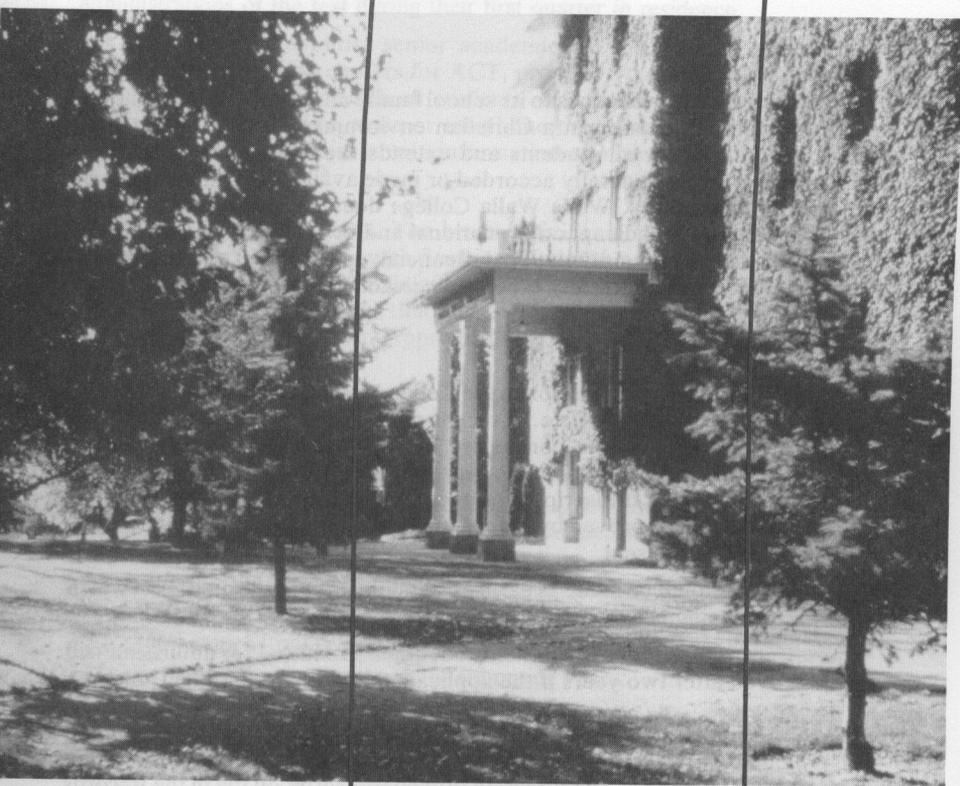
ASSOCIATED STUDENTS

The Associated Students is an organization whose membership consists of all faculty members and regularly enrolled students. The association has for its objective the promotion of Walla Walla College ideals and activities. The two official publications of the Associated Students are the *Mask*, the student directory, *The Collegian*, the weekly newspaper of the College, and the *Mountain Ash*, the yearbook.

Organization	Faculty Adviser
ASWWC Sponsor	Edward Boyatt
ASWWC Religious Activities Committee	Winston De Haven
<i>The Collegian</i>	_____
<i>The Mask</i>	Kenneth Gruesbeck
<i>The Mountain Ash</i>	Tom Emmerson
Campus Ministries	Winston De Haven
Sabbath School	Beverly Beem
Student Missionary	Winston De Haven

CAMPUS CLUBS AND ADVISERS

Aleph Gimel Ain (AGA); Dormitory Women	Paula Chapman
Canadian Club; Canadian students	Gary Brendel
Epsilon Mu Sigma (EMA); Married students ...	Jerry Bokoles, Richard Kruger
International Club	Dale Hepker
Omicron Pi Sigma (OPS); Dormitory men	Lynn Prohaska
Village Singles Club	_____



Admission to the College

ADMISSION TO THE COLLEGE

Walla Walla College welcomes to its school family any student who wishes to obtain a quality education in a Christian environment. It is committed to equal opportunity for all students and extends the rights, privileges, programs and activities generally accorded or made available to all members of the college community. Walla Walla College does not discriminate on the basis of sex, race, handicap, color, national and/or ethnic origin in administration of its admissions, educational, financial, employment and student life programs and policies, or any other college-administered program.

ADMISSION PROCEDURE

Formal application for admission to the College is required on a form supplied through the Admissions Office. A recent photograph and a \$15 fee must be included. The chief factors considered by the Admissions Committee are scholastic achievement, good character, financial support and good health. After the applicant's transcripts and recommendations have been received by the College and approved by the Admissions Committee, prompt notification of acceptance is sent.

Applications should be made as early as possible prior to the quarter in which study is to commence. All records become the property of the College.

Transcripts, applications and other credentials submitted for admission will be destroyed after two years if the applicants do not enroll in the College.

OFFICIAL TRANSCRIPT. While a student may receive acceptance on the basis of an unofficial or an incomplete transcript, no one will be permitted to complete registration until there is an official transcript on file in the Records Office.

LETTER OF ACCEPTANCE. Under no condition should an applicant consider himself accepted until he has received an official letter of acceptance. Applicants ought not to plan on residence or work on the campus until they have been formally accepted.

ROOM DEPOSIT. As soon after acceptance as possible, applicants should send a room deposit of \$50 to the Accounting Office. This will guarantee a room for the year. This fee is refundable any time until September 1 of each year. See section on Financial Information.

COLLEGE ENTRANCE EXAMINATION. ACT (American College Testing Program) test scores must be submitted by all entering freshmen and transfer students with fewer than 30 quarter credits. Students without these test scores will be provisionally registered (provided other criteria are met) until they have taken the ACT during one of the regularly scheduled on-campus administrations of the test during their first quarter in residence.

All Seventh-day Adventist senior academies in the North Pacific Union Conference are testing centers for ACT, providing these services on a non-Saturday schedule. High school students and others not enrolled at these academies are invited to write or telephone the guidance counselor at the academy of their choice to obtain information regarding participation in the ACT testing program.

MEDICAL EXAMINATION. The health services of the College are in the charge of a registered nurse who functions under the direction of the college physician. In order to give efficient service and aid in cases of illness and accident, the College requires that all new students present a certificate of a recent physical examination. Approved forms are available in the Records Office.

ADMISSION STATUS

Regular. The following entrance requirements apply to students entering all Bachelor and some Associate degree programs. Students planning entrance to Associate degree programs should inquire concerning possible variations in entrance requirements.

Applicants for admission to the College should have graduated from an accredited secondary school and have a minimum grade-point average of 2.0. All students with secondary school backgrounds must present the following credits for admission beginning in the following years:

	1984-85	1985-86	1986-87
English	40	40	40
History	20	20	20
Algebra I	10	10	10
Geometry	—	10	10
Science	10	—	10
Laboratory Science	—	10	10

In addition to the above requirements for admission, the following semester credits are highly recommended for entrance into the college curriculum:

	Semester Credits
Foreign Language*	20
Social Studies	10
Science (additional)	10
Mathematics** (additional course should be taken in the junior or senior year)	10

*Students completing two years of the same foreign language at the secondary level will fulfill the elementary language requirements for the bachelor of arts degree.

**Additional departments may require 10 semester credits of Algebra II including Trigonometry. Please check departmental requirements.

Provisional. Provisional admission may be granted to applicants who lack one or more of the subjects required for entrance, or whose grade-point average is below 2.0. All students accepted on a provisional basis must check with the Director of Records about specific requirements for meeting their deficiencies. Students must make up deficiencies during the freshman year to qualify for admission to the second year of studies.

ADMISSION TO CHOSEN MAJORS

Certain major areas of study require specific subjects prior to admission. The following departments require an additional 10 semester credits of Algebra II which should include Trigonometry:

Chemistry	Mathematics
Computer Science	Physics
Engineering	

Business recommends 10 semester credits of Algebra II.

Applicants who are deficient in subjects required for entrance to their chosen major will be required to:

1. Present secondary credit to cover the deficiency by the end of the first year of registration in that major; or
2. Complete a waiver examination by the end of the first year of registration in that major; or
3. Take additional college course work in areas approved by the major adviser.

ADMISSION BY EXAMINATION

HIGH SCHOOL EQUIVALENCY. Mature persons who have not completed secondary school or who are unable to furnish a transcript of credits may be admitted to freshman standing on the basis of a high school equivalency diploma. Such students will have obtained an average standard score of 50 on the five sections of the General Education Development (GED) Test, with no score less than 45 on any one section. The student must be at least 18 years of age when the test is taken and four years must have elapsed since the student's eighth grade graduation.

CALIFORNIA HIGH SCHOOL PROFICIENCY EXAMINATION. Applicants who are under 18 years of age, but have successfully passed the California High School Proficiency Examination, may be considered for admission provided that (1) a minimum of two years of high school has been completed; (2) written parental permission has been given; (3) the application letter lists reasons, goals and objectives for acceleration. A copy of this letter will be sent to the high school principal and residence dean/counselor for their reactions and recommendations.

NONMATRICULATED ADMISSION

NONMATRICULATED ADMISSION. Mature individuals ineligible for regular admission may be admitted as nonmatriculated students and may register for any course for which they have sufficient background. Nonmatriculated students are not eligible for a degree; however, by completing requirements for regular admission, they may become degree candidates.

GUEST ADMISSION. Students who have been in residence at other institutions of higher learning and who are not candidates for a degree from Walla Walla College may be classified as guest students. The guest student must show evidence that he is in good and regular standing at the university or college to which the credits are to be transferred.

ADMISSION OF INTERNATIONAL STUDENTS

Applicants must have met the college or university entrance requirements of their native country. If English is not the native language, international students must demonstrate ability to pursue studies in the English language by passing the University of Michigan Test of English Language Proficiency with a minimum score of 85. Questions regarding this test should be directed to Testing and Certification, English Language Institute, University of Michigan, North University Building, Ann Arbor, Michigan 48104. Students presenting Test of English as a Foreign Language (TOEFL) scores of 500 and above need not take the University of Michigan Test. In addition to tests taken abroad, students will be evaluated after arrival at Walla Walla College for appropriate placement in English. Before final acceptance is given and an I-20 form sent to the applicant, the applicant must have \$1,500 on deposit with the College. Please see also the section "International Students" under Financial Information.

ADMISSION OF TRANSFER STUDENTS

APPROVED COLLEGES. Applicants who have attended approved institutions of higher education and who have on file in the Records Office official transcripts showing a minimum grade-point average of 2.00 on all course work taken may be admitted to advanced standing. Students transferring from other institutions may be required to take validating examinations should they wish credit to be transferred to Walla Walla College. **Failure to indicate that work has been taken at other institutions at the time of application invalidates any admission.**

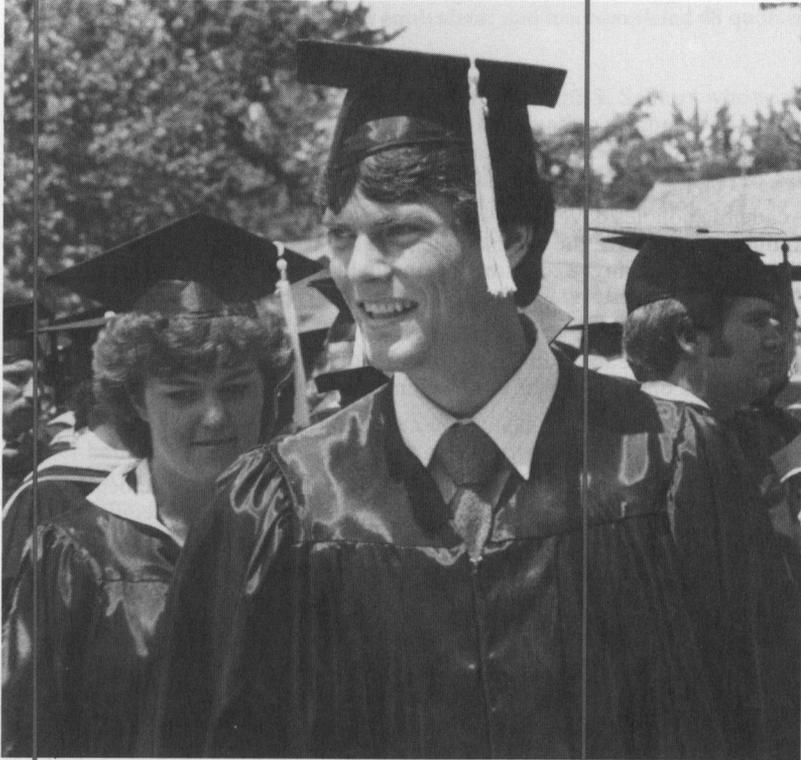
COMMUNITY COLLEGE. A maximum of 96 quarter hours may be transferred from a community or two-year college (see Concurrent Registration, p. 26).

ENGINEERING STUDENT TRANSFERS. Students enrolled in the Engineering affiliation program will be allowed to graduate under any official Walla Walla College bulletin in effect since the time they first enrolled on an affiliated campus as an engineering student provided that the bulletin chosen has been current at some time within three academic years prior to the first year at Walla Walla College. Any student who withdraws from engineering studies for a continuous period of one year or more will forfeit the right to graduate under bulletins which were current prior to his withdrawal.

SENIOR. A transfer student with senior standing must be in residence three consecutive quarters and must complete a minimum of 36 quarter hours including nine quarter hours of upper-division work in the major and three upper-division quarter hours in the minor, and meet all degree requirements.



ACADEMIC INFORMATION AND POLICIES



CONGRUENT WITH THE STATE'S STUDENT RIGHTS ACT, THE BOARD OF REGENTS HAS ADOPTED THE FOLLOWING POLICIES AND PROCEDURES TO PROTECT THE RIGHTS OF STUDENTS AND TO PROMOTE THE INTEGRITY OF THE HIGHER EDUCATION SYSTEM.

CHANGES IN REGISTRATION: Changes in registration may be made during the first four days of instruction without charge. No course change is permitted after the first four days of instruction without the permission of the instructor and the student's advisor. A charge of \$2.50 for each course added or dropped is made after the first four days of instruction. Courses may not be added after the second week of any quarter.

Academic Information and Policies

ACADEMIC INFORMATION AND POLICIES

ACADEMIC POLICIES

Academic policies developed in the course of the school year and announced to the students have the same application as those published in this bulletin. Those wishing any exception to published policy may petition to the Academic Standards Committee. Forms for this purpose are available at the Records Office.

The academic year is divided into four quarters. The summer session is regarded as one quarter of the academic school year.

REGISTRATION

All students are required to register on designated days at the beginning of each quarter. Registration is not official until all procedures required by the College have been completed and all fees have been paid. Faculty advisers are available to assist students with registration and in the planning of academic programs.

LATE REGISTRATION. Students who register after the designated registration periods are charged a late registration fee of \$20, plus \$2 per day from published registration date. Students may not register for the first week of a quarter without permission of the Director of Records and the instructors involved. Late registrants may expect a reduction in course load.

CONCURRENT REGISTRATION. Students registered at Walla Walla College are not permitted to enroll for courses in neighboring colleges without prior approval of the House Committee.

CHANGES IN REGISTRATION. Changes in registration may be made during the first four days of instruction without charge. No course change is permitted after the first four days without the permission of the instructor and the student's academic adviser. A charge of \$2.50 for each course added or dropped is made after the first four days of instruction. Courses may not be added after the second week of any quarter.

FRESHMAN ORIENTATION. During the first week of the autumn quarter all entering freshmen are required to attend the orientation program. Counseling and instruction concerning study skills, registration and college regulations are given.

ADMISSION TO UPPER DIVISION. In view of the course gradation reflected in the numbering system, a student should plan to take courses numbered 300 or 400 only after he has earned 84 quarter hours and completed the lower-division general studies requirements. However, a student may register for upper-division courses with the permission of his department chairman and the instructor of the course **provided he has completed ENGL 121, 122, 123, College Writing or its equivalent; and has completed 48 quarter hours of course work.**

SENIOR REGISTRATION FOR GRADUATE COURSES. Seniors who wish to take graduate (500) courses must submit for evaluation an approved senior outline and transcript to the Graduate Council. Approval to register for a course is given only after determination of eligibility for admission to the Graduate School. Credits taken under any circumstances will not apply to a graduate program without completed graduate application forms and registration approval.

For admission to the graduate program, students should consult the *Graduate Bulletin*.

COURSE LOAD

The academic study load at Walla Walla College is described in terms of quarter hours. A quarter hour normally represents one class meeting a week or three hours of laboratory work a week for the duration of the quarter. Thus, a three-quarter-hour class would meet three times each week. For each quarter hour of credit earned, a student is expected to spend two clock hours a week in outside preparation or three hours a week in supervised study or laboratory work.

The normal load is 16 hours per quarter. Sophomores, juniors and seniors may request to register for 18 quarter hours if their grade-point average for the previous quarter was 3.00 (B) or better. In general, the full study load for graduate students is 12 quarter hours. Undergraduate students on academic probation ordinarily should carry a reduced course load.

Students in college residence halls are charged for and should register for a minimum of 12 hours per quarter, except seniors in their final quarter who need less than 12 quarter hours to graduate. Requests for exceptions should be processed through the Student Affairs Office.

The following minimum study loads will satisfy the authorities indicated:

- Immigration Authorities12 quarter hours
- Social Security12 quarter hours
- Veterans12 quarter hours

WITHDRAWALS

INDIVIDUAL COURSES. Students withdrawing from individual courses must submit a Change of Registration voucher to the Records Office signed by the instructor involved and the student's adviser. The final date for dropping a course is the third Wednesday prior to test week. Consult the Academic Calendar for specific dates.

ALL COURSES. Students withdrawing from all classes must submit an official Class Drop Voucher to the Records Office. It must be signed by: (1) Academic Adviser, (2) Student Accounts and Employment Officer, (3) Vice President for Student Affairs, (4) Director of Records.

CLASS REGULATIONS

Students are not officially registered for a course until the instructor has been informed by the Records Office. Students are not permitted to attend courses for which they have not registered. The student is responsible for punctual and regular attendance at all classes for which he is registered. It will be recognized that missing instruction for any reason may jeopardize the class standing and course grade. Students will not be permitted to register for two classes which meet concurrently.

CLASSIFICATION OF STUDENTS

FRESHMAN. Applicants for admission to the College who fulfill the entrance requirements for their chosen course of study are classified as freshmen.

SOPHOMORE. Students who have met the entrance requirements of their chosen course of study and who have completed a minimum of 45 quarter hours with a grade-point average of at least 2.00 are classified as sophomores.

JUNIOR. Students who have completed a minimum of 90 quarter hours with a grade-point average of at least 2.00, and who can complete degree requirements by the end of the following school year, are classified as juniors.

SENIOR. Students who have completed a minimum of 136 quarter hours with a grade-point average of at least 2.00 and who can complete all degree requirements during the current school year are eligible for senior class membership.

POSTGRADUATE. Students who have completed a baccalaureate degree and are registered for work which does not ordinarily apply toward an advanced degree.

GRADUATE. Students who have applied for and have been accepted into one of the graduate programs.

NONMATRICULATED. Students who do not meet college entrance requirements or who do not wish to qualify for a degree, but who wish to take certain courses on a credit or an audit basis.

AUDIT. Students who audit classes must register in the usual manner and pay the full tuition but are not required to do class assignments or sit for tests. They receive no grades and no credit. Students with a minimum cumulative 3.0 GPA taking 13-16 hours for credit are allowed to audit classes provided they: (1) receive prior approval of the instructor, because some classes may not be audited, (2) pay a \$10 class enrollment fee for each course and any extra expense as appropriate.

GRADING SYSTEM

The quality of student effort is measured by a system of grades and by computed grade-point averages. The grade-point average is computed by totaling the grade points for all courses and dividing by the total quarter hours for which grades are received. **Only the best grade of a repeated course will be calculated in the grade-point average.** The AU, I, NC, S, W and X are disregarded in computing the grade-point average. A report of grades earned is made to students at the end of each quarter. With the student's written permission, a copy of his/her quarterly scholarship record will be sent to the parents or guardian.

The following system of grades and point values is used:

A — Excellent	4	grade points per quarter hour
B — Above Average	3	
C — Average	2	
D — Below Average	1	
F — Failure	0	

AU — Audit

I — Incomplete

The Incomplete is given in case of incomplete work due to justifiable cause and must be made up three weeks before the close of the following quarter; otherwise the instructor records the grade earned, taking into consideration all course requirements.

NC — No Credit

Indicates that credit was not earned because: The course was evaluated with a mandatory S/NC mark but performance did not meet the minimum standards for a satisfactory grade. **Some professional schools calculate the NC mark as an F grade when computing the grade-point average.**

S — Satisfactory (C or better)

W — Withdrawal

Courses dropped during the first two weeks of the term will not appear on the student's record. Courses dropped thereafter will appear on the permanent record with a W.

X — Unofficial Withdrawal

GRADING REGULATIONS

ERRORS AND CORRECTIONS. Grade reports are issued at the close of each quarter. Upon the receipt of a grade report, the student should carefully check it for correctness as to the courses recorded, quarter hours and grades. Any error should be reported within two weeks. Grades may be changed in the records office only if a teacher error has been made.

ACADEMIC PROBATION. A student who fails to make satisfactory progress toward graduation will be placed on academic probation. A quarter of cumulative grade-point average below 2.00 (C) is considered unsatisfactory and will bring the student's record under review by the Vice President for Academic Affairs. Students whose cumulative grade-point average falls below 2.00 (C) are automatically placed on academic probation, and they remain so classified until the overall grade-point average is again 2.00 (C) or better.

DEAN'S LIST. The Vice President for Academic Affairs maintains a list of those students who have earned a minimum of 15 hours per quarter (excluding "S" and "I" credits) and achieved a grade-point average of 3.5 or better.

GRADUATION WITH HONORS. Candidates for the baccalaureate degree with a minimum overall grade-point average of 3.50, with a 3.50 grade-point average on credit earned at Walla Walla College, may be awarded the degree with honors, *cum laude*.

CREDIT BY EXAMINATION

Walla Walla College recognizes that students who have independently achieved college-level proficiency on the basis of work experience and study may receive credit for what they already know by challenging comparable classes offered by the College. Certain college classes may not be challenged. The student must take the examination before enrolling for further study in the field of the examination. Students must be currently enrolled before credit by examination can be recorded on the permanent record.

APPLICATION FORMS. Application forms for challenge, validation and/or waiver examinations may be obtained from the Records Office.

ADVANCED PLACEMENT EXAMINATION (CEEB) and COLLEGE-LEVEL EXAMINATION PROGRAM (CLEP). Regular college credit may also be established by successful completion of either an Advanced Placement examination or the College-Level Examination Program as outlined below.

Advanced Placement (CEEB). Walla Walla College grants credit for College Entrance Examination Board (CEEB) advanced placement examinations. These tests are graded on a scale of 1 to 5.

ENGLISH 121, 122; or 141, 142 COLLEGE WRITING

Students obtaining a 3, 4, or 5 will receive 6 quarter hours which will fulfill two quarters of the College Writing requirement. All students must take ENGL 123 or 143.

College-Level Examination Program (CLEP). There are two types of CLEP examinations—General and Subject. Walla Walla College grants credit for Subject Examinations only. The Guidance and Counseling Center administers these tests in the third week of each month. Candidates should consult with the center for application forms and other specific information. These tests may not be repeated.

A number of subject-matter examinations are offered by CLEP. Students obtaining the percentile established by the department will receive credit toward that basic requirement.

BIOLOGY 101, 102, 103 GENERAL BIOLOGY:

Students obtaining the 70th percentile in the "Biology" examination will receive 12 quarter hours which will fulfill the basic science requirement.

ENGLISH 121 COLLEGE WRITING:

Students who earn a 60th percentile on a subject examination will receive credit for ENGL 121. All students must take ENGL 122, 123 or 142, 143.

HISTORY 221, 222 HISTORY OF THE UNITED STATES:

Students obtaining the 60th percentile in the "American History" examination will receive 8 quarter hours which will fulfill the basic history requirement.

MATHEMATICS 117 PRECALCULUS:

Students obtaining the 50th percentile in the "College Algebra-Trigonometry" test will receive 5 quarter hours which will fulfill the basic math requirement.

MATHEMATICS 121 FUNDAMENTALS OF MATHEMATICS:

Students obtaining the 50th percentile in the "College Algebra" test will receive 4 quarter hours which will fulfill the basic math requirement.

SOCIOLOGY 204 GENERAL SOCIOLOGY:

Students obtaining the 60th percentile in the "General Sociology" examination will receive 4 quarter hours which will fulfill the basic social studies requirement.

CHALLENGE EXAMINATIONS. A challenge examination is a college-prepared or a standardized examination which, if successfully completed, will yield regular college credit. A student wishing to challenge a course must first obtain permission from the chairman of the department in which the course is offered and then the permission of the course instructor. The student must take the examination before enrolling for further study in the field of the examination. The challenge examination may not be repeated and must be taken *prior* to the final quarter of residence. A fee is charged as indicated under the heading "Special Fees" of the Financial section of this bulletin.

VALIDATION EXAMINATIONS. Students who have transcripts from nonaccredited colleges and /or transcripts showing nontransferable college courses may request to take validation examinations in courses which are comparable to those offered by Walla Walla College. Upon successful completion of the examination, the student will be given credit in the comparable College course. A student must first obtain permission from the chairman of the department in which the course is offered and then the permission of the course instructor. A fee is charged as indicated under the heading "Special Fees" of the Financial section of this bulletin.

RESTRICTIONS. The following restrictions apply to all credit earned by examination by a college-prepared examination.

1. Students must be currently enrolled before credit by examination can be recorded on the permanent record.
2. Credit by examination (including CEEB and CLEP) may be earned only if the student has not already earned credit in a similar lower- or upper-division course.
3. A maximum of 24 quarter hours by examination may be counted toward a baccalaureate degree excluding validation examinations.
4. Grades are issued as on normal test scores and all grades are recorded on the permanent record of the student (except Nursing, see p. 215).
5. Challenge examinations, including CEEB and CLEP, may *not* be repeated.
6. Repeat course work and F grades are not open to credit by examination.

COURSE WAIVER EXAMINATIONS. A student may meet an academic requirement, within specified limits, by passing a waiver examination at least equal in scope and difficulty to a final examination in a course. Successful completion of the examination waives the curricular requirement but does *not* result in credit earned. Thus, it does not reduce the total number of quarter hours required for a degree but will increase the available number of elective hours. The waiver examination is administered by the department in which the course is offered and may *not* be repeated. Waiver examinations must be taken *prior* to the final quarter of residence. A fee is charged as indicated under the heading "Special Fees" of the Financial section of this bulletin.

TRANSFER CREDIT BY EXAMINATION. Credit earned by examination may be transferred from other educational institutions provided such credit meets the guidelines used by Walla Walla College for credit by examination.

REPEAT COURSES

Students may repeat a course in which credit has been granted and grades have been received; however, academic credit may be earned only once. Regardless of the number of times a course is repeated, only the best grade will be computed in the grade-point average, though all grades will remain on the permanent record. This repeat work must be taken in a regularly offered class. Challenge examinations, independent or directed study arrangements are not allowed for repeat course work. Repeat course work for which an F has been received must be completed in residence unless permission to do otherwise is granted by the Academic Standards Committee.

CORRESPONDENCE WORK

The College will accept a maximum of 24 quarter hours of approved courses by correspondence toward a baccalaureate degree or a maximum of 12 quarter hours for the associate degree. Correspondence work will not meet upper-division requirements, nor can a student who has failed a course make this up by correspondence study. Students must obtain approval from their major department chairman in order to carry correspondence work while in college. Correspondence work may not apply on a major unless approved by the department chairman concerned. Seniors must have all correspondence work completed prior to the beginning of their last quarter in residence.

The Home Study International, Washington, D.C., is a member of the Seventh-day Adventist school system in the United States, and while we recommend this correspondence school, students may take correspondence from any accredited correspondence school. Further information may be obtained from the Records Office.

EXTENSION COURSE WORK

Extension courses are offered by Walla Walla College on a limited basis. These off-campus courses provide opportunity for academic enrichment, acceleration and continuing education.

The College accepts extension course credit from other institutions provided the institution offering the courses accepts similar credits toward a degree on its own campus.

ADVENTIST COLLEGES ABROAD

Walla Walla College, together with nine other Seventh-day Adventist colleges in North America, founded an organization in 1967 for the purpose of providing opportunities for qualified students to study abroad while completing the requirements of their programs. The ACA program allows students to immerse themselves in the culture and life of the host country and to become conversant in the language. Presently, arrangements are in operation for students to study a full year at Seminaire Adventiste, Collonges-sous-Saleve, France; Colegio Adventista de Sagunto, Sagunto, Spain; and Seminar Schloss Bogenhofen, Braunau, Austria.

Prerequisites for admission to a year of study abroad through ACA are:

1. Admission as a regular student of Walla Walla College for the year abroad.
2. Competence in the language (minimum: one year of college language or two years of secondary study).
3. A grade-point average of 3.00 in the language and an overall grade-point average of 2.50.
4. A good citizenship record.
5. Application to the Records Office on the special ACA application form.
6. Meeting the financial requirements.

Students planning to study under this program must submit a completed application with a \$100 refundable deposit by January 4, 1985, as there are usually more applications than spaces available.

All applications and payments for tuition, room and board are to be made through the SDA college of the student's choice in North America before August 1. Any deviation from this schedule by students of Walla Walla College must be arranged in advance with the Office of Financial Aid. A small incidental deposit is to be made to the foreign college on arrival.

Financial credit for work cannot be counted on by students residing in foreign countries. The student financial aid officer has information on grants and loans available to students for overseas study.

Academic credit will be granted for these studies so that a student will be able to complete a full college year abroad. Prospective students must have successfully completed one year of college French, German or Spanish or the equivalent as applicable. It is recommended that students desiring to participate do so during their sophomore year. Applicants should consult with their major professors, the Modern Language Department and the Director of Records prior to enrollment.

Information and applications may be obtained from the Records Office.

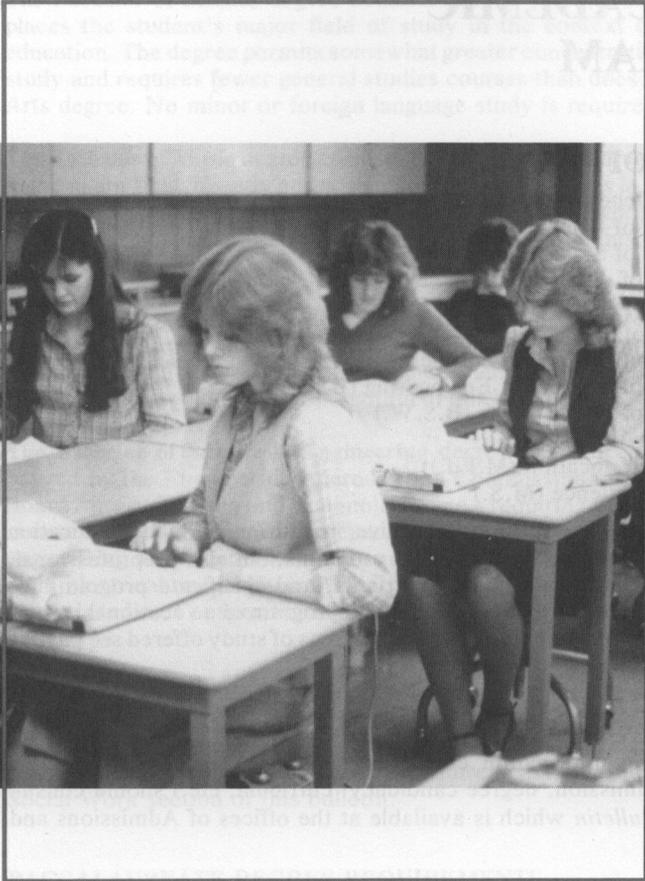
FINAL EXAMINATIONS

All students are expected to take final examinations as scheduled. Special administrations are arranged by petition to the Vice President for Academic Affairs three weeks prior to the close of the quarter. If approved, a special fee of \$30 for each examination is assessed.

TRANSCRIPTS

One transcript of a student's record is supplied without charge. A fee of \$2 per transcript is charged thereafter. Credit is not recorded after a student has ceased residence in the College.

THE ACADEMIC PROGRAM



The Graduate Bulletin which is available at the office of Admissions and Records.

Academic Program

The Bachelor of Arts degree requires that foreign language study be included in the student's course of study.

THE ACADEMIC PROGRAM

DEGREES OFFERED

Walla Walla College offers courses of study leading to the following degrees:

- Associate of Science (A.S.)
- Associate of Science in Nursing (A.S.N.)
- Bachelor of Arts (B.A.)
- Bachelor of Music (B.Mus.)
- Bachelor of Science (B.S.)
- Bachelor of Science in Business Administration (B.S.B.A.)
- Bachelor of Science in Engineering (B.S.E.)
- Bachelor of Social Work (B.S.W.)
- Master of Arts (M.A.)
- Master of Education (M.Ed.)
- Master of Science (M.S.)

Walla Walla College is a comprehensive institution of higher education offering not only traditional liberal arts programs, but also preprofessional, special two-year associate degree curricula, and certificate programs for students who may wish to pursue a terminal program of a vocational nature. For a listing of undergraduate and graduate areas of study offered see pages 4 and 5 of this bulletin.

GRADUATE DEGREES

Students desiring information concerning graduate degree requirements (standards of admission, degree candidacy, curricula, etc.) should consult the *Graduate Bulletin* which is available at the offices of Admissions and Records.

TEACHER EDUCATION PROGRAM

The Walla Walla College Department of Education and Psychology is authorized by the Washington State Board of Education to recommend both provisional and standard teaching and principal's credentials. Students who plan to enter the teaching profession with a denominational or state teaching credential should become thoroughly acquainted with the certification requirements as listed in the Education and Psychology section of this bulletin.

BACCALAUREATE DEGREES

The Bachelor of Arts degree consists of four years of course work that places the student's major field of study in the context of a liberal arts education. To encourage a wide range of studies, the degree requires a greater concentration of general studies courses and a minor in an area distinct from the major, while it allows a greater number of electives. In the tradition of the liberal arts, **all Bachelor of Arts degree majors require that foreign language study be included in the student's course of study.**

The Bachelor of Science degree consists of four years of course work that places the student's major field of study in the context of a liberal arts education. The degree permits somewhat greater concentration in the field of study and requires fewer general studies courses than does the Bachelor of Arts degree. No minor or foreign language study is required.

The Bachelor of Music degree consists of four years of course work primarily in the major field of study and with modified requirements in general studies. The degree is offered with a choice of two majors, Performance or Music Education. For general studies and specific requirements, see the Music section of this bulletin.

The Bachelor of Science in Business Administration degree consists of a four-year program with concentrations available in accounting, economics, management information systems, management and marketing. For specific requirements, see the Business section of this bulletin.

The Bachelor of Science in Engineering degree is a four-year program approved by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology, Inc., requiring 200 quarter hours of course work. It is designed to prepare students for entry into the profession of engineering and to provide an adequate foundation for graduate studies in civil, electrical or mechanical areas. This degree modifies requirements in general studies. For specific requirements, see the Engineering section of this bulletin.

The Bachelor of Social Work degree is a four-year program designed to meet the requirements of the Council on Social Work Education. It permits greater specialization in the area and qualifies students for job entry in a variety of social service agencies. For specific requirements, see the Sociology and Social Work section of this bulletin.

BACCALAUREATE DEGREE REQUIREMENTS

Although general studies are stressed during the first two years of study, the student should plan to include certain elementary and intermediate courses in the desired major during the freshman and sophomore years to permit successful completion of the major.

A student who is undecided as to a major field of study may, during the freshman year, explore several fields of knowledge without loss of credit if he plans his choices in consultation with an academic adviser. A major should be chosen no later than the end of the sophomore year. The selection of a minor (for Bachelor of Arts degree candidates) and appropriate electives must be made in consultation with and approved by the assigned academic adviser.

Candidates are expected to be fully informed concerning degree requirements and are responsible for their fulfillment. A student shall have the option of meeting degree requirements as published in the bulletin at the time of initial registration or any bulletin published while in regular attendance. Those not

in regular attendance for one full school year (except for Student Missionaries and Taskforce workers) must meet the requirements of the current bulletin upon resuming attendance. **Students taking double majors must meet all the degree requirements for each major, including the general studies program.**

Degrees are formally conferred in June and in August of each year. Students completing all degree requirements may receive their degrees at the close of the quarter of completion of their studies and are eligible to participate in the June graduation exercises. All degrees received at times other than at the June and August presentation are granted *in absentia* and a special fee is required. The college president must approve all degrees granted *in absentia*.

Residence Requirements:

1. Degree candidates must be in residence the three quarters preceding graduation.
2. Transfer students must be in residence the three consecutive quarters preceding graduation and must complete a minimum of 36 quarter hours, including 9 upper-division quarter hours in the major and 3 upper-division quarter hours in the minor.

General Requirements:

1. **Credits required.** Successful completion of a minimum of 192 quarter hours, including 60 quarter hours in courses numbered 300 or above, and a cumulative grade-point average of 2.0 (C) or above.
2. **Major.** The completion of a major field of departmental specialization (minimum of 45 quarter hours). A grade lower than C will not apply toward a major except in engineering (see Engineering section of this bulletin). At least 21 quarter hours in the major must be numbered 300 or above. The maximum allowed on a major for the Bachelor of Arts degree is 60 quarter hours unless the excess is beyond the 192 quarter hours required for the degree, except for the music major which is 66 quarter hours. **Unless otherwise specified all electives applied to the major must be courses offered by the major department. A course may fulfill requirements for several majors or minors, but credit will apply to only one.**
3. **Minor.** Bachelor of Arts degrees require the completion of a minor of at least 27 quarter hours. Three quarter hours must be in courses numbered 300 or above. A grade lower than C will not apply toward a minor. **A course may fulfill requirements for several majors or minors but credit will apply to only one.**
4. **General Studies Requirements.** The completion of the general studies requirements as specified for the type of degree sought and as outlined below and detailed in the following section (86 quarter hours for the Bachelor of Arts degree and 74 quarter hours for the Bachelor of Science degree).
5. **Candidacy for Degree.** Degree candidates must file a formal application for a degree showing the proposed schedule of courses for the senior year with the Director of Records not later than one week after the beginning of the first quarter of the senior year. Appropriate forms may be obtained

from the Records Office. Students are not considered candidates for degrees or eligible for senior class membership until officially notified by the Director of Records.

6. **Senior Class.** Candidates for degrees must be members of the senior class. The fee is fixed by the class and approved by the President of the College.
7. **Comprehensive Examinations.** A comprehensive examination is required for each major before a degree may be conferred. For some majors the Graduate Record Examination (GRE) subject examination is used as the comprehensive. Where GRE subject examinations are not available for specific majors the academic department will provide a comprehensive examination or project.
Students whose majors require that they take the Graduate Record Examination (GRE) should make arrangements at the Counseling Center at least six weeks in advance of the test dates.
8. **Transcripts and Correspondence Work.** June seniors must have all transcripts for correspondence transfer credit on file in the Records Office by May 15, and summer seniors by July 15 in order to graduate. All correspondence work must be completed prior to the beginning of the last quarter in residence.
9. **Second Baccalaureate Degree.** Two baccalaureate degrees may be conferred concurrently or sequentially if the candidate has met all requirements, has completed a total of 237 quarter hours, and has spent a minimum of three quarters (36 hours) in residence.
10. **Applied Music Credit Applicable Toward Baccalaureate Degree.** Not more than 9 quarter hours in applied music (including 3 quarter hours of Ensemble) may be earned toward a baccalaureate degree without an equal number of quarter hours in music courses with prefixes MUCT, MUED or MUHL. Additional hours in applied music may include ensemble hours without restrictions.

GENERAL STUDIES REQUIREMENTS

Objectives. The general studies courses are required in order to provide the student with opportunities for the acquisition of knowledge and skills over a range of disciplines. While the requirements for a major speak to the need for proficiency and excellence in one or two fields, the general studies courses bring into focus the unity of knowledge and are intended to help the student develop a cognitive perspective consistent with that unity.

The general studies courses are so designed that students may increase both their breadth of knowledge and depth of thought in major areas of learning. The breadth of knowledge is achieved by having students take courses from a number of teachers in many departments and disciplines. The depth of thought, which presupposes background, is achieved (1) by taking courses of

sufficient duration to allow for in-depth study or (2) by taking courses that presuppose adequate background for intensive study. Courses in the general studies area are taught, as far as possible, so as to show relationships to other fields of knowledge.

Such a format for the general studies area insures that the students will develop some practical skills, a general knowledge of major areas of learning, in-depth study in selected areas and an overview of the unity of knowledge to help them in their professions as well as enrich their lives.

Following is an outline of the general studies requirements for the various degrees. A full description and listing of general education courses follow the outline.

Bachelor of Arts Degree	Select 86 quarter hours (including foreign language)
Bachelor of Music Degree	*
Bachelor of Science Degree	Select 74 quarter hours
Bachelor of Science in Business Administration	Select 74 quarter hours
Bachelor of Science in Engineering Degree	*
Bachelor of Social Work	Select 74 quarter hours
Associate of Science in Nursing Degree	42 quarter hours (see the Nursing section of this bulletin)
Associate Program	Select 32 quarter hours
Certificate Program	Select 10 quarter hours

*These degrees have modified general studies requirements. Please refer to the respective Departments of Instruction in this bulletin.

GENERAL AREAS

The range of hours for each area indicates the minimum number of hours that must be chosen from that area and the maximum number of hours from that area that can count toward the total requirement. Some areas are subdivided with ranges from each subdivision indicating the minimum that must be taken from that subdivision and the maximum that can count toward that area requirement.

Areas	Hours	Hours
	Minimum/Maximum in specific subject areas	Minimum/Maximum in general areas
APPLIED ARTS0 - 4
Courses in the applied arts should introduce the student to basic manual and technical skills.		
HEALTH AND PHYSICAL EDUCATION2 - 6
Courses should introduce the student to health principles and, by stressing both theory and activity, emphasize the pursuit of healthful living. (No more than 4 quarter hours from any one area will count toward the requirement.)		
Activity Courses2-4	
Theory Courses in Health, Health-related, or Nutrition0-4

HISTORY AND SOCIAL STUDIES12 - 20

Courses in history and social studies should help the student understand the forces that have shaped the individual in his culture and society. History courses should interpret the sweep of cultures, instilling an appreciation for the development of civilization and an awareness of the unique place of the Christian church in time. Social Studies courses should introduce the student to the methodology and contributions of the particular discipline.

- History8
- Social Studies4-12

If more than one course is selected from the areas listed below, courses chosen must be from two or more areas:

- Business/Economics Geography/Political Science
- Education Psychology
- Engineering Sociology

HUMANITIES12 - 16

Courses in the fine arts, literature and philosophy should introduce the student to mankind's aesthetic and intellectual aspirations and achievements. Fine arts and literature courses should concentrate upon ideas and styles in their cultural context rather than upon the development of skills. Philosophy courses should in their manner and subject matter clearly make for an understanding of and appreciation for philosophy as a distinct mode of inquiry. (No more than 8 quarter hours from any one area will count toward the requirement.)

- Fine Arts0-8
- Literature0-8
- Philosophy0-8

LANGUAGE ARTS12 - 20

Courses should introduce the student to the concepts and skills of the language arts by emphasizing the practice of effective written and oral communication. Courses in foreign language should emphasize the acquisition of such communicative skills as speaking, reading and writing a foreign language while introducing students to a foreign culture and its thought. ENGL 121, 122, 123 or equivalent is required. **Completion of an elementary course in a foreign language (12 credits of the same language) is required of all Bachelor of Arts degree students.**

The first course in the communications area must be selected from oral communication courses.

- College Writing8
- Communications0-8
- Foreign Language0-12

MATHEMATICS AND NATURAL SCIENCE12 - 16

Courses in mathematics should introduce the student to mathematical thought and practice and to the relationship of mathematics to other disciplines. Courses in science should introduce the student to methods of measurement and discovery and should help the student to understand through theory and practice how hypotheses are developed, tested and applied. (A minimum of 8 quarter hours should be taken from one course in sequence in a science area.)

- Mathematics4-8
- Science8-12

RELIGION AND THEOLOGY16 - 20

Courses in religion and theology should emphasize an understanding and application of biblical knowledge, foster continued spiritual growth and help the student develop a personal religious philosophy and prepare for active witnessing.

- Biblical Studies6-20
- Electives in Religion
or Theology0-14

A minimum of 6 quarter hours must be upper division.

Religion requirement for transfer students from non-SDA colleges:

Transfer students will take the equivalent of three hours per quarter in residence, but with the understanding that a student who spends six or more quarters in residence is required to take only the minimum requirement of 16 hours.

Students from non-SDA regional accredited colleges may transfer up to six hours of credit toward the general studies religion requirement, subject to the approval of the School of Theology and the Academic Standards Committee. In such cases, however, the student will still be required to take a minimum of nine hours of religion from Walla Walla College.

SPECIFIC COURSES FOR GENERAL STUDIES

The following list of specific courses will satisfy the General Studies Requirements: (*Courses listed in more than one area of general studies may be applied in only one area for an individual student.*)

APPLIED ARTS0 - 4

All 100-level courses with the following prefixes: AUTO, AVIA, CPTR, DRFT, ENGR, FDNT, FINA, GRPH and PRNT.

All 100- and 200-level courses with the following prefixes: ACCT, ART (except 161-163; 244-251); AGRI, ELCT, HMEC (except 101, 201); INCR, INDS and OFAD (except 161; 251-264).

In addition LIBR 111 and COMM 231.

HEALTH and PHYSICAL EDUCATION2 - 6

Activity Courses: 2-4

All PEAC 101 thru 199 Activity Courses

Theory Courses in Health, Health-related, or Nutrition: 0-4

FDNT	220	Human Nutrition	4
HLED	208	Drugs and Society	2
HLED	215	Contemporary Health Issues	2
HLED	453	Principles of Health	3

HISTORY and SOCIAL STUDIES.....12 - 20

History: 8

HIST	121, 122	History of Western Civilization	4, 4
*HIST	131, 132, 133	Western Thought I (Honors)	4, 4, 4
HIST	221, 222	History of the United States	4, 4
HIST	225	History of Canada	4
HIST	274, 275	History of England	4, 4
HIST	284, 285	History of Latin America	4, 4

*Equivalent to 8 hours HIST 121, 122 and ENGL 207 if complete course is taken.

Social Studies: 4-12

ANTH	255	Cultural Anthropology	3
COMM	145	Mass Communication Media	4
ECON	211, 212	Principles of Economics	4, 4
EDUC	110	Principles and Concepts of Christian Education	2
EDUC	210	Foundations of Education	3
*ENGR	344	The Environment and Man	4
GBUS	361, 362	Business Law	4, 4
GEOG	258	World Geography	4
PLSC	224	American Government	4
PSYC	130	General Psychology	4
PSYC	230	Systems and Theories in Psychology	4
PSYC	444	Social Psychology	3
SOCI	204	General Sociology	4
SOCI	225	Marriage and Family Life	2
SOCI	349	Religion in a Social Context (Honors)	4
SOWK	266	Social Welfare as a Social Institution	3
SPCH	401	Introduction to General Semantics	2

*Two hours will apply beyond the minimum 12-hour requirement.

HUMANITIES.....12 - 16**Fine Arts: 0-8**

ART	251	Introduction to Art	4
ART	321, 322, 323	History of Art	2, 2, 2
**ENGL	311, 312, 313	Western Thought II (Honors)	4, 4, 4
MUHL	124	Introduction to Music	4
SPCH	363	History of Dramatic Arts	4

Literature: 0-8

ENGL	204	Introduction to Literature	4
ENGL	205	American Literature	4
ENGL	206	English Literature	4
ENGL	207	World Literature	4
ENGL	209	Religious Literature	4
ENGL	214	Themes in Literature	4
ENGL	215	Film Literature	4
**ENGL	311, 312, 313	Western Thought II (Honors)	4, 4, 4
ENGL	454	Literature of the Bible	4
***HIST	131, 132, 133	Western Thought I (Honors)	4, 4, 4
FREN	301, 302, 303	Survey of French Literature	3, 3, 3
GRMN	311, 312, 313	Survey of German Literature	3, 3, 3
SPAN	324, 325, 326	Survey of Spanish Literature	3, 3, 3

Philosophy: 0-8

PHIL	205	Introduction to Philosophy	4
PHIL	206	Introduction to Logic	4
PHIL	305	Moral Philosophy	4
PHIL	306	History of Philosophy	4
PHIL	407	Philosophy of Science	4
PHIL	412	Philosophy of Religion	4
PHIL	440	Problems in Philosophy	4

**Equivalent to 4 hours each ENGL 204, ART 251, MUHL 124 if complete course is taken.

***Equivalent to 4 hours each ENGL 207, and 8 hours HIST 121, 122 if complete course is taken.

LANGUAGE ARTS.....12 - 20**English: 8**

ENGL	121, 122, 123	College Writing	3, 3, 2
ENGL	141, 142, 143	College Writing (Honors)	3, 3, 2

Communications: 0-8

ENGL	324	Advanced Expository Writing	3
ENGL	325	Advanced Technical Writing	3
JOUR	245	Journalistic Writing	4
JOUR	341	Magazine Article Writing	4
SPCH	101	Fundamentals of Speech Communication	4
SPCH	207	Small Group Communication	3
SPCH	443	Persuasive Speaking	3

The first course in the communications area must be selected from oral communication courses.

Foreign Language: 0-12

FREN 101	Introduction to French	4
FREN 102, 103	Elementary French	4, 4
FREN 202, 203	Intermediate French	4, 4
GRMN 111	Introduction to German	4
GRMN 112, 113	Elementary German	4, 4
GRMN 212, 213	Intermediate German	4, 4
RELL 121, 122, 123	Greek I	4, 4, 4
SPAN 121	Introduction to Spanish	4
SPAN 122, 123	Elementary Spanish	4, 4
SPAN 222, 223	Intermediate Spanish	4, 4

MATHEMATICS and NATURAL SCIENCE12 - 16

Mathematics: 4-8

MATH 105	Mathematics With Applications	4
MATH 106	Applied Statistics	4
MATH 111	Mathematics for the Liberal Arts	4
MATH 115	Elementary Math	4
MATH 117	Precalculus	5
MATH 121, 122	Fundamentals of Mathematics	4, 4
MATH 181, 281	Analytic Geometry/Calculus I, II	4, 4
MATH 282, 283	Analytic Geometry/Calculus III, IV	4, 4

Natural Science: 8-12

ASTR 141, 142	General Astronomy	4, 4
BIOL 101, 102, 103	General Biology	4, 4, 4
BIOL 121	Physical Geology	4
BIOL 201, 202	Anatomy and Physiology	4, 4
CHEM 101, 102	Introductory Chemistry	4, 4
CHEM 141, 142, 143	General Chemistry	4, 4, 4
*ENGR 344	The Environment and Man	4
GEOL 231, 232	Earth Science (Honors)	4, 4
PHYS 201, 202	Introduction to Physics	3, 3
PHYS 204, 205	Introduction to Physics Laboratory	1, 1
PHYS 211, 212, 213	General Physics	3, 3, 3
PHYS 214, 215, 216	General Physics Laboratory	1, 1, 1
PHYS 251, 252, 253	Principles of Physics	3, 3, 3
PHYS 254, 255, 256	Principles of Physics Laboratory	1, 1, 1

*Two hours will apply beyond the minimum 8-hour requirement.

RELIGION and THEOLOGY.....*16 - 20

*Six hours of this 16-20 must be upper division.

Biblical Studies: 6-20

RELB 101, 102, 103	Bible Survey	2, 2, 2
RELB 104	The Ministry of Jesus	4
RELB 105	Sermon on the Mount	2
RELB 106	Parables of Jesus	2
RELB 111	Messages of the Old Testament	4
RELB 216	Messages of Paul	4

RELB	281, 282, 283	The New Testament and Its Environment (Honors)	2, 2, 2
RELB	301	Old Testament History	3
RELB	302	Pentateuch	3
RELB	303	Writings	3
RELB	304, 305, 306	Hebrew Prophets	3, 3, 3
RELB	312	Daniel	3
RELB	313	Revelation	3
RELB	434, 435, 436	Gospels	3, 3, 3
RELB	464, 465, 466	New Testament Epistles	3, 3, 3

Electives in Religion or Theology: 0-14

RELH	349	Religion in a Social Context (Honors)	4
RELH	402	Modern Denominations	3
RELH	403	World Religions	3
RELH	405	Biblical Archaeology	2
RELH	406	History of the English Bible	2
RELH	457	History of Adventism	2
RELM	233	Introduction to Cross-Cultural Ministry	3
RELT	112	Theology of Christian Witnessing	3
RELT	201	The Christian Way of Salvation	4
RELT	202	Basic Christian Beliefs	4
RELT	204	Contemporary Issues in Adventist Thought	4
RELT	246	Christian Ethics	4
RELT	312	Bioethics	4
RELT	314	Eschatology	3
RELT	317	Inspiration and Revelation	4
RELT	330	Discipleship and Mission	4
RELT	404	A Scientific Approach to Biblical Interpretation	2
RELT	408	Doctrine of the Sanctuary	3
RELT	412	Philosophy of Religion	4
RELT	417, 418	Christian Dynamics	3, 3
SOCI	449	Sociology of Religion	2

ASSOCIATE DEGREE

The two-year associate degree programs are intended to provide accredited technological and occupational preparation for students desiring to graduate with marketable skills while experiencing the full benefits of a residential Christian college.

GRADUATION REQUIREMENTS FOR THE ASSOCIATE DEGREE

All candidates for the associate degree must complete the following residence and general requirements:

Residence Requirements:

A minimum of 24 quarter hours and the last two quarters must be completed in residence, with a minimum of 9 quarter hours earned in the concentration.

General Requirements:

1. A minimum of 96 quarter hours for the degree.
2. A minimum grade-point average of 2.0 (C) must be maintained in course-work required for the degree. A grade lower than C will not apply toward the concentration.
3. The completion of the associate degree concentration as outlined under the respective departments of instruction of this bulletin.
4. The completion of the general studies requirements as outlined below. For a listing of the specific courses which may apply to the requirements, see page 42.
5. **A course may fulfill requirements for one or more concentrations but credit will apply to only one concentration.**
6. Students must have all transcripts for correspondence and transfer credit on file in the records office by May 15 in order to graduate with the June class. Summer seniors must have all transcripts for correspondence work by July 15 in order to graduate with the August class. A maximum of 12 quarter hours of correspondence credit will be accepted. All correspondence work must be completed prior to the beginning of the last quarter in residence.
7. Degree candidates must file a formal application for a degree showing the proposed schedule of courses for the senior year with the Director of Records not later than one week after the beginning of the first quarter of the senior year. Appropriate forms may be obtained from the records office. Students are not considered candidates for degrees or eligible for senior class membership until officially notified by the Director of Records.

General Studies Requirements for the Associate Degree:

Areas	Hours Minimum/Maximum in specific subject areas	Hours Minimum/Maximum in general areas
Applied Arts		0 - 2
Health and Physical Education		0 - 2
Activity Courses		
History and Social Studies		0 - 8
History	0-8	
Social Studies	0-8	
Humanities		0 - 8
Fine Arts	0-4	
Literature	0-4	
Philosophy	0-4	
Language Arts8 - 12
ENGL 101, 102 or 121, 122, 123 ..	.8	
Communications	0-4	
Mathematics and Natural Science		0 - 8
Mathematics	0-8	
Science	0-8	

Religion and Theology6 - 8
Biblical Studies4-8
Electives in Religion0-4
or Theology	

Select a minimum of 32 quarter hours for the Associate degree.

CERTIFICATE PROGRAMS

The Certificate programs typically are one-year curricula providing occupational preparation for students desiring immediately marketable skills. For complete descriptions of the Certificate programs, consult the respective departments of instruction in this bulletin.

General Studies Requirements for the Certificate Program:

Language Arts	4
ENGL 100, ENGL 101 (Recommended), ENGL 121, SPCH 101	
Mathematics, Natural Science, and/or Business	0 - 4
Religion and Theology	4 - 6

Select a minimum of 10 quarter hours for the Certificate program.

PREPROFESSIONAL PROGRAMS

Programs are offered in a wide variety of fields to prepare students for admission to professional schools or to enter upon technical careers. Students wishing to secure admission to such schools should familiarize themselves with the admission requirements of the school of their choice. Most preprofessional curriculums require two units of high school mathematics (algebra and geometry). The following preprofessional curricula are detailed in the Preprofessional Courses of Study section of this bulletin:

Architecture (2)*	Optometry (2)
Chiropractic Medicine (2)	Osteopathy (3)
Dentistry (3)	Pharmacy (2)
Dental Assistant (1)	Public Health (4)
Dental Hygiene (2)	Physical Therapy (2)
Dietetics (2)	Radiological Technology (1)
Law (4)	Respiratory Therapy (1)
Medicine (4)	Veterinary Science (2)
Occupational Therapy (2)	

*Numbers in parenthesis indicate the years of study normally required on the Walla Walla College campus before acceptance into a professional school.

TRANSITIONAL CURRICULUM

The transitional curriculum is designed for freshman students who have been accepted by the College with an inadequate background for attempting a full academic program. It consists of ENGL 100, MATH 100 and RDNG 100, in addition to courses within the regular college curriculum as approved by the Transitional Curriculum adviser.

Students are registered for courses within this curriculum on the basis of test scores from their entrance examinations and/or secondary school grades. Credit received from the courses in this curriculum do not apply to the 192 quarter hours for graduation.

A transitional curriculum coordinator closely advises and schedules regular academic counseling sessions for all students in this program. This counseling procedure continues throughout the freshman year, although most transitional students are able to carry a full college load by the beginning of the winter quarter.

COURSE NUMBERING

The course numbering sequence is designed to reflect in varying degrees a progression in course content, level of approach and breadth of coverage. The course description further delineates specific course content progression. This information provided by the course number, prefix and description should serve as a general guide to students in selecting courses compatible with their background and ability.

In general, the following guidelines have been used in course numbering:

The first numeral indicates academic level of the course:

- 100 Remedial courses (credits do not apply toward graduation)
- 101-199 Courses normally taken during the freshman year
- 200-299 Courses normally taken during the sophomore year
- 300-399 Courses normally taken during the junior year
- 400-499 Courses normally taken during the senior year

The third numeral will indicate course sequencing. Courses in which the third numerals are 1, 2 and 3, must be taken in sequence.

The credit indicated in connection with each course is the "quarter hour," and one quarter hour represents one recitation period per week for one quarter or three clock hours of laboratory work.

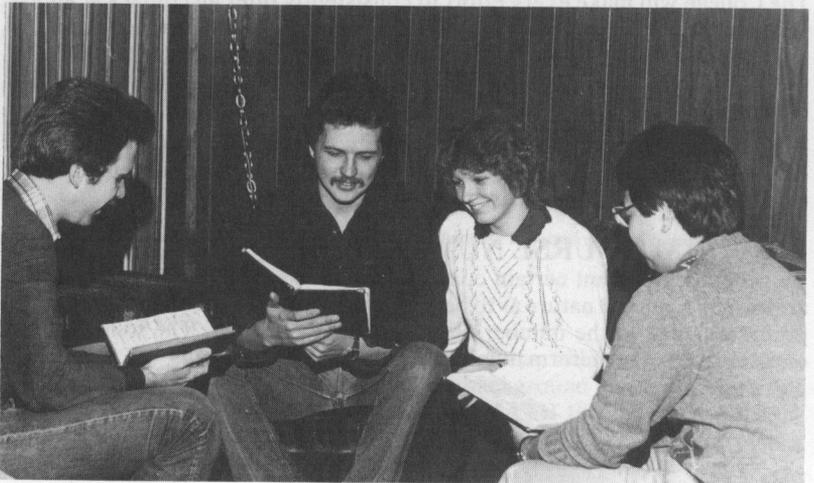
The College will make every effort to consistently offer all courses at appropriate intervals. It does reserve the right, however, to alter the sequences or drop courses if unforeseen circumstances in class enrollments, teacher staffing, etc., so dictate. The *Class Schedule* should be consulted for personal planning of course loads and schedules.

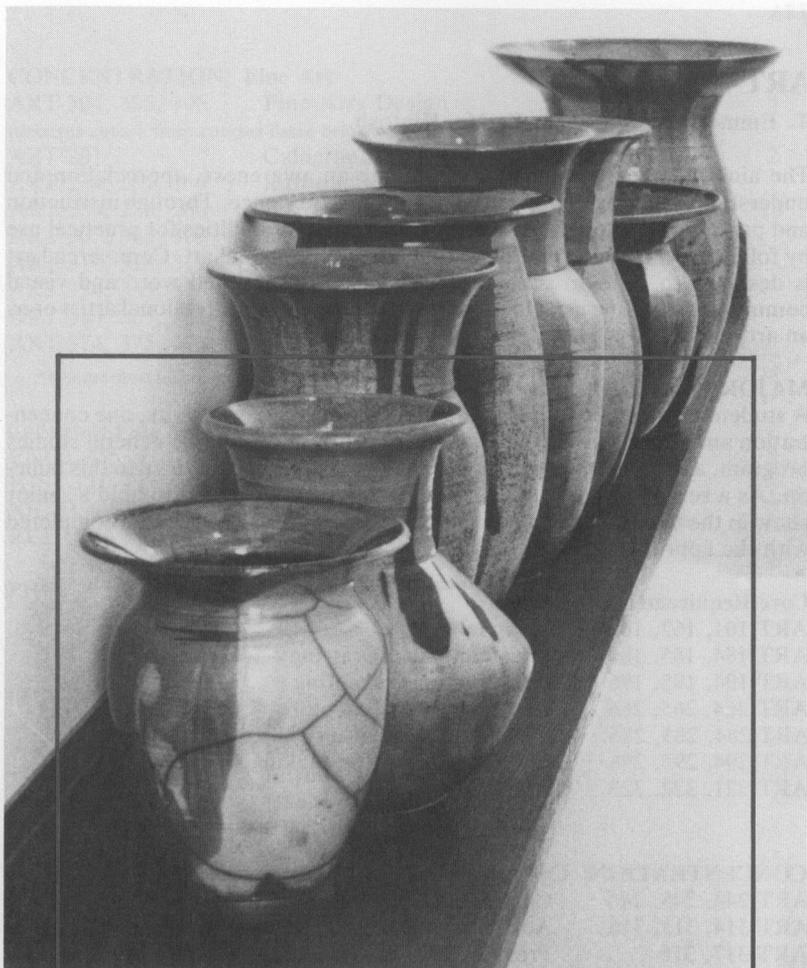
The College reserves the right to withdraw temporarily any course which does not have an adequate enrollment. A course may not be offered for fewer than six students except in case of seniors or graduate students.

UNIFORM COURSE NUMBERS

By general agreement certain course numbers are reserved for classes that are of such a general nature as to be found in many different departments. The prefix assigned to the number designates the discipline. The following are courses that carry uniform numbers through this bulletin:

- 100 REMEDIAL COURSES** 2-4
 Courses providing individualized help for students needing to improve basic skills in preparation for college level work. Credit will not apply toward graduation.
- 150 EXPERIENTIAL PROGRAM** 6; 18
 Programs with qualified supervision and structured experience including Student Missionary and Task Force. Credit will not apply toward graduation. Graded S or NC basis.
- 200; 400 TOPICS** 1-4; 6
 Each academic department may offer topics courses in specialized or experimental areas on either the lower division or advanced level. These courses are conducted through regular class activities and are approved as a one-time offering by the Curriculum Committee. See the *Class Schedule* for all approved Topics courses. One to four hours per quarter (except marine-oriented courses taken at the Marine Station).
- 274; 474 WORKSHOPS** 1-4; 6
- 279, 479 DIRECTED STUDY/RESEARCH** 1-4
 Certain academic departments may need to offer additional directed study or research in the major. See individual departments for specific course description.
- 280; 370; 490 DIRECTED FIELD WORK/PRACTICUM/EXPERIENCE** 2-16
- 396; 496; 497; 498 SEMINAR** 1-4; 4
- 471 GENERAL SECONDARY METHODS COURSE** (see Education) 2
- 472; 473 DEPARTMENTAL METHODS COURSES** 3
- 477 INDEPENDENT STUDY** *1-3; 6
 Each academic department may offer directed, independent study in an approved area. The student will be required to read widely on an assigned subject, follow regular research methods, and present a paper and/or project showing competence in the study. Independent study requires an advance written proposal and subsequent evaluation. All independent study must be approved by the department chairman who in turn will assign an adviser for the completion of this study. Special instructional procedures for off-campus independent study are available at the office of the Vice President for Academic Affairs. Course 477 is open only to majors and minors. One to three hours per quarter; maximum six hours. **Nine quarter hours of independent study is the maximum amount of credit allowed toward the 192 hours required for graduation.**
- 495 COLLOQUIUM** 0





Art

ART

T. Emmerson, Chairman; K. MacKintosh.

The aim of the department is to cultivate an awareness, appreciation and understanding of the various forms of visual experience. Through instruction and practice, the student may develop his creative abilities for practical use by following the concentration in fine art or commercial art. Commercial art is designed to develop skills in working with the printed word and visual communication; fine art will prepare the student as a professional artist or as an art teacher.

MAJOR IN ART (Bachelor of Arts)

A student majoring in art must complete the core requirements, one concentration and the required cognates for that concentration, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin. As a senior comprehensive, all art majors are required to hold a senior show in the Clyde and Mary Harris Art Gallery; the show is to be completed with the approval and coordination of the art faculty.

Core Requirements:

ART 161, 162, 163	Design	9
ART 184, 185, 186	Introduction to Drawing	6
ART 194, 195, 196	Introduction to Painting	} 14
ART 264, 265, 266	Introduction to Sculpture	
ART 284, 285, 286	Introduction to Pottery	
ART 294, 295, 296	Introduction to Printmaking	
ART 321, 322, 323	History of Art	<u>6</u>
		35

CONCENTRATION: Commercial Art

ART 244, 245, 246	Commercial Art	6
ART 314, 315, 316	Advertising Design	9
ART 317, 318	Printmaking	4
ART 201	Calligraphy	} *6
ART 307, 308	Drawing	
ART 319	Printmaking	

*2 hours must be upper division.

25

Cognates: Commercial Art

GRPH 154	Principles of Photography	2
GRPH 355	Applied Photography	3
HIST 121, 122	History of Western Civilization	8

CONCENTRATION: Fine Art

ART 304, 305, 306	Fine Arts Design	9
Electives chosen from courses listed below (limited to 5 areas):		
ART 201	Calligraphy	2
ART 264, 265, 266	Introduction to Sculpture	} *14
ART 284, 285, 286	Introduction to Pottery	
ART 307, 308, 309	Drawing	
ART 317, 318, 319	Printmaking	
ART 334, 335, 336	Painting	
ART 364, 365, 366	Sculpture	} —
ART 374, 375, 376	Pottery and Ceramic Sculpture	
*6 hours must be upper division.		25

Cognates: Fine Art

ENGL 455	Classical Backgrounds	3
HIST 121, 122	History of Western Civilization	8
RELH 405	Biblical Archaeology	2
REL 246	Christian Ethics	} 4
or		
PHIL 205	Introduction to Philosophy	

MINOR IN ART

A student minoring in art must complete 33 quarter hours:

ART 161, 162, 163	Design	9
ART 184, 185, 186	Introduction to Drawing	6
ART 321, 322, 323	History of Art	6
	Electives	<u>12</u>
Approval of art adviser required.		33

ART 161, 162, 163 DESIGN 3, 3, 3
Intensified study of the basic elements of design aimed to develop cognizance of visual organization.

ART 184, 185, 186 INTRODUCTION TO DRAWING 2, 2, 2
Experience in the use of line in representational and nonfigurative approaches, with application to still life and portraiture.

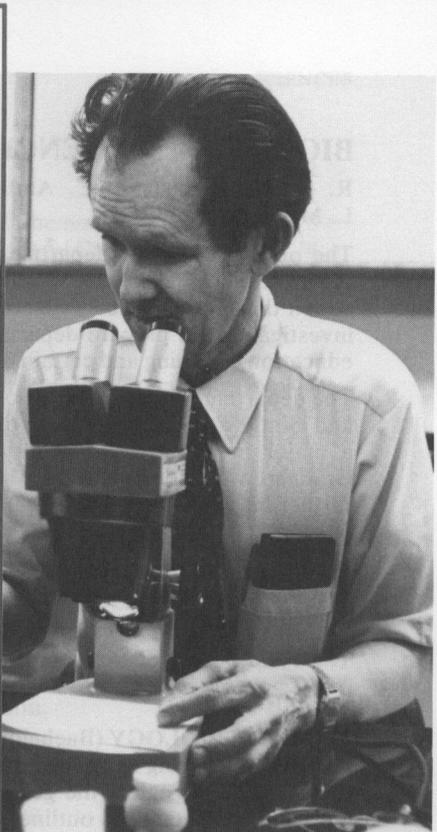
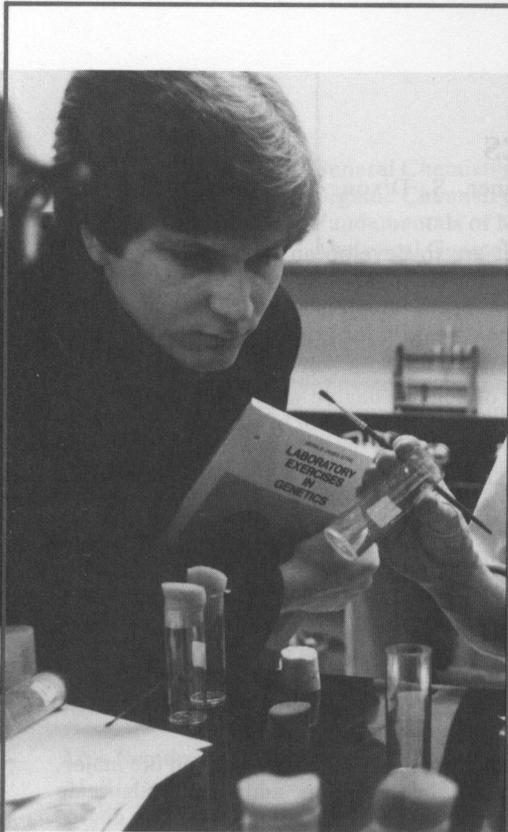
ART 194, 195, 196 INTRODUCTION TO PAINTING 2, 2, 2
Introduction to painting using acrylics and oil.

ART 201 CALLIGRAPHY 2
An introduction to italic handwriting with emphasis on the creative aspects of page layout and design and on developing a beautiful style. Includes individual study of selected hands chosen from foundational, uncial, chancery cursive or gothic hands.

ART 244, 245, 246 COMMERCIAL ART 2, 2, 2
An introduction to the various processes and media of commercial art, with emphasis on layout, design, new directions and craftsmanship. First quarter covers the basic principles of proportion and design applied to letters of the alphabet. Offered alternate years.

ART

- ART 251 INTRODUCTION TO ART** 4
Introduction to art for liberal arts students who wish to better understand and appreciate the visual arts of painting, sculpture, printmaking and the minor arts.
- ART 264, 265, 266 INTRODUCTION TO SCULPTURE** 2, 2, 2
The study and application of three-dimensional forms in space using varied media such as clay, plaster, plasticene and paper. Offered alternate years.
- ART 284, 285, 286 INTRODUCTION TO POTTERY** 2, 2, 2
An introduction to pottery and ceramic sculpture using wheel-thrown and hand-built forms. Stresses design as it relates to form, function and glaze decoration. Includes an introduction to the different methods of kiln firing.
- ART 294, 295, 296 INTRODUCTION TO PRINTMAKING** 2, 2, 2
Introduction to the art of printmaking, emphasizing the relief method — linoleum cut, woodcut and wood engraving. Includes a basic introduction to the intaglio method.
- ART 301 ART IN THE ELEMENTARY SCHOOL** 3
Principles of design and exploration of materials appropriate for primary and intermediate grade children. Methods of the intelligent use of art materials for the child of elementary-school age. Mandatory S grade.
- ART 304, 305, 306 FINE ARTS DESIGN** 3, 3, 3
Application of the basic principles and elements of design to be used in the fine arts field. Prerequisites: ART 161, 162, 163. Offered alternate years.
- ART 307, 308, 309 DRAWING** 2, 2, 2
An advanced study using the basic principles of drawing in various experimental approaches and advanced techniques. Prerequisites: ART 184, 185, 186.
- ART 314, 315, 316 ADVERTISING DESIGN** 3, 3, 3
Application of the basic principles and elements of design to be used in the commercial field of art. Prerequisites: ART 161, 162, 163; ART 244, 245, 246. Offered alternate years.
- ART 317, 318, 319 PRINTMAKING** 2, 2, 2
An advanced study of the various processes of intaglio printmaking, drypoint, engraving, etching and lithography. Open to majors and minors only. Prerequisites: ART 161, 162, 163; ART 184, 185, 186; ART 294, 295, 296.
- ART 321, 322, 323 HISTORY OF ART** 2, 2, 2,
A chronological study of the great periods in the history of art, their causes and developments; includes discussion of the relation between art and society and the implications of aesthetic understanding in each period. Prerequisites: HIST 121, 122. Offered alternate years.
- ART 334, 335, 336 PAINTING** 2, 2, 2
An advanced study of aesthetic enjoyment and understanding. Designed to develop the application of paint, including oil, casein or tempera. Prerequisites: ART 184, 185, 186; or ART 194, 195; 196.
- ART 364, 365, 366 SCULPTURE** 2, 2, 2
An advanced study of basic three-dimensional design principles, using metal, Fiberglas, wood and stone, emphasizing experimentation in direction, media and techniques. Prerequisites: ART 264, 265, 266. Offered alternate years.
- ART 374, 375, 376 POTTERY AND CERAMIC SCULPTURE** 2, 2, 2
An advanced study of the relationship of form, design and decoration to tableware and handbuilt sculptural forms. Includes the understanding and making of clay, glaze formulation, construction methods and kiln firing procedures. Prerequisites: ART 284, 285, 286.



Biological Sciences

*Required each quarter of junior and senior years in residence.

Electives must be chosen in consultation with and approval of the department advisor assigned by the department chairman. (One course each in botany and zoology is required.)

and by permission of the department chairman. (One course each in botany and zoology is required.)

BIOL 492

BIOL 483

BIOL 455

BIOL 446

BIOL 392

BIOL 332, 352, 354

Research Methods II, III, IV

BIOL 330

BIOL 306

BIOL 261

Major Requirements:

BIOL 101

BIOL 25

BIOLOGICAL SCIENCES

R. Carter, Chairman; C. Amlaner, S. Dixon, J. Galusha, A. Grable, L. McCloskey, D. Rigby.

The objectives of the department are to develop an understanding of the principles of biology which will better acquaint students with the world in which they live; to create an atmosphere which is conducive to individual investigation; to prepare department majors for graduate and professional education, teaching and certain careers in the biological sciences.

The department offers a Bachelor of Science degree with a major in biology, and jointly with the department of physics, a Bachelor of Science degree with a major in biophysics. Minors are offered in biology and agriculture. Graduate work leading to the Master of Science degree is also offered. For further information, see the *Graduate Bulletin*.

Exceptional opportunities for study in the biological sciences are possible during the summer at the Marine Station at Rosario Beach adjoining Deception Pass State Park, Anacortes, Washington. For further information, see the bulletin of the Marine Station.

The Field School of Biology travels to various parts of North America and offers courses in botany and zoology.

MAJOR IN BIOLOGY (Bachelor of Science)

A student majoring in biology must complete 57 quarter hours in the major, the required cognates, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin. Candidates for this degree who plan on graduate work in biology should counsel with the assigned academic adviser concerning the need of a foreign language. One summer term (10 credits) is required at the WWC Marine Station during which at least one upper-division, marine-oriented course must be taken. The Graduate Record Examination in biology is required.

Major Requirements:

BIOL 101, 102, 103	General Biology	12
BIOL 251	Research Methods I	1
BIOL 261	Genetics	4
BIOL 266	Developmental Biology	4
BIOL 350	Biostatistics	4
BIOL 352, 353, 354	Research Methods II, III, IV	3
BIOL 392	Cell Physiology	4
BIOL 446	General Ecology	4
BIOL 455	Research Methods V	1
BIOL 483	Philosophy of Origins and Speciation	3
BIOL 495	*Colloquium	0
	Electives (must be upper division)	<u>17</u>

Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman. One course each in zoology and botany is required. 57

*Required each quarter of juniors and seniors while in residence.

Cognates:

CHEM 141, 142, 143	General Chemistry	12
CHEM 321, 322, 323	Organic Chemistry	12
MATH 121, 122	Fundamentals of Mathematics	8
MATH 181	Analytical Geometry and Calculus I	4
PHYS 211, 212, 213	General Physics	9
PHYS 214, 215, 216	General Physics Laboratory	3

MAJOR IN BIOPHYSICS (Bachelor of Science)

A student majoring in biophysics must complete 33 quarter hours in biology and 35 quarter hours in physics, the required cognates, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin. One summer term (10 credits) is required at the WWC Marine Station during which at least one upper-division, marine-oriented course must be taken. Specific course requirements are outlined in the Interdisciplinary section. Graduate Record Examinations in biology and physics are required.

AGRICULTURE— APPLIED BIOLOGY (Associate of Science)

A student specializing in agriculture must complete 38 quarter hours in the area, the required cognates, the general studies program, and all associate degree requirements as outlined in this bulletin.

Area Requirements:

AGRI 266	Horticulture	4
AGRI 267	Turf and Landscaping	3
AGRI 361	Introduction to Soils	4
AGRI 363	Animal Science	3
AGRI 364	Crop Production	4
BIOL 101, 102, 103	General Biology	12
BIOL 261	Genetics	4
	Electives	4
		<hr/> 38

Cognates:

ACCT 115	Clerical Accounting	}	3-4
or			
ACCT 201	Principles of Accounting	}	8-12
or			
ECON 211	Principles of Economics	}	8
CHEM 101, 102	Introductory Chemistry		
or			
CHEM 141, 142, 143	General Chemistry		
MATH 121, 122	Fundamentals of Mathematics		8

Electives and cognates must be chosen in consultation with and approved by the academic adviser assigned by the department chairman.

BIOLOGICAL SCIENCES

MINOR IN AGRICULTURE

The minor in agriculture is designed to provide the student with a practical knowledge of a science relating to the basic needs of mankind. The student must complete 30 quarter hours. The following courses are required:

AGRI 262	Fruit Growing	2
AGRI 263	Home Gardening	3
AGRI 266	Horticulture	4
AGRI 361	Introduction to Soils	4
AGRI 362	Farm Management	3
AGRI 363	Animal Science	3
	Electives	<u>11</u>

Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman. 30

Cognates:

BIOL 101, 102, 103	General Biology	12
CHEM 101, 102	Introductory Chemistry	8

MINOR IN BIOLOGY

A student minoring in biology must complete 27 quarter hours, of which 8 must be upper division.

BIOL 101, 102, 103	General Biology	12
	One course in botany	4
	One course in zoology	4
	Electives (one course in agriculture may apply)	<u>7</u>

Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman. 27

AGRICULTURE (AGRI)

All AGR I courses are offered alternate years.

AGRI 260 PLANT PROPAGATION 3
Principles and methods of greenhouse propagation vegetatively and from seeds of herbaceous and woody plants. One laboratory per week.

AGRI 262 FRUIT GROWING 2
Study of fruit varieties, propagation, orchard soil management, fertilization, pest control, and harvesting.

AGRI 263 HOME GARDENING 3
Principles and methods of planning home gardens, preparing soil for planting, growing transplants, transplanting, fertilizing, irrigating, and planting for different seasons. One laboratory per week.

AGRI 266 HORTICULTURE 4
Study of plant growth and development, propagation, fertilizers, transplanting and horticulture crops. One laboratory per week.

AGRI 267 TURF AND LANDSCAPING 3
Principles and methods of cut-flower and potted-plant production, plant care in the home, laying out of lawns and shrubbery, tree planting, fertilizers, and cultivation. One laboratory per week.

AGRI 361 INTRODUCTION TO SOILS 4
Study of soil types, plant food, irrigation, soil testing, conservation, pollution. One laboratory per week. Prerequisites: CHEM 101, 102.

AGRI 362 FARM MANAGEMENT 3
Study of labor efficiency, credit, marketing, farm account records, causes of variation in farm income, measuring profits in farming, rates of crop and animal production. Requires special project.

AGRI 363 ANIMAL SCIENCE 3
Study of livestock breeds, nutrition and feeding, sanitation, judging, management and economics of beef and dairying, breeding and genetics. Prerequisites: BIOL 101, 102, 103.

AGRI 364 CROP PRODUCTION 4
Grain production, forage production, pasture management, fertilizers, weed control, marketing. Includes field trips and farm visitations. One laboratory per week. Prerequisites: BIOL 101, 102, 103.

BIOLOGY (BIOL)

College Place campus: *BIOL 101, 102, 103 is a prerequisite for all upper-division courses.*

BIOL 101, 102, 103 GENERAL BIOLOGY 4, 4, 4
Study of the basic principles of biology. Topics such as anatomy, physiology, cytology, genetics, taxonomy, ecology and embryology are considered with reference to both plants and animals. Must be taken in sequence. One laboratory per week.

BIOL 121 PHYSICAL GEOLOGY 4
Study of the earth, its materials, structures and the processes and forces that effect changes upon and within it. Laboratory training includes the recognition of common rocks and minerals, the use of topographic and geologic maps, and identification and interpretation of events recorded in the rocks. One laboratory per week. One weekend field trip required.

BIOL 201, 202 ANATOMY AND PHYSIOLOGY 4, 4
Study of human (organ-system) anatomy and physiology with reference to cellular, genetic and developmental relationships. First quarter studies include integumentary, skeletal, muscle, nervous and endocrine systems. Second quarter focuses on circulatory, respiratory, digestive, urinary and reproductive systems. Must be taken in sequence. One laboratory per week. Will not apply to biology major.

BIOL 222 MICROBIOLOGY 5
Study of the nature and control of bacteria and other disease-producing organisms; consideration of their relationship to human disease and the basic concepts of immunology. Two half laboratories per week. Prerequisites: CHEM 101, 102.

GEOL 231, 232 EARTH SCIENCE (HONORS) 4, 4
See Honors in the Interdisciplinary section of this bulletin for description.

BIOL 251 RESEARCH METHODS I 1
Introduction to the principles of scientific research and the function of the scientific methods. Prerequisites: BIOL 101, 102, 103. Graded S or NC.

BIOL 261 GENETICS 4
Study of the principles of inheritance in plants and animals. Laboratory work consists of both descriptive and experimental analysis of heredity. One laboratory per week. Prerequisites: BIOL 101, 102, 103.

BIOL 266 DEVELOPMENTAL BIOLOGY 4
Principles of development of plants and animals. Emphasizes problems of growth, differentiation and morphogenesis. Laboratory work consists of both descriptive and experimental analysis of development. Two laboratories per week. Prerequisites: BIOL 101, 102, 103. BIOL 261 recommended.

BIOL 350 BIOSTATISTICS 4
Practice and theory of statistical methods in quantitative biology. Prerequisites: MATH 121, 122.

BIOL 352 RESEARCH METHODS II 1
A laboratory course analyzing a broad spectrum of research problems in the biological sciences. Emphasis is placed on modern scientific approaches to, and the solution of these problems. Prerequisite: BIOL 251. Graded S or NC.

BIOLOGICAL SCIENCES

- BIOL 353 RESEARCH METHODS III** 1
Preparation for the senior thesis proposal. The student will work with departmental adviser on an independent basis, doing a literature search and sometimes appropriate preliminary experiments leading to the writing and completion of a senior thesis proposal. Prerequisite: BIOL 352 and permission of research adviser.
- BIOL 354 RESEARCH METHODS IV** 1
Collection and analysis of data for the senior thesis. Prerequisite: BIOL 353 and permission of research adviser.
- BIOL 360 SURVEY OF THE PLANT KINGDOM** 4
Study of the life histories, internal anatomy and physiology of the various members of the plant kingdom. One laboratory per week.
- BIOL 374 ANIMAL BEHAVIOR** 4 or 5
Introduction to animal behavior with emphasis on the historical perspective and classical experiments. Contributions from diverse disciplines such as neurophysiology, ecology, endocrinology, sociology, anatomy and medicine are drawn together to illustrate the dependence of ethology and animal behavior on the other life sciences. One laboratory per week. (College Place campus — 4 quarter hours; Marine Station — 5 quarter hours.)
- BIOL 389 NATURAL HISTORY OF VERTEBRATES** 4 or 5
Study of vertebrates with emphasis on natural history, ecology, and taxonomy. One laboratory per week. (College Place campus — 4 quarter hours; Marine Station — 5 quarter hours.)
- BIOL 392 CELL PHYSIOLOGY** 4
An investigation of the chemical and physical phenomena of plant and animal cells. Integrates function with the various cellular organelles. One laboratory per week. Prerequisites: BIOL 261; BIOL 266 or permission of instructor. Physics and organic chemistry strongly recommended.
- BIOL 393 ANIMAL PHYSIOLOGY** 4
Study of animal physiology with emphasis on integration of vertebrate organ systems. Two laboratories per week. Prerequisite: BIOL 392. Physics and organic chemistry strongly recommended.
- BIOL 401 PLANT PHYSIOLOGY** 4
A study of the principles of plant physiology. One laboratory per week. Prerequisites: BIOL 360; BIOL 392.
- BIOL 403 ORNITHOLOGY** 4
Systematic study of native birds of North America, with emphasis on identification, migration, geographical distribution, habits and life histories. Two laboratories per week.
- BIOL 405 GENERAL ENTOMOLOGY** 4
Study of insect morphology, physiology, ecology and classification. One laboratory per week.
- BIOL 407 PHILOSOPHY OF SCIENCE (or PHIL 407)** 4
Study of the scientific method as it relates to primary origins and present-day distributions of living things. Evidences from archeology and the physical and biological sciences are examined. Will not apply on biology major. Prerequisite: A completed general education science requirement.
- BIOL 412 PLANT ANATOMY** 4
Study of the microscopic anatomy of plant tissues with emphasis on their origin and development. Emphasizes the vascular plants. Recommended: BIOL 360. One laboratory per week.
- BIOL 424 HERPETOLOGY** 4
Systematic study of amphibians and reptiles with emphasis on natural history and ecology. Two laboratories per week.
- BIOL 426 SYSTEMATIC BOTANY** 4 or 5
Study of the principles of plant classification, together with a systematic survey of vascular plants, with emphasis on natural history and ecology. Two laboratories per week. One weekend field trip required. (College Place campus — 4 quarter hours; Marine Station — 5 quarter hours.)

- BIOL 429 LIMNOLOGY** 4
 Study of the factors responsible for the presence and distribution of animals and plants in fresh water. Field work includes trips to a number of lakes and streams for collection of living specimens as well as habitat analysis. Two laboratories per week.
- BIOL 432 INTRODUCTION TO PALEOBIOLOGY** 4
 Study of earth history as exhibited by the fossils with particular emphasis on paleobiological relationships. Two laboratories per week. Prerequisite: permission of instructor.
- BIOL 444 MAMMALOLOGY** 4
 Systematic study of mammals with emphasis on natural history and ecology. Two laboratories per week.
- BIOL 446 GENERAL ECOLOGY** 4
 Study of the relationship of plants and animals, both as individuals and assemblages, to their physical and biological environment. Field studies designed to examine ecological principles are part of the laboratory work. Two laboratories per week. Biostatistics, genetics and a minimum of one field natural history course recommended.
- BIOL 447 PARASITOLOGY** 5
 Systematic study of the morphology, life cycle and host-parasite relationships of protozoan, helminth and arthropod parasites. Two laboratories per week. Prerequisites or corequisites: CHEM 321, 322, 323.
- BIOL 449 VERTEBRATE HISTOLOGY** 4
 Study of the microscopic anatomy of vertebrate cells, tissues and organs, including reference to their functions. Two laboratories per week.
- BIOL 451 INVERTEBRATE ZOOLOGY** 5
 Study of the biology of the invertebrates with emphasis on their ecology, morphology and physiology. Two laboratories per week.
- BIOL 455 RESEARCH METHODS V** 1
 Methods of writing and orally presenting a scientific paper. Students present the results of their senior thesis in a seminar and submit a written manuscript of their senior thesis (see BIOL 251; BIOL 352; BIOL 353; BIOL 354).
- BIOL 458 PSYCHOBIOLOGY** 4
 Readings in, and discussion of, current concepts of the biological bases of behavior in animals and man. Material is of a comparative nature with emphasis on human behavior. One laboratory per week. Prerequisites: BIOL 101, 102, 103 or BIOL 201, 202 and PSYC 130 or permission of instructor. Recommended: BIOL 374.
- BIOL 465 BACTERIOLOGY** 5
 Principles of morphology and function of bacteria. Laboratory work, including unknowns, points out techniques employed in their study. Two laboratories per week. Prerequisites or corequisites: CHEM 321, 322, 323.
- BIOL 472 METHODS OF TEACHING BIOLOGY** 3
 Principles of teaching biology in the secondary school. Observation, demonstration and class presentation are required. Not applicable to a major or minor. Taught alternate years.
- BIOL 483 PHILOSOPHY OF ORIGINS AND SPECIATION** 3
 Comparison of the various theories on the origin and history of living organisms in light of present scientific knowledge in biochemistry, paleontology, morphology, geology, genetics and other related areas. For majors and minors only. Recommended for senior year.
- BIOL 490 TECHNIQUES IN FIELD BIOLOGY** 1-6
 Study of the techniques used in the collection and preservation of biological specimens for museum purposes. Emphasizes the recording and preservation of ecological data obtained with the collections of specimens. Topics vary depending on the instructor; credit will be given at the rate of one quarter hour for each week spent working in the field.
- BIOL 495 COLLOQUIUM** 0
 A lecture series designed to expose students to modern scientific research and researchers. Each lecture is normally given by a visiting scientist. Six quarters required of all junior, senior and graduate biology majors. Graded S or NC.

BIOLOGICAL SCIENCES

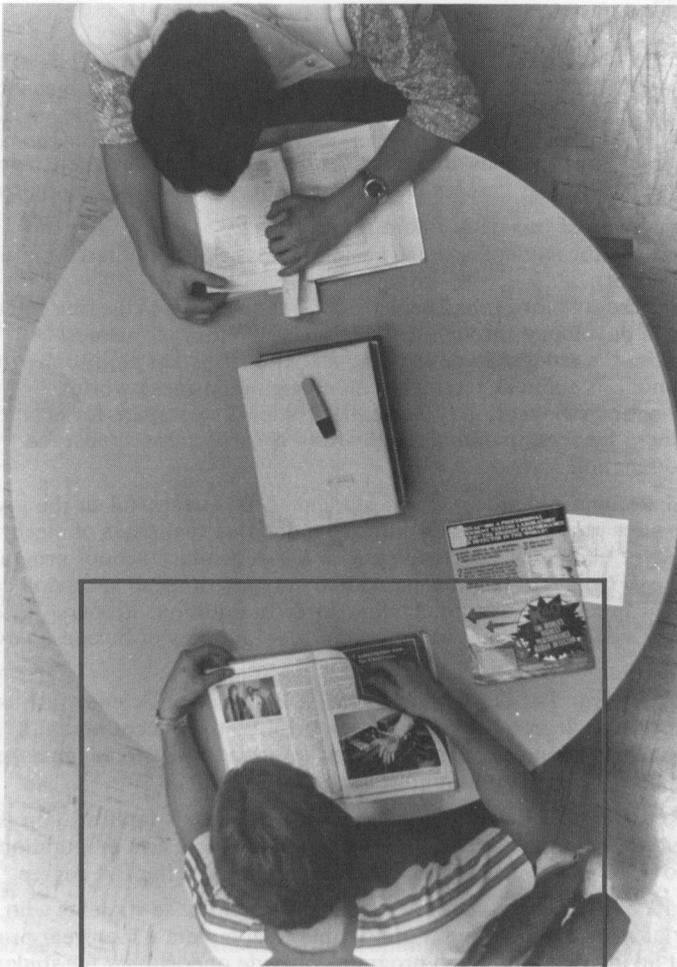
MARINE STATION:

BIOL 101, 102, 103 or equivalent is prerequisite for all courses listed below.

- BIOL 460 MARINE ECOLOGY*** 5
Study of interspecific, intraspecific and community relationships demonstrated by marine organisms.
- BIOL 462 ICHTHYOLOGY*** 5
Systematic study of the fishes found in Puget Sound, with a survey of the fishes of other waters.
- BIOL 463 MARINE BOTANY*** 5
Systematic study of plants found in Puget Sound, with a survey of marine plants from other areas.
- BIOL 467 INTRODUCTION TO OCEANOGRAPHY*** 5
A physical, chemical and geological study of the oceans and ocean basins as a habitat for life, emphasizing the mutual interaction between the oceanic biosphere and its environment.
- BIOL 468 COMPARATIVE PHYSIOLOGY** 5
Comparative study of the physiology and life processes of animals with emphasis on invertebrates. Prerequisite: BIOL 392.
- BIOL 470 MARINE BIOPHYSICS** 5
Introduction to the physical aspects of living organisms studied by the experimental and conceptual methods of physics with application to marine life.
- BIOL 475 MARINE INVERTEBRATES*** 5
A study of the biology of selected groups of marine invertebrates.

*Qualifies as a marine-oriented course.





Business

BUSINESS

R. Manuel, Acting Chairman; J. Aulick, A. Gibson, P. Joice, W. Messer, J. Paulman.

The courses and programs offered by the department are designed to prepare students for business careers with the church, government and industry.

The objectives of this department are:

- 1) to provide the student with the basic business skills required for initial job placement;
- 2) to give the student a broad background of knowledge of the free enterprise system developed through the several disciplines of business;
- 3) to assist the student in developing a sound Christian philosophy toward our modern political economy and changing business world;
- 4) to encourage Seventh-day Adventist students to prepare for positions of business leadership and service within organizations sponsored by this denomination.

General Recommendations. For a student to be successful in the cognate mathematics requirement, it is recommended that two years of algebra and one year of geometry be completed in the secondary school program. It would be desirable to complete a course in typewriting so such skill can be used as a functional communication tool. In addition, a course in office machines would prove advantageous in several types of business environments.

Degrees Offered. The department offers a Bachelor of Science in Business Administration degree (BSBA) with opportunity to concentrate in the areas of accounting, economics, management information systems, management or marketing. No minor is required.

A Bachelor of Arts degree with a major in business administration is also available to the student who wishes a broader liberal arts preparation than that provided by the BSBA. A minor is required for the BA degree.

Associate of Science degrees are also available for those students who, for a variety of reasons, may find it impossible to complete a four-year program without an interruption. Such programs provide opportunity for students to gain the basic knowledge and skills required for initial job placement. Minors are also available in either business or economics.

Students who plan to teach business subjects at the high-school level should consult with the department chairman or follow the business education program listed in the Department of Office Administration. Students may emphasize either business or office occupation skills.

Graduate Study. Students who anticipate graduate study in business areas or economics should note the specific requirements of the various schools where they intend to apply. In general, it is recommended that a minimum of one quarter of calculus be included in the undergraduate program. Curriculums of a quantitative nature usually require a year of calculus and additional mathematics courses.

BUSINESS (Bachelor of Science in Business Administration)

A student majoring in business must complete the core requirements, the required cognates, one concentration, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin.

Core Requirements:

ACCT 201, 202, 203	Principles of Accounting	}	10
or			
ACCT 205, 206	Principles of Accounting	}	4
CPTR 131	Data Processing		
ECON 211, 212	Principles of Economics		8
FINA 351	Financial Management		4
GBUS 263	Business Statistics		4
GBUS 266	Operations Research for Business		4
GBUS 361, 362	Business Law		8
GBUS 496	Seminar		2
MGMT 272	Principles of Management		4
MKTG 281	Principles of Marketing		4
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Cognates:

MATH 117	Precalculus	}	4-8
or			
MATH 121, 122	Fundamentals of Mathematics	}	4-8
or			
MATH 181	Analytic Geometry and Calculus I	}	3-4
OFAD 362	Business Communications		
or			
ENGL 325	Advanced Technical Writing	}	1-2
OFAD 208	Concepts in Office Machines		
PSYC 130	General Psychology		4
SPCH 101	Fundamentals of Speech Communication	}	3-4
or			
SPCH 207	Small Group Communication		

CONCENTRATION: Accounting

ACCT 321, 322, 323	Intermediate Accounting	9
ACCT 331, 332	Managerial Cost Accounting	6
ACCT 335	Personal Income Tax	3
ACCT 421	Advanced Accounting	4
ACCT 430	Auditing Concepts	3
ACCT 431	Auditing Practices	3
ACCT 435	Advanced Income Tax	3
	Electives	<hr/> 10

Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman. 41

BUSINESS

CONCENTRATION: Economics

ECON 341	Managerial Economics	4
ECON 343	Intermediate Macroeconomics	4
ECON 441	Money and Banking	4
	Electives (6 must be upper division accounting)	<u>29</u>

Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman. 41

CONCENTRATION: Management Information Systems (MIS)

CPTR 136	File-Oriented Programming (COBOL)	4
CPTR 236	Data Structures	4
CPTR 245	Intermediate COBOL	4
MIS 201	Introduction to MIS	3
MIS 315	Introduction to Information Systems Analysis	4
MIS 415 or MIS 440	Intermediate Information Systems Analysis	} 4
MIS 470	Database and Data Management Issues	
MIS 490	MIS Administration	4
	MIS Projects	4
	Electives	<u>10</u>

Students must demonstrate an ability in four computer languages. Electives and computer languages must be chosen in consultation with and approved by the academic adviser assigned by the department chairman. 41

CONCENTRATION: Management

ECON 341 or ECON 343	Managerial Economics	} 4
MGMT 372	Intermediate Macroeconomics	
MGMT 476	Human Resources Management	3
MGMT 479	Human Relations in Management	3
	Business Policies	3
	Electives (6 must be upper division accounting)	<u>28</u>

Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman. Students may select electives emphasizing general management, health facility administration, or human resources administration. 41

CONCENTRATION: Marketing

ECON 341	Managerial Economics	4
MKTG 383	Principles of Advertising	4
MKTG 384	Consumer Behavior	3
MKTG 385	Selling and Sales Management	4
MKTG 451	Research Methods	4
MKTG 489	Marketing Problems	4

BUSINESS

Two of the following courses are required:

MKTG 481	Public Relations	4
MKTG 485	Retail Store Operation and Management	4
MKTG 486	Marketing for Non-Profit Organizations	4
MKTG 488	International Marketing Electives	4
		<u>10</u>

Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman.

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MAJOR IN BUSINESS ADMINISTRATION (Bachelor of Arts)

A student majoring in business must complete 55 quarter hours in the major, the required cognates, a minor, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin.

Major Requirements:

ACCT 201, 202, 203	Principles of Accounting	}	10
or			
ACCT 205, 206	Principles of Accounting	}	4
CPTR 131	Data Processing		
ECON 211, 212	Principles of Economics		8
FINA 351	Financial Management		4
GBUS 263	Business Statistics		4
GBUS 361	Business Law		4
GBUS 496	Seminar		2
MGMT 272	Principles of Management		4
MKTG 281	Principles of Marketing		4
	Electives (7 must be upper division)		<u>11</u>

Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman.

55

Cognates:

MATH 117	Precalculus	}	4-8
or			
MATH 121, 122	Fundamentals of Mathematics		
or		}	1-2
MATH 181	Analytic Geometry and Calculus I		
OFAD 208	Concepts of Office Machines		1-2
OFAD 362	Business Communications	}	3-4
or			
ENGL 325	Advanced Technical Writing		4
PSYC 130	General Psychology		4
SPCH 101	Fundamentals of Speech Communication	}	3-4
or			
SPCH 207	Small Group Communication		

BUSINESS (Associate of Science)

A student specializing in business must complete 46 quarter hours in the area, the required cognates, the general studies program, and all associate degree requirements as outlined in this bulletin. Electives may be chosen in consultation with the academic adviser with emphasis in the area of interest such as Management Information Systems.

BUSINESS

Core Requirements:

ACCT 115, 116 and ACCT 206 or ACCT 201, 202, 203 or ACCT 205, 206	Clerical Accounting Principles of Accounting Principles of Accounting Principles of Accounting	}	10-11	
CPTR 131	Data Processing			4
ECON 211	Principles of Economics			4
FINA 101	Personal Finance			2
GBUS 361	Business Law		4	
	Electives		<u>21-22</u>	
Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman.			46	

Cognates:

MATH 105 or MATH 117 or MATH 121 OFAD 208	Mathematics With Applications Precalculus Fundamentals of Mathematics Concepts in Office Machines	}	4-5 1-2
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MANAGEMENT INFORMATION SYSTEMS (Associate of Science)

A student specializing in management information systems must complete 46 quarter hours in the area, the required cognates, the general studies program, and all associate degree requirements as outlined in this bulletin.

Core Requirements:

ACCT 115, 116 and ACCT 206 or ACCT 201, 202, 203 or ACCT 205, 206	Clerical Accounting Principles of Accounting Principles of Accounting Principles of Accounting	}	10-11	
CPTR 136	File-Oriented Programming (COBOL)			4
CPTR 225	Commercial Computer Application (RPG)			4
CPTR 227	Computer Operations			2
CPTR 236	Data Structures		4	
ECON 211	Principles of Economics		4	
MGMT 272	Principles of Management		4	
MIS 201	Introduction to MIS		3	
MIS 315	Introduction to Information Systems Analysis		4	
	Electives		<u>6-7</u>	
Students must, by credit or departmental exam, demonstrate an ability in three computer languages. Electives and computer languages must be chosen in consultation with and approved by the academic adviser assigned by the department chairman.			46	

Cognates

MATH 117	Precalculus	}	4-5
or MATH 121	Fundamentals of Mathematics		

MINOR IN BUSINESS

A student minoring in business must complete 30 quarter hours:

ACCT 201, 202, 203	Principles of Accounting	}	10
or ACCT 205, 206	Principles of Accounting		
ECON 211, 212	Principles of Economics		8
	Electives (8 must be upper division)		<u>12</u>

Approval of business adviser required. 30

MINOR IN ECONOMICS

A student minoring in economics must complete 30 quarter hours:

ECON 211, 212	Principles of Economics	8
ECON 341	Managerial Economics	4
ECON 343	Intermediate Macroeconomics	4
	Electives (8 must be upper division)	<u>14</u>

Approval of economics adviser required. 30

ACCOUNTING (ACCT)

ACCT 115, 116 CLERICAL ACCOUNTING 3, 3

Introduction to accounting theory and practice for office employees or owners of small businesses. Emphasizes cash control and checking account procedures, payroll and special problems related to service and merchandising firms. Credit will not be granted for this course and ACCT 201, 202, 205. Students completing ACCT 116 with a C or better grade may enter ACCT 206.

ACCT 201, 202, 203 or 205, 206 PRINCIPLES OF ACCOUNTING 4, 3, 3, or 5, 5

Study of accounting concepts and procedures required in the accumulation and presentation of data needed by management for decision making. Must be taken in sequence. May be taken in a two- or three-quarter sequence; the two-quarter sequence (205, 206) is 5 hours per quarter. See the *Class Schedule*.

ACCT 222 ACCOUNTING PROJECTS 2

Individualized laboratory course in which students will complete extended problems or practice sets. Such projects may be completed using manual accounting systems or computer systems where appropriate. If a computer project is anticipated, CPTR 131 or equivalent is a required prerequisite. Permission of instructor is required. Prerequisite: ACCT 116 or 203 or 206.

ACCT 321, 322, 323 INTERMEDIATE ACCOUNTING 3, 3, 3

Study of the construction, analysis, and interpretation of financial statements and reports prepared from accounting records. Basic accounting procedures employed in balance sheet evaluation and determination of profit. Prerequisite: ACCT 203 or ACCT 206.

ACCT 331, 332 MANAGERIAL COST ACCOUNTING 3, 3

Study of standards and budgets for control, cost-volume-profit relationships, discretionary and committee costs, application of overhead and analysis of variances, accounting systems for accumulating cost data, responsibility centers and controllable costs, long-range planning, and capital budgeting; quantitative techniques and computer problems applied to cost accounting. Prerequisite: ACCT 203 or ACCT 206.

ACCT 335 PERSONAL INCOME TAX 3

Study of tax regulations and accounting records necessary for proper tax accounting for individuals.

BUSINESS

- ACCT 421 ADVANCED ACCOUNTING** 4
Special accounting problems relating to partnership accounting, consolidated corporate financial statements, branch office accounting and trusts and estates; includes other topics related to consolidated statements. Prerequisite: ACCT 323.
- ACCT 423 CPA REVIEW** 4
Comprehensive review of problems covering accounting principles, procedures and presentations as found in the practice section of the CPA examination. Prerequisite: ACCT 323; ACCT 421 recommended.
- ACCT 425 ACCOUNTING THEORY** 4
Advanced study of financial accounting concepts and a number of topics related to the accounting profession, including the modern historical development of the profession, a critical study of its adaptability to changing economic and political conditions, and considerations for choosing accounting principles and developing a theory of accounting. Prerequisite or corequisite: ACCT 323.
- ACCT 427 FUND ACCOUNTING** 4
Study of the application of fund accounting principles to various governmental entities, school, hospital and church accounting systems. Prerequisite: ACCT 203 or ACCT 206. Offered alternate years.
- ACCT 430 AUDITING CONCEPTS** 3
Study of the auditing standards and concepts observed by certified public accountants in the examination of financial statements of business and other organizations. Prerequisite: ACCT 323.
- ACCT 431 AUDITING PRACTICES** 3
Study of auditing concepts emphasizing the application and operation of auditing. Methods of preparation of audit programs, work papers, internal control evaluations and report writing. Prerequisite: ACCT 430.
- ACCT 435 ADVANCED INCOME TAX** 3
Study of partnership and corporation income tax law; includes estate and gift taxes, trust reporting and researching income tax problems. Prerequisites: ACCT 203 or ACCT 206; ACCT 335.
- COMPUTER SCIENCE (CPTR)**
- CPTR 124 INTRODUCTION TO BASIC** 2
See Computer Science section of this bulletin.
- CPTR 131 DATA PROCESSING** 4
Study of fundamental software and hardware concepts as they apply to business applications. Students will obtain hands-on experience on several computer systems and a variety of peripheral devices. They will be required to write and execute a series of programs in BASIC and at least one in RPG II.
- CPTR 134 INTRODUCTION TO COMPUTING** 3
See Computer Science section of this bulletin.
- CPTR 136 FILE-ORIENTED PROGRAMMING (COBOL)** 4
Program development in the business environment, structured programming techniques, elementary file processing, and the syntax of the language. Introduction to programming in the COBOL language. Prerequisite: CPTR 131 or CPTR 134 or permission from the instructor.
- CPTR 225 COMMERCIAL COMPUTER APPLICATION (RPG)** 4
Principles of analyzing and solving practical business programming problems applicable to any computer or language; emphasis on standard flow charts peculiar to the problems commonly encountered in business situations; functional use of report program generator (RPG) language; experience in the use of a computer. Prerequisite: CPTR 131 or CPTR 134.
- CPTR 227 COMPUTER OPERATIONS** 2
See Computer Science section of this bulletin.
- CPTR 234 ASSEMBLY LANGUAGE PROGRAMMING II** 3
See Computer Science section of this bulletin.

CPTR 236 DATA STRUCTURES 4
See Computer Science section of this bulletin.

CPTR 245 INTERMEDIATE COBOL 4
Intermediate and advanced features of the COBOL language. Emphasis is on structured programming techniques, advanced file processing, programming style, and job control languages. Prerequisite: CPTR 136.

ECONOMICS (ECON)

ECON 211, 212 PRINCIPLES OF ECONOMICS 4, 4
Study of the organization, operation and control of the American economy and of the principles and analytical concepts pertaining thereto.

ECON 341 MANAGERIAL ECONOMICS 4
Study of the structure of markets, the determination of prices, the relations of price and cost, income and its functional distribution in a capitalistic economy. Prerequisite: ECON 211.

ECON 343 INTERMEDIATE MACROECONOMICS 4
Analysis of the determinants of the aggregate level of employment output and income of an economy. Prerequisite: ECON 212. Offered alternate years.

ECON 345 ECONOMIC HISTORY OF THE UNITED STATES 4
Study of the economic development of the United States from the colonial period to the present. Recommended: ECON 211, 212 or HIST 221. Offered alternate years.

ECON 441 MONEY AND BANKING 4
Study of the functional activities of the institutions which comprise the American financial system; emphasizing the nature and functions of money, credit and banking. Prerequisite: ECON 212. Offered alternate years.

ECON 443 COMPARATIVE ECONOMIC SYSTEMS 4
Study of the theoretical bases of capitalism, socialism and communism; includes a comparison of the modern systems in their response to basic economic problems. Prerequisites: ECON 211, 212. Offered alternate years.

ECON 455 PUBLIC FINANCE 4
Governmental expenditures, taxation, public debt and public financial administration; public policies on expenditures, taxation and debt management and their relation to business fluctuations. Prerequisites: ECON 211, 212.

FINANCE (FINA)

FINA 101 PERSONAL FINANCE 2
Introduction to the techniques of efficiently managing personal finances.

FINA 351 FINANCIAL MANAGEMENT 4
Study of the fundamental principles of financial policy in the organization and management of corporate enterprises. Prerequisites: ACCT 203 or ACCT 206 and ECON 212.

FINA 451 INVESTMENTS 4
Study of the principles of making sound investments in the securities markets, managing investment portfolios, and evaluating securities; the function of speculation, the hedging operation and the evaluation of market risks. Prerequisite: ACCT 203 or ACCT 206 or permission of the instructor. Offered alternate years.

FINA 453 CREDIT ADMINISTRATION 4
Study of loan and collection problems from the viewpoint of the credit administrator. Offered alternate years. Prerequisite: ACCT 203 or ACCT 206 or permission of the instructor.

BUSINESS

GENERAL BUSINESS (GBUS)

- GBUS 263 BUSINESS STATISTICS** 4
Study of descriptive and inferential statistics with emphasis on business and economics applications. Prerequisite: MATH 117 or MATH 122.
- GBUS 266 OPERATIONS RESEARCH FOR BUSINESS** 4
Study of operations research with applications in the functional areas of business. Includes study of systems and models, critical path methods, linear programming, inventory models, utility theory, Bayesian decision theory, queuing models, game theory, and simulation techniques. Students required to use a computer to solve a series of operations research problems. Prerequisite: GBUS 263.
- GBUS 361, 362 BUSINESS LAW** 4, 4
Introduction to the legal system with emphasis on contracts, sales, secured transactions, agency, and related sections of the Uniform Commercial Code. Includes the law of financial instruments, documents of title, securities regulations, and forms of business organization.
- GBUS 365 PRINCIPLES OF INSURANCE** 4
Study of insurance contracts, underwriting organizations and insurance representation and procedures. Offered alternate years.
- GBUS 367 REAL ESTATE** 4
Survey of the basic principles and problems of real estate management and appraisal.
- GBUS 462 PUBLIC POLICIES TOWARD BUSINESS** 4
Study of antitrust, regulated industry and certain special cases of government intervention in the marketplace. Prerequisite: ECON 211 or permission of the instructor.
- GBUS 491, 492 INTERNSHIP IN BUSINESS** 4, 4
On-the-job work experience with supplementary academic assignments provided in cooperation with a business organization or not-for-profit institution; taken only after junior-year business courses have been completed and only with the written approval of the department chairman. Application must be made during the first two weeks of the quarter prior to the actual work experience.
- GBUS 496 SEMINAR** 2
Introduction to business and economics research, problems and trends. Students will conduct independent study and research leading to a formal paper. Open only to majors during senior year.

MANAGEMENT (MGMT)

- MGMT 272 PRINCIPLES OF MANAGEMENT** 4
Study of the functions of management in terms of administrative organization, planning and control. Considers the setting of business objectives and policies, how executives make decisions and the problems that arise in the delegating of authority and responsibility. Recommended: GBUS 263; 266.
- MGMT 273 INTRODUCTION TO HEALTH CARE ORGANIZATIONS** 2
Introduction to the history, concepts and activities of health care systems. Focuses on the basic elements, the changing nature of the system and issues confronting the future health care system. Recommended: ACCT 203 or ACCT 206 and MGMT 272.
- MGMT 275 MANAGEMENT OF SMALL BUSINESSES** 3
Introduction to various concepts peculiar to the small business enterprise. Recommended: ACCT 203 or ACCT 206.
- MGMT 372 HUMAN RESOURCES MANAGEMENT** 3
Study of the human resource management functions and systems existing in complex public and private organizations; considers legal restraints and organizational structures. Prerequisite: MGMT 272.
- MGMT 377 INTRODUCTION TO LABOR RELATIONS** 3
Study of the role of unions in society, labor-management relations, and employee-related legislation, including current policies and interpretations of governmental agencies. Prerequisites: GBUS 361, 362; MGMT 372.

- MGMT 378 COLLECTIVE BARGAINING AND CONTRACT NEGOTIATING** 3
Study of the processes of collective bargaining, mediation, and arbitration; considers strategies used in contract negotiating and problems peculiar to private and public sectors; legal and ethical considerations. Prerequisite: MGMT 377.
- MGMT 379 COMPENSATION MANAGEMENT** 3
Study of procedures used in job analysis, evaluation, and performance appraisal; determining compensable factors and fringe benefits; legal and ethical considerations; administering the compensation program. Prerequisite: MGMT 372.
- MGMT 473 PRODUCTION MANAGEMENT** 3
A systems-oriented view of the production management field. Analysis and synthesis of elements common to production management. Prerequisites: ACCT 203 or ACCT 206 and MGMT 272; 273.
- MGMT 474 LEADERSHIP AND SUPERVISION** 3
Study of issues and concepts affecting the role of leadership in contemporary business environments. Prerequisite: MGMT 272 or upper division standing.
- MGMT 475 HEALTH CARE ORGANIZATION AND MANAGEMENT** 2
Analysis of health care organization with emphasis on organizational functions, structure, financial planning and controls. Prerequisites: ACCT 203 or ACCT 206, and MGMT 272; 273.
- MGMT 476 HUMAN RELATIONS IN MANAGEMENT** 3
Survey of the human relations problems found in various types of organizations. Recommended: MGMT 272 and MGMT 372.
- MGMT 479 BUSINESS POLICIES** 3
Study of policy-level decision making, the duties and responsibilities of top management in establishing policies, and objectives and future plans for business organizations. Prerequisites: completion of business core and MGMT 476.
- AGRI 362 FARM MANAGEMENT** 3
See the Biology section of this bulletin.

MANAGEMENT INFORMATION SYSTEMS (MIS)

- MIS 201 INTRODUCTION TO MANAGEMENT INFORMATION SYSTEMS (MIS)** 3
An overview of Management Information Systems (MIS); structure of information systems which support a wide range of organizational functions from routine processes to managerial decision making. Includes the development, operation, and evaluation of information systems, with examples drawn from application areas. Prerequisite: CPTR 131 or permission from the instructor.
- MIS 315 INTRODUCTION TO INFORMATION SYSTEMS ANALYSIS** 4
Information processing concepts; management of the information system; database concepts; systems analysis, design, evaluation and implementation. Management concepts for incorporating a computer-based system into the organization. Procedures for the development of computer-based information system applications. Prerequisites: ACCT 203 or 206; CPTR 245; ECON 212; MGMT 272; MIS 201.
- MIS 415 INTERMEDIATE INFORMATION SYSTEMS ANALYSIS** 4
Theoretical and applied approaches to information systems analysis. Characteristics of system's requirements, hardware, data and performance criteria. Prerequisites: CPTR 236; CPTR 245; MIS 315.
- MIS 440 DATABASE AND DATA MANAGEMENT ISSUES** 4
Concepts and methods in the management of the organizational data resource. Includes database management objectives, selection, acquisition, design, definition, creation, update, maintenance, revision, and use; role of the database administrator; database integrity, security, and privacy. Prerequisites: CPTR 236; CPTR 245; MIS 315.
- MIS 470 MIS ADMINISTRATION** 4
Theory and practice of planning, controlling and administering management information systems. Focus on the needs and responsibilities of management. Includes project selection, control, staffing, and use of outside services. Prerequisites: CPTR 236; MIS 315; 415 or 440.

BUSINESS

MIS 490 MIS PROJECTS 4

Application of management and technical skills to a real life situation. Students work in teams in the role of consultant and/or systems analyst. Prerequisites: CPTR 236; MIS 315; 415 or 440; AND permission from the instructor. Note: The instructor's permission must be obtained one quarter prior to registration.

MARKETING (MKTG)

MKTG 281 PRINCIPLES OF MARKETING 4

Study of the nature and operation of the market structure; methods of marketing agricultural products, raw materials and manufactured goods; considers marketing functions, institutions and costs. Prerequisites: ACCT 203 or ACCT 206; ECON 212 or permission of the instructor.

MKTG 383 PRINCIPLES OF ADVERTISING 4

Study of the principles, functions, forms and techniques of advertising; considers advertising media, personnel and institutions; persuasive mass communications in marketing; includes problem analysis and solution planning, budgeting, research, the use of media and creative techniques. Prerequisite: MKTG 381. Offered alternate years.

MKTG 384 CONSUMER BEHAVIOR 3

A study of the needs and attitudes of people that influence consumption decisions. Prerequisites: MKTG 281; PSYC 130.

MKTG 385 SELLING AND SALES MANAGEMENT 4

Study of the basic principles and techniques in selling and sales management; considers development of sales manuals and effective sales presentation methods, controlling the sales force. Offered alternate years.

MKTG 451 RESEARCH METHODS 4

Introduction to the principles of research design; data collection through surveys and other methods; scaling, sampling; and computer assisted statistical analysis. Prerequisites: GBUS 263; MKTG 281. Laboratory required. Same as PLSC 451; SOCI 451.

MKTG 481 PUBLIC RELATIONS 4

Introduction to public relations as a promotional activity of the firm; analysis of the techniques used to create and maintain goodwill. Offered alternate years.

MKTG 485 RETAIL STORE OPERATION AND MANAGEMENT 4

Study of the various types of retail institutions and their role in the distribution system. Problems of planning and control as they apply to the retail store. Special attention given to Adventist Book Center operation and school bookstores. Prerequisite: MKTG 381. Offered alternate years.

MKTG 486 MARKETING FOR NON-PROFIT ORGANIZATIONS 4

A detailed study of peculiar marketing needs for non-profit organizations. Prerequisite: MKTG 281.

MKTG 488 INTERNATIONAL MARKETING 4

Marketing management problems, techniques, and strategies necessary to incorporate the marketing concept into the framework of the world marketplace. Prerequisites: ECON 212; MKTG 281.

MKTG 489 MARKETING PROBLEMS 4

Application of marketing and decision-making techniques in solving a variety of marketing problems through case analyses. Prerequisites: GBUS 263; MKTG 281; MKTG 382; MKTG 384.

JOUR 465 PROMOTIONAL CAMPAIGNS 3

See the Communications section of this bulletin.

BUSINESS EDUCATION (BUED)

- BUED 474 WORKSHOP IN BUSINESS EDUCATION** 2
 Study of a major program or area of business education in terms of plans, procedures, materials, research and individual projects; techniques and methods designed to improve instructional competency. May be repeated.
- BUED 491 PRINCIPLES OF BUSINESS EDUCATION** 2
 Study of the problems, trends and recent developments in business education.
- BUED 496 SEMINAR IN BUSINESS EDUCATION** 2
 Study of a specific topic pertinent to business education. Topics may include consumer economic education, school and community relations, tests and measurements in business education, or audio-visual aids for use in business education.

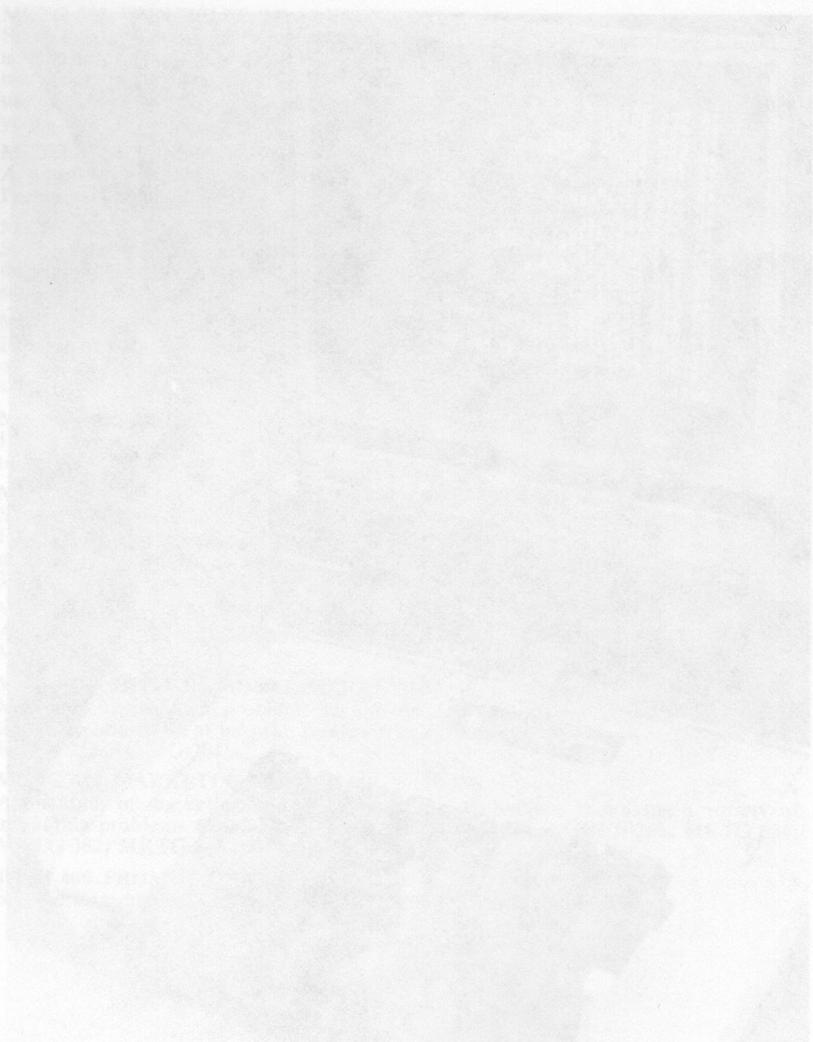


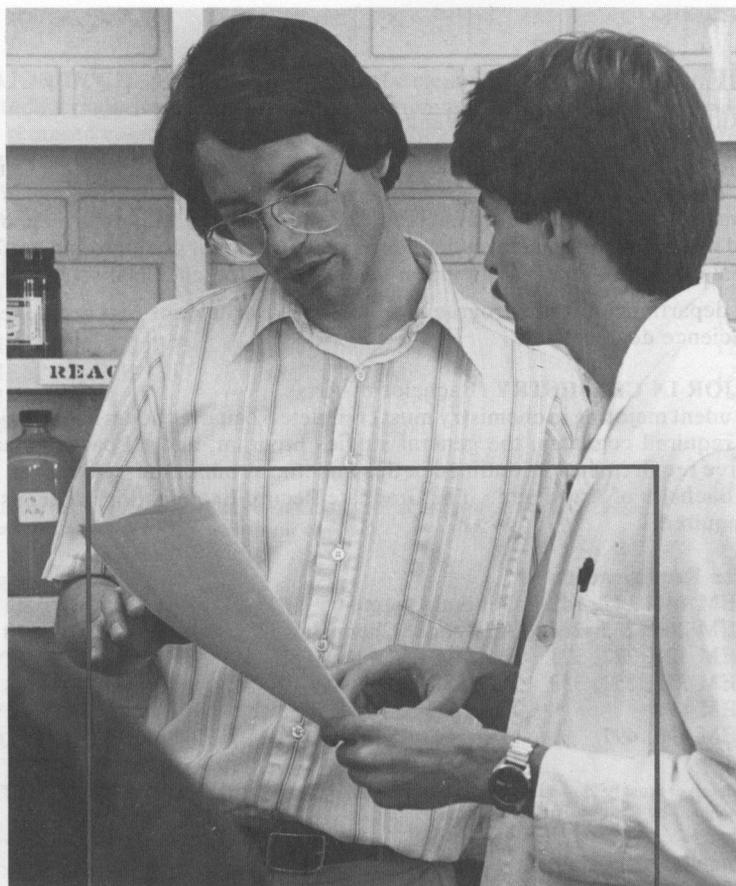
PROJECTS

Application of management and technical skills to solve business problems. Study of a major project or field of business education in terms of theory, practice, materials, research and individual projects. Assignments and reports designed to improve instructional competency. May be repeated.

PRINCIPLES OF BUSINESS EDUCATION (150)

Study of the problems, trends and recent developments in business education. Study of the seminar in business education in relation to the general education program. Study of the seminar in business education in relation to the general education program. Study of the seminar in business education in relation to the general education program.





Chemistry

CHEM 101, 102, 103 INTRODUCTORY CHEMISTRY 4 4
 Introduction to chemistry, covering the fields of inorganic, organic, and biochemistry. Must be taken in sequence. One laboratory per week. Prerequisites: MATH 181, 182, 183.

CHEM 101, 102, 103 GENERAL CHEMISTRY 4 4, 4, 4
 Study of the structure and properties of matter; atomic theory, periodicity, chemical bonding, and thermodynamics. Must be taken in sequence. One laboratory per week. Prerequisites or corequisites: MATH 121, 122 or equivalent.

CHEMISTRY

R. Rittenhouse, Chairman; R. Jenks, S. Lee, R. Wade.

The department seeks to introduce the student to a basic science in a Christian environment and to acquaint the major with the four broad fields of chemistry: analytical, inorganic, organic and physical. Majors are encouraged to conduct original investigation as preparation for graduate and professional education and for careers in teaching and the chemical sciences.

The department offers a program leading to the Bachelor of Arts or Bachelor of Science degrees.

MAJOR IN CHEMISTRY (Bachelor of Arts)

A student majoring in chemistry must complete 52 quarter hours in the major, the required cognates, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin. A minor must be chosen for the Bachelor of Arts degree. The Graduate Record Examination in chemistry is required.

Major Requirements:

CHEM 141, 142, 143	General Chemistry	12
CHEM 264, 265, 266	Analytical Chemistry	10
CHEM 321, 322, 323	Organic Chemistry	12
CHEM 351, 352, 353	Physical Chemistry	12
CHEM 479	Directed Study/Research	2
CHEM 496, 497	Chemistry Seminar	2
	Electives	<u>2</u>

Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman.

52

Cognates:

CPTR 125	Principles of BASIC	}	2-4
or			
CPTR 134	Introduction to Computing		
or		}	8
CPTR 135	Algorithmic Programming		
MATH 181, 281	Analytic Geometry and Calculus I, II		
PHYS 211, 212, 213	General Physics	}	12
PHYS 214, 215, 216	General Physics Laboratory		
or			
PHYS 251, 252, 253	Principles of Physics		
PHYS 254, 255, 256	Principles of Physics Laboratory		

MAJOR IN CHEMISTRY (Bachelor of Science)

A student majoring in chemistry must complete 65 quarter hours in the major, the required cognates and the general studies program for the baccalaureate degree as outlined in this bulletin. No minor is required for the Bachelor of Science degree, but minors in both mathematics and physics are recommended. The Graduate Record Examination in chemistry is required.

Major Requirements:

CHEM 141, 142, 143	General Chemistry	12
CHEM 264, 265, 266	Analytical Chemistry	10
CHEM 321, 322, 323	Organic Chemistry	12
CHEM 351, 352, 353	Physical Chemistry	12
CHEM 479	Directed Study/Research	3
CHEM 496, 497	Chemistry Seminar	2
	Electives	<u>14</u>
		65

Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman.

Cognates:

CPTR 125	Principles of BASIC	}	2-4
or			
CPTR 134	Introduction to Computing		
or		}	16
CPTR 135	Algorithmic Programming		
MATH 181, 281-283	Analytic Geometry and Calculus, I-IV		
PHYS 211, 212, 213	General Physics	}	12
PHYS 214, 215, 216	General Physics Laboratory		
or			
PHYS 251, 252, 253	Principles of Physics		
PHYS 254, 255, 256	Principles of Physics Laboratory		

MINOR IN CHEMISTRY

A student minoring in chemistry must complete 27 quarter hours; 3 must be upper division. The following courses are required:

CHEM 141, 142, 143	General Chemistry	12
CHEM 321, 322, 323	Organic Chemistry	12
	Electives (in addition to General and Organic)	<u>3</u>
		27

Electives must be chosen in consultation with department chairman.

CHEMISTRY (CHEM)**CHEM 101, 102 INTRODUCTORY CHEMISTRY**

4, 4

Introduction to chemistry, covering the fields of inorganic, organic, and biochemistry. Meets the general studies requirement for a science sequence, but does not apply on a major or minor. Must be taken in sequence. One laboratory per week.

CHEM 141, 142, 143 GENERAL CHEMISTRY

4, 4, 4

Study of the structure and states of matter; atomic and molecular theory, including valency, and periodicity and bonding; solutions and equilibria, stoichiometry, kinetics and thermodynamics; and the descriptive chemistry of metals and nonmetals. Must be taken in sequence. One laboratory per week. Prerequisites or corequisites: MATH 121, 122 or equivalent.

CHEMISTRY

- CHEM 264, 265, 266 ANALYTICAL CHEMISTRY** 4, 3, 3
Principles of analytical chemistry. First quarter includes a study of data treatment and certain gravimetric, volumetric and spectrophotometric methods of analysis. Second quarter emphasizes ionic equilibrium and electrochemistry. Third quarter covers electroanalytical and chromatographic methods. One laboratory per week. Prerequisite: CHEM 143.
- CHEM 321, 322, 323 ORGANIC CHEMISTRY** 4, 4, 4
Principles of organic chemistry; their application to the preparation, properties, and reactions of aliphatic, aromatic, and a few heterocyclic compounds. Laboratories will introduce organic techniques and emphasize synthesis, purification, and identification of organic compounds using spectroscopic methods; includes an introduction to chemical literature. One laboratory per week. Prerequisite: CHEM 143.
- CHEM 351, 352, 353 PHYSICAL CHEMISTRY** 4, 4, 4
Study of quantum theory, molecular symmetry, spectroscopy, thermodynamics, and kinetics. Laboratory includes spectroscopic determination of molecular parameters, thermodynamic and kinetic measurements on chemical systems, and computer calculation of wave functions. One laboratory per week. Prerequisites: CHEM 266; CPTR 125 or CPTR 134 or CPTR 135; MATH 281; PHYS 213 or PHYS 253.
- CHEM 427 ORGANIC STRUCTURE AND MECHANISMS** 3
In-depth study of the structures of organic molecules and the theories of reaction mechanisms. Laboratories emphasize structure. One laboratory per week. Prerequisite: CHEM 323.
- CHEM 428 ORGANIC SYNTHESIS** 3
Analysis of current methods used to synthesize complex organic molecules. Laboratories emphasize synthesis and spectroscopic interpretation of results. One laboratory per week. Prerequisite: CHEM 323.
- CHEM 431 BIOCHEMISTRY** 4
Study of the chemistry of carbohydrates, lipids, proteins, nucleic acids and porphyrins; the nature and mode of action of enzymes; intermediary metabolism. Prerequisite: CHEM 323. BIOL 392 recommended.
- CHEM 442 CHEMISTRY OF MAIN GROUP ELEMENTS** 2
Study of energetics and structures as guides to main group chemistry. Lewis acid base concepts. Prerequisites: CHEM 143; CHEM 351 or consent of instructor.
- CHEM 443 TRANSITION METAL CHEMISTRY** 2
Study of coordination chemistry of first row transition elements, crystal field and Ligand field theory, and organometallics. Prerequisites: CHEM 143; CHEM 351 or consent of instructor.
- CHEM 461 OPTICAL INSTRUMENTAL METHODS** 3
Principles of optical methods of chemical analysis. Theory and application of ultraviolet, visible, infrared and atomic absorption spectroscopy. One laboratory per week. Prerequisite: CHEM 266. Corequisite: CHEM 351.
- CHEM 462 NONOPTICAL INSTRUMENTAL METHODS** 3
Principles of nonoptical methods of analysis. Theory and application of gas chromatography, mass spectrometry and electroanalytical techniques. One laboratory per week. Prerequisite: CHEM 266. Corequisite: CHEM 351.
- CHEM 472 METHODS OF TEACHING CHEMISTRY** 3
Methods, materials and techniques of teaching chemistry on the secondary-school level. Requires observation, demonstration and class presentations. Will not apply on a major or minor.
- CHEM 479 DIRECTED STUDY/RESEARCH** 1-3
Original investigation of a chemical research problem carried out under the direction of an assigned faculty member. Most projects involve one laboratory period per week per credit hour.
- CHEM 496, 497 CHEMISTRY SEMINAR** 1, 1
Formal introduction to fields of current chemical research. Student will prepare and present papers covering various areas of chemical research as well as attend all Chemistry Colloquia. Prerequisites: CHEM 266; CHEM 323 or consent of instructor.

COMMUNICATIONS

L. Dickinson, Chairman; D. Bullock, J. Hannum, D. Rigby, C. Wood.

The department's programs are intended to develop articulate Christian communicators while preparing students in communications-related professions. The department offers three majors, with minors in speech communication, journalism, and broadcast media.

The mass media major is offered through the cooperation of several departments whose courses include mass communication areas. It trains, primarily, those interested in journalism, broadcasting, audiovisual production, public relations, and promotional work. This major also provides a preprofessional foundation which enables students to take advanced work in a specialized communications area such as advertising or public relations.

The speech communication major emphasizes public, small group and interpersonal communication. It is designed for the student intending to teach oral communication, or is used as an adjunct to other preparations in which interpersonal and public speech communication skills are particularly important.

The speech-language pathology and audiology major trains students to become speech and hearing therapists. The curriculum is considered primarily preprofessional. Graduate work must be subsequently taken to certify the student at the national professional level and as required by most states.

MAJOR IN MASS MEDIA (Bachelor of Arts)

A student majoring in mass media must complete the core requirements, one concentration, the required cognates, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin.

Core Requirements:

COMM 145	Mass Communication Media	4
COMM 231	Broadcast Techniques and Announcing	4
COMM 357	Communication Law and Ethics	3
COMM 495	Senior Project	1
COMM 496	Seminar in Mass Media	3
JOUR 245	Journalistic Writing	4
JOUR 246	Reporting Methods	3
MKTG 481	Public Relations	3-4
or		
COMM 385	Church Public Relations	4
SPCH 101	Fundamentals of Speech Communication	
		29-30

CONCENTRATION: Journalism

JOUR 257	Photojournalism	2
JOUR 341	Article Writing	4
JOUR 451	Publication Production	4
JOUR 465	Promotional Campaigns	3
	Electives (at least 6 must be writing)	11-12
		24-25

COMMUNICATIONS

CONCENTRATION: Media

COMM 301	Audio Production	4
COMM 302	Video Production	4
COMM 303	Video Production	} 4
or		
COMM 305	Multimedia Design and Production	} 4
COMM 352	Survey of Broadcasting	
	Electives	9
		<u>25</u>

Cognates:

ART 244	Commercial Art	} 2-3
or		
PRNT 295	Printing Layout and Design	} 2
GRPH 154	Principles of Photography	
GRPH 155	Photo Laboratory	1
MKTG 281	Principles of Marketing	} 4
or		
MKTG 383	Principles of Advertising	} 0-3
OFAD 113	Basic Keyboarding (or proficiency)	
or		
OFAD 225	Word Processor Keyboarding	} 3
PRNT 121	Introduction to Graphic Arts	

MAJOR IN SPEECH COMMUNICATION (Bachelor of Arts)

A student majoring in speech communication must complete 48 quarter hours in the major, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin.

Major Requirements:

SPCH 101	Fundamentals of Speech Communication	4
SPCH 107	Voice and Articulation	3
SPCH 211	Oral Interpretation	3
SPCH 443	Persuasive Speaking	} 3
or		
SPCH 453	Rhetoric and Public Address	} 3
SPPA 210	Survey of Speech-Language Pathology and Audiology	
SPPA 291	Anatomy/Physiology of Speech/Hearing	5
	Electives (18 must be upper division)	<u>27</u>
		48

Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman.

MAJOR IN SPEECH-LANGUAGE PATHOLOGY AND AUDIOLOGY

(Bachelor of Science)

A student majoring in speech-language pathology and audiology must complete 66 quarter hours in the major, the required cognates, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin.

COMMUNICATIONS

Major Requirements:

SPCH 101	Fundamentals of Speech Communication	4
SPCH 107	Voice and Articulation	3
SPCH 401	Introduction to General Semantics	2
SPPA 210	Survey of Speech-Language Pathology and Audiology	3
SPPA 275	Phonetics	3
SPPA 291	Anatomy/Physiology of Speech/Hearing	5
SPPA 371	Introduction to Audiology	3
SPPA 372	Audiometry	3
SPPA 373	Aural Rehabilitation	3
SPPA 383	Language Acquisition	4
SPPA 385	Language Disorders	4
SPPA 389	Phonological Disorders	4
SPPA 390	Directed Clinical Observation	1
SPPA 391	Clinical Methods in Speech-Language Pathology	4
SPPA 393	*Clinical Practicum	4
SPPA 461	Diagnosis in Speech-Language Pathology	3
SPPA 471	Neurogenic Communication Disorders	4
SPPA 473	Cleft Palate	3
SPPA 475	Voice Disorders	3
SPPA 479	Stuttering	3
		<u>36</u>

*Majors are expected to be active in the clinic each quarter of their junior and senior years and must have a minimum of 100 clock hours of client contact prior to registration for SPPA 484 and for graduation.

Cognates:

BIOL 201, 202	Anatomy and Physiology	8
ENGL 485	Linguistics	3
MATH 106	Applied Statistics	} 4
or		
PSYC 350	Elementary Statistics	} 4
PSYC 215	Psychology of Childhood and Adolescence	
PSYC 430	Psychological Testing	3
PSYC 431	Psychology of Exceptional Children	} 3
or		
PSYC 460	Childhood Learning Disorders	} 4
SOCI 204	General Sociology	

MINOR IN SPEECH COMMUNICATION

A student minoring in speech communication must complete 27 quarter hours:

SPCH 101	Fundamentals of Speech Communication	4
	Electives (9 must be upper division)	<u>23</u>

Approval of speech communication adviser required.

27

MINOR IN JOURNALISM

A student minoring in journalism must complete 27 quarter hours, of which 9 must be upper division.

COMM 145	Mass Communication Media	4
JOUR 245	Journalistic Writing	4
JOUR 246	Reporting Methods	3
	Electives (minimum of one additional writing course)	<u>16</u>
		27

Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman.

MINOR IN BROADCAST MEDIA

A student minoring in broadcast media must complete 27 quarter hours, of which 9 must be upper division.

COMM 145	Mass Communication Media	4
COMM 231	Broadcast Techniques and Announcing	4
JOUR 245	Journalistic Writing	4
	Electives	<u>15</u>
		27

Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman.

COMMUNICATIONS (COMM)

COMM 145 MASS COMMUNICATION MEDIA 4
Introduction to the organization, operation and control of the mass media in America, with emphasis on the social function of mass communication and the characteristics of media audiences.

COMM 231 BROADCASTING TECHNIQUES AND ANNOUNCING 4
Introduction to radio station control room operations and announcing performance for radio and television. Emphasis on vocal delivery and on-camera performance for a variety of program types and broadcast situations including continuity, commercials, music, news, interviews, and talk shows.

COMM 301 AUDIO PRODUCTION 4
Advanced study of the aesthetics of the sound medium and procedures for creative sound production in various media. Covers directing the audio session, studio and remote recording, mixing, production music and sound effects, music recording, and technical quality control. Prerequisite: COMM 231.

COMM 302, 303 VIDEO PRODUCTION 4, 4
Study of video and film production principles and techniques. Includes single and multi camera and microphone operations, directing, video recording, program design, budgeting, lighting, post-production editing. Prerequisite: COMM 231 or equivalent experience.

COMM 305 MULTIMEDIA DESIGN AND PRODUCTION 4
Study and experience in scripting, budgeting, slide photography, titling, audio production, and synchronization for single and multiprojector slide programs. Prerequisites: COMM 231 or equivalent; GRPH 154.

COMM 352 SURVEY OF BROADCASTING 4
Study of the organization and operation of stations, networks, cable services and related activities, including religious broadcasting. Also includes an introduction to audience analysis and an overview of world systems of broadcasting.

COMMUNICATIONS

- COMM 357 COMMUNICATION LAW AND ETHICS** 3
Study of the legal and ethical aspects of the news-gathering materials for articles and preparation of manuscripts for publication. Offered alternate years.
- COMM 385 CHURCH PUBLIC RELATIONS** 3
Introduction to public relations techniques employed by the minister and layman to present effectively the church message to the local community. Includes internal and external church public relations, advertising, media relations, writing for the print and electronic media. Intended for mass media and non-mass media majors. Offered alternate years.
- COMM 490 PRACTICUM IN MASS MEDIA** 1-4
Practical experience in broadcasting news, and/or public relations with participating agencies. The student works under the cooperative direction of professionals and the department. Evaluated on the S or NC basis. Instructor's permission must be obtained one quarter before registration.
- COMM 495 SENIOR PROJECT** 1
A student-selected, department-approved project to demonstrate one's ability to perform in his major field of instruction. Satisfactory completion of this course constitutes the department comprehensive requirement for the bachelor's degree. This course will be evaluated on the S or NC basis.
- COMM 496 SEMINAR IN MASS MEDIA** 2, 1
An integrating course required of all mass media majors in the senior year. Study includes a review of literature, research, and research methods in media. Experience in writing critical reviews. Individual research projects in areas of special relevance to the student. Group conferences and oral presentation of formal papers.
- SPEECH COMMUNICATION (SPCH)**
- SPCH 101 FUNDAMENTALS OF SPEECH COMMUNICATION** 4
Introduction to the procedure of public speaking. The course places emphasis on acquiring ease, a conversational attitude, and reasonable facility in organizing and delivering content relevant to the audience.
- SPCH 107 VOICE AND ARTICULATION** 3
Study of and practice in improving the speaking voice, with emphasis on the function of the speech mechanism, the quality and effectiveness of voice, and the development of clear and correct pronunciation, enunciation and articulation.
- SPCH 207 SMALL GROUP COMMUNICATION** 3
Study of the nature of group and interpersonal processes; includes leadership and participation in group discussion.
- SPCH 211 ORAL INTERPRETATION** 3
Study of the various types of interpretative literature with a view toward its understanding for the purpose of public presentation; includes reading from the printed page with fluency and effectiveness, and reading from the Scriptures.
- SPCH 252 PLAY PRODUCTION** 1-3
Analysis, rehearsal and performance of a play chosen by the instructor. May be taken only by permission of the instructor.
- SPCH 275 COMMUNICATION THEORY** 2
Examination of contemporary thought on the nature and process of communication.
- SPCH 310 INTERPERSONAL AND NONVERBAL COMMUNICATION** 2
Examination both of the process and the messages, verbal and nonverbal, that characterize interpersonal communication; employs readings, discussion and strategies useful in interpersonal interactions.
- SPCH 341 ARGUMENTATION** 4
Examination of informal logic to develop critical thinking; includes study of evidence, reasoning, and fallacies; application of evidence and logical forms by analyzing current rhetoric and debating contemporary issues.
- SPCH 363 HISTORY OF DRAMATIC ARTS** 4
Study of the history and development of the theater from the Greek to the twentieth century.

- SPCH 365 PLAY DIRECTION** 3
 Fundamentals of play direction; each student produces and directs a one-act play or one act from a longer play for public performance.
- SPCH 381, 382, 383 BIBLICAL PREACHING** 2, 2, 2
 See the Religion section of this bulletin.
- SPCH 401 INTRODUCTION TO GENERAL SEMANTICS** 2
 Study of the use of language to influence human behavior; language in problem solving and as a means of resolving conflicts.
- SPCH 443 PERSUASIVE SPEAKING** 3
 Study of motivation and human behavior as applied by the public speaker in the process of persuasion; analysis of persuasive speeches for emotional, ethical and logical proof; practice in composing and delivering speeches to stimulate and convince. Prerequisite: SPCH 101.
- SPCH 453 RHETORIC AND PUBLIC ADDRESS** 3
 Study of the principles of rhetoric proposed by Aristotle, Quintillian, Cicero and others; the relationship of the principles of rhetoric to modern speechmaking. Prerequisite: SPCH 101.
- SPCH 472 METHODS OF TEACHING SPEECH COMMUNICATION** 3
 Study of the basic principles and practices of teaching speech on the junior high and secondary levels. Special attention will be given to the contemporary methods of presentation in classroom and therapy situation; includes observations, demonstration and class participation.
- ENGL 484 HISTORY OF THE ENGLISH LANGUAGE** 3
 See the English section of this bulletin.
- ENGL 485 LINGUISTICS** 3
 See the English section of this bulletin.
- SPEECH-LANGUAGE PATHOLOGY AND AUDIOLOGY (SPPA)**
- SPPA 100 INDIVIDUALIZED SPEECH INSTRUCTION** 1-3
 Appraisals and remedial service for speech and hearing problems; maximum one hour per quarter; by permission of the speech clinic director.
- SPPA 210 SURVEY OF SPEECH-LANGUAGE PATHOLOGY AND AUDIOLOGY** 3
 Survey of communication disorders with major emphasis given to the etiologies, symptomatology, and the recognition of speech, language, voice and hearing disorders.
- SPPA 250 BASIC MANUAL COMMUNICATION** 3
 Introduction to the basic signs used in communicating with the hearing impaired; includes group practice in signing letters, words, sentences, and songs.
- SPPA 275 PHONETICS** 3
 Study of the theory, history, development and application of the international phonetic alphabet, its application to speech correction and to adequate pronunciation.
- SPPA 291 ANATOMY AND PHYSIOLOGY OF SPEECH AND HEARING** 5
 Study of the anatomy, physiology and neuroanatomy of the speech and hearing mechanisms. Recommended: BIOL 201, 202.
- SPPA 299 NORMAL LANGUAGE DEVELOPMENT** 2
 Study of the normal development of speech and language in children and methods of facilitation. Does not apply to a major in speech-language pathology and audiology.
- SPPA 371 INTRODUCTION TO AUDIOLOGY** 3
 Study of the history of audiology, rehabilitation of the acoustically handicapped, and basic clinical techniques used in air, bone and impedance audiometry. Prerequisite: SPPA 210.
- SPPA 372 AUDIOMETRY** 3
 Study of the psychophysical methods of auditory testing, specialized audiometric techniques, theory and practice determining types of hearing abilities, includes the interpretation of test results; hearing aid evaluation and follow-up procedures for the acoustically handicapped. Prerequisite: SPPA 371. Offered alternate years.

COMMUNICATIONS

- SPPA 373 AURAL REHABILITATION** 3
Methods of rehabilitation of hearing impairment; use of amplification, auditory training and speech reading. Prerequisite: SPPA 371. Offered alternate years.
- SPPA 383 LANGUAGE ACQUISITION** 4
Study of the acquisition of the linguistic systems of language, includes phonology, morphology, syntax, and semantics; language pragmatics.
- SPPA 385 LANGUAGE DISORDERS** 4
Study of etiological theories, evaluation and management of childhood language disorders. Prerequisite: SPPA 210.
- SPPA 389 PHONOLOGICAL DISORDERS** 4
Study of children's deviant patterns of articulation; assessment and treatment.
- SPPA 390 DIRECTED CLINICAL OBSERVATION** 1
Attendance at scheduled sessions to observe clinical management of speech-language disorders and to participate as an assistant to the clinician.
- SPPA 391 CLINICAL METHODS IN SPEECH-LANGUAGE PATHOLOGY** 4
Instruction, observation and practice in methods and procedures basic to the development and implementation of a program of remediation for speech-language disorders. Prerequisites: SPPA 385; SPPA 390.
- SPPA 393 CLINICAL PRACTICUM** 1-6
Clinical experience in evaluation and treatment of the various speech, language and hearing disorders. Responsibility commensurate with experience. Maximum 2 hours per quarter. Prerequisites: SPPA 383; SPPA 385; SPPA 391.
- SPPA 461 DIAGNOSIS IN SPEECH-LANGUAGE PATHOLOGY** 3
Diagnosis and appraisal procedures of communicative disorders; includes the use of speech and language tests, associated behavior and instrumentation techniques; three lectures and one laboratory per week. Prerequisite: SPPA 210.
- SPPA 471 NEUROGENIC COMMUNICATION DISORDERS** 4
Assessment and treatment of speech and language disorders resulting from neurological impairment: aphasia, dysarthria, apraxia. Offered alternate years.
- SPPA 473 CLEFT PALATE** 3
Study of the etiology of cleft palate and other oro-facial abnormalities; assessment and treatment.
- SPPA 475 VOICE DISORDERS** 3
Study of the etiological, diagnostic and therapeutic approaches to functional and organic disorders of voice; consideration of the acoustic characteristics of aberrant voice and mechanical faults of voice production. Prerequisite: SPPA 210. Offered alternate years.
- SPPA 479 STUTTERING** 3
Study of the theories of stuttering and an evaluation of therapeutic techniques employed. Prerequisite: SPPA 210.
- SPPA 484 PUBLIC SCHOOL PRACTICUM** 14
Professional laboratory experience for the speech pathology and audiology major. A weekly seminar will be conducted for students working in the Walla Walla area. Application for the autumn quarter must be made during the preceding spring quarter; application for the winter and spring quarters must be made during the first week of the autumn quarter. Prerequisites: SPPA 391; SPPA 393.

JOURNALISM (JOUR)

- JOUR 245 JOURNALISTIC WRITING** 4
Introduction to gathering facts and writing news stories for mass media audiences. Prerequisites: ENGL 121, 122. A
- JOUR 246 REPORTING METHODS** 3
Basic training in the use of interviewing and other social research techniques for the gathering and reporting of news. Two lectures and one laboratory per week. Prerequisite: JOUR 245. W

- JOUR 257 PHOTOJOURNALISM** 2
Introduction to the taking and use of photographs for publication; includes composition, cropping, caption writing and picture-page layout. Students are expected to have their own cameras. Prerequisite: GRPH 154 or equivalent.
- JOUR 341 MAGAZINE ARTICLE WRITING** 4
Analysis of magazine markets, fundamentals of gathering materials for articles and preparation of manuscripts for publication. Offered alternate years.
- JOUR 345 DIRECTED JOURNALISTIC WRITING** 1-3
Refining journalistic writing skills through a program adapted to the students professional interests. Prerequisites: JOUR 245 and permission of instructor.
- JOUR 357 COMMUNICATION LAW AND ETHICS** 3
Study of the legal and ethical aspects of the news-gathering process; emphasis on libel, privacy, copyright, confidentiality and censorship. Offered alternate years.
- JOUR 412 SCRIPT WRITING** 3
Introduction to the writing of broadcast narratives, including the preparation of scripts for commercial, educational and religious markets; emphasizes the visualization of completed scripts. Recommended: ENGL 335 or 336. Offered alternate years.
- JOUR 451 PUBLICATION PRODUCTION** 4
Instruction and practice in copy editing, headline writing, and outline writing; publication design and print production. Each student will plan a project consisting of planning a new publication, with prospectus and dummy copy. Offered alternate years. Permission of instructor required.
- JOUR 465 PROMOTIONAL CAMPAIGNS** 3
Study in the writing of creative communication designed to sell products, services and ideas offered by clients. Includes media planning and campaign execution. Prerequisites: MKTG 383, MKTG 481, or permission of instructor. Offered alternate years.
- ENGL 215 FILM LITERATURE** 4
See the English section of this bulletin.
- MKTG 281 PRINCIPLES OF MARKETING** 4
See the Business section of this bulletin.
- MKTG 383 PRINCIPLES OF ADVERTISING** 4
See the Business section of this bulletin.
- MKTG 481 PUBLIC RELATIONS** 4
See the Business section of this bulletin.
- ENGL 335 CREATIVE WRITING: NARRATIVE** 3
See the English section of this bulletin.
- SOCI 451 RESEARCH METHODS** 4
Same as MKTG 451; PLSC 451. See course description under those departments.



JOE 27 PHOTOGRAPHY
Instruction in the use of the camera for the student. Includes the use of the camera for the student. Includes the use of the camera for the student.

JOE 28 LANGUAGE
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JOE 29 JOURNALISM
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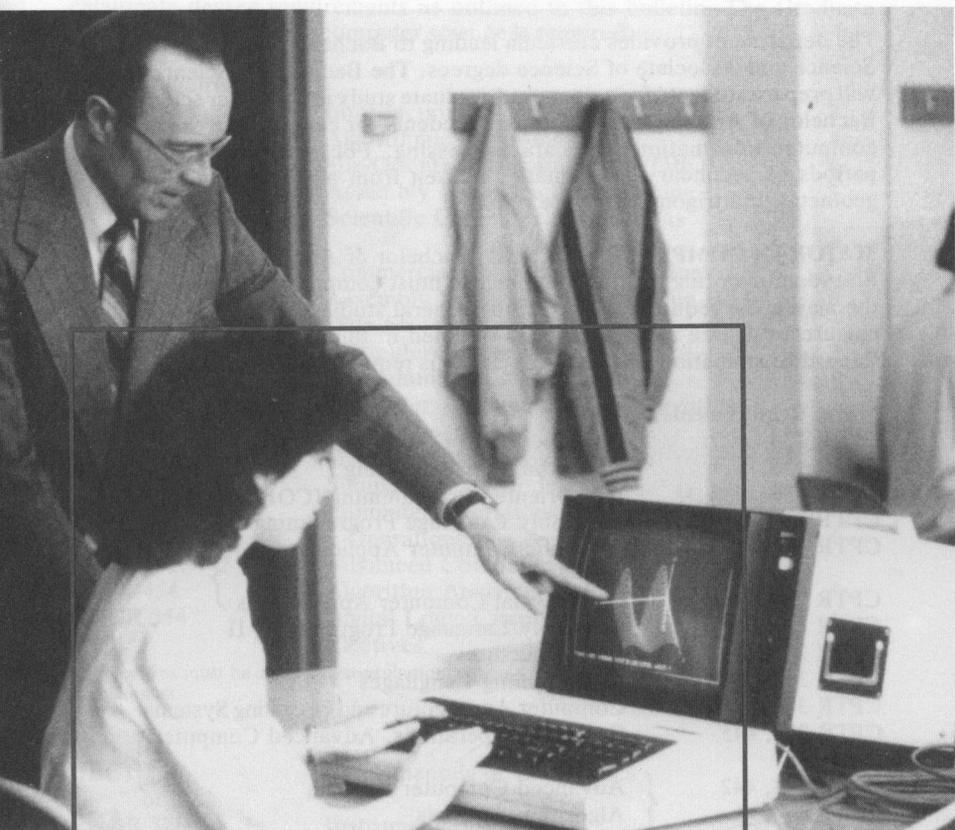
JOE 45 JOURNALISM
Instruction in the use of the camera for the student. Includes the use of the camera for the student. Includes the use of the camera for the student.



14
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COMPUTER SCIENCE

MAJOR IN COMPUTER SCIENCE (B.S.)



Computer Sciences

COMPUTER SCIENCE

T. Anderson, Chairman; J. Aulick, J. Klein, M. Lang, G. Masden, J. Paulman.

The department provides curricula leading to Bachelor of Arts, Bachelor of Science and Associate of Science degrees. The Bachelor of Science degree will prepare students for careers and graduate study in computer science. The Bachelor of Arts degree will prepare students for careers in areas applying computer information and data processing. For entrance, 20 semester periods of secondary mathematics chosen from algebra, plane and solid geometry and trigonometry are required.

MAJOR IN COMPUTER SCIENCE (Bachelor of Arts)

A student majoring in computer science must complete 49 quarter hours in the major, the required cognates, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin. The Graduate Record Examination in computer science is required.

Major Requirements:

CPTR 134	Introduction to Computing	3
CPTR 135	Algorithmic Programming	4
CPTR 136	File-Oriented Programming (COBOL)	4
CPTR 215	Assembly Language Programming I	3
CPTR 224	Scientific Computer Applications	4
or		
CPTR 225	Commercial Computer Applications	3
CPTR 234	Assembly Language Programming II	
CPTR 236	Data Structures	4
CPTR 341	Programming Languages	4
CPTR 342	Computer Architecture and Operating Systems	4
CPTR 227, 445	Computer Operations, Advanced Computer	4
or	Operations	
CPTR 441, 442	Advanced Computer Projects	4
CPTR 454	Algorithm Analysis	
	Electives (5-7 must be upper division)	8
		<u>49</u>

Electives must be chosen in consultation with and approved by the department chairman. A minor should be chosen in an area in which computer science can be applied. Business, mathematics or a science is recommended.

Cognates:

BIOL 350	Biostatistics	4
or		
GBUS 263	Business Statistics	8
or		
MATH 311	Probability and Statistics	3
MATH 181, 281	Analytic Geometry and Calculus I, II	
MATH 289	Linear Algebra and Its Applications	3
MATH 292	Numerical Methods	3
OFAD 111	Basic Keyboarding or equivalent	0-2
ELCT 241	Fundamentals of Electronics	3-5
or		
ENGR 325	Instrumentation	

MAJOR IN COMPUTER SCIENCE (Bachelor of Science)

A student majoring in computer science must complete 62 quarter hours in the major, the required cognates, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin. The Graduate Record Examination in computer science is required.

Major Requirements:

CPTR 134	Introduction to Computing	3
CPTR 135	Algorithmic Programming	4
CPTR 136	File-Oriented Programming (COBOL)	4
CPTR 215	Assembly Language Programming I	3
CPTR 224	Scientific Computer Applications	4
or		
CPTR 225	Commercial Computer Applications	3
CPTR 234	Assembly Language Programming II	
CPTR 236	Data Structure	4
CPTR 331	Computers in the Laboratory	3
CPTR 341	Programming Languages	4
CPTR 342	Computer Architecture and Operating Systems	4
CPTR 351	Memory and I/O Systems	4
CPTR 374	Simulation and Modeling	3
CPTR 227, 445	Computer Operations, Advanced Computer Operations	4
or		
CPTR 441, 442	Advanced Computer Projects	4
CPTR 454	Algorithm Analysis	
ENGR 354	Digital Logic Circuits	3
	Electives	8
	Electives must be chosen in consultation with and approved by the department chairman.	62

Cognates:

ELCT 241	Fundamentals of Electronics	3-5
or		
ENGR 325	Instrumentation	
MATH 181, 281-283	Analytic Geometry and Calculus I-IV	16
MATH 289	Linear Algebra and Its Applications	3
MATH 311	Probability and Statistics	4
MATH 341	Numerical Analysis	4
MATH 442	Advanced Numerical Analysis	4
OFAD 111	Basic Keyboarding or equivalent	0-2
PHYS 251, 252	Principles of Physics	6
PHYS 254, 255	Principles of Physics Laboratory	2

DATA ENTRY (Associate of Science)

The data entry program is administered jointly by the departments of computer science and office administration. A student completing the data entry program must complete the area requirements, the required cognates, and the general studies program for the associate degree as outlined in this bulletin. See the Office Administration section of this bulletin for a complete list of requirements.

COMPUTER SCIENCE

COMPUTER PROGRAMMING (Associate of Science)

A student specializing in computer programming must complete the following 54 quarter hours, the required cognates, the general studies program, and all associate degree requirements as outlined in this bulletin.

Area Requirements:

CPTR 125	Principles of Basic	}	2-4
or CPTR 131			
CPTR 134	Data Processing		3
CPTR 135	Introduction to Computing		4
CPTR 136	Algorithmic Programming		4
CPTR 215	File-Oriented Programming (COBOL)	}	3
or CPTR 224	Assembly Language Programming I		
CPTR 234	Assembly Language Programming II	}	4
or CPTR 225	Scientific Computer Applications		
CPTR 227	Commercial Computer Applications		2
CPTR 236	Computer Operations		4
CPTR 241, 242	Data Structures		4
CPTR 370	Computer Projects		4
	Practicum in Computer Programming		4
	Electives		<u>18-20</u>
			54

Electives must be chosen in consultation with and approved by the department chairman and will usually have one of the following prefixes ACCT, CPTR, FINA, GBUS, MATH or MGMT.

Cognates:

BIOL 350	Biostatistics	}	4
or GBUS 263			
or MATH 106	Business Statistics		
MATH 117	Applied Statistics	}	5-8
or MATH 121, 122	Precalculus		
MATH 289	Fundamentals of Mathematics		3
OFAD 111	Linear Algebra and Its Applications		0-2
PSYC 130	Basic Keyboarding or equivalent		4
	General Psychology		4

MINOR IN COMPUTER SCIENCE

A student minoring in computer science must complete 30 quarter hours:

CPTR 134	Introduction to Computing		3
CPTR 135	Algorithmic Programming	}	4
or CPTR 136	File-Oriented Programming (COBOL)		
CPTR 215	Assembly Language Programming I		3
CPTR 224	Scientific Computer Applications	}	4
or CPTR 225	Commercial Computer Applications		

CPTR 236	Data Structures	4
CPTR 341	Programming Languages	4
	Electives	8
	Electives must be chosen in consultation with and approved by the department chairman.	<u>30</u>

Cognates:

MATH 181	Analytical Geometry and Calculus I	4
MATH 289	Linear Algebra and Its Applications	3

COMPUTER SCIENCE (CPTR)

CPTR 124 INTRODUCTION TO BASIC 2
 Introduction to computer programming in the BASIC language for the general student. Includes conceptual aspects of programming and applications involving the manipulation of numbers and textual material. Students may not receive credit in both CPTR 124 and CPTR125. Will not apply toward a major or minor in computer science. Prerequisite: Elementary concepts of algebra. AWS

CPTR 125 PRINCIPLES OF BASIC 2
 Introduction to problem solving using the BASIC language on the computer. Includes problem analysis, algorithm and program development, debugging and documentation. Students may not receive credit in both CPTR 124 and CPTR 125. Will not apply toward a major in computer science. Prerequisite: MATH 117 or MATH 121 or equivalent. AWS

CPTR 131 DATA PROCESSING 4
 See the Business section of this bulletin.

CPTR 134 INTRODUCTION TO COMPUTING 3
 See the Engineering section of this bulletin.

CPTR 135 ALGORITHMIC PROGRAMMING 4
 Introduction to algorithmic analysis and further study of algorithm design and programming style, emphasizing structured programming and including basic aspects of string processing, recursion, internal search/sort methods and simple data structures. BASIC and SPL languages will be used. A

CPTR 136 FILE-ORIENTED PROGRAMMING (COBOL) 4
 Program development in the business environment, structured programming techniques, elementary file processing, and the syntax of the language. Introduction to programming in the COBOL language. Prerequisites: CPTR 131 or CPTR 134 or permission from the instructor.

CPTR 204 INTERACTIVE DATA ENTRY AND EDITING 1
 Introduction to the use of on-line computer terminals for text or data entry and editing and applications to word processing. Prerequisite: Typing proficiency equivalent to OFAD 113.

CPTR 215 ASSEMBLY LANGUAGE PROGRAMMING I 3
 See the Engineering section of this bulletin.

OFAD 111 is prerequisite to all courses in computer science numbered above 220.

CPTR 224 SCIENTIFIC COMPUTER APPLICATIONS 4
 Surveys problem-solving techniques applicable to scientific investigation, including symbolic methods, trial and error, simulation, statistics and graphics. Prerequisite: CPTR 134. S

COMPUTER SCIENCE

- CPTR 225 COMMERCIAL COMPUTER APPLICATIONS** 4
Principles of analyzing and solving practical business programming problems applicable to any computer or language; emphasis on standard flow charts peculiar to the problems commonly encountered in business situations; functional use of report program generator (RPG) language; experience in the use of a computer. Prerequisite: CPTR 131 or CPTR 134. Recommend GBUS 266. W
- CPTR 227 COMPUTER OPERATIONS** 2
Practical experience in which the student works as a computer operator, programmer and consultant in the Educational Computer Center. Students will be supervised and instructed by the Center staff. Prerequisites: CPTR 124; CPTR 125; CPTR 131; or CPTR 134. W
- CPTR 234 ASSEMBLY LANGUAGE PROGRAMMING II** 3
Further study of computer architecture, machine language and assembly languages. Prerequisites: CPTR 135; CPTR 136. A
- CPTR 236 DATA STRUCTURES** 4
Introduction to common data structures, operations, application and alternate methods of data representation. Topics include linear lists, strings, arrays, tree structures and an introduction to database techniques. Emphasizes analysis of efficiency in time and space. Prerequisite: CPTR 234. Corequisite: MATH 289 or MATH 331. S
- CPTR 241, 242 COMPUTER PROJECTS** 2, 2
Experience in programming a major software system. Usually a single project will be chosen in consultation with the instructor, or several students may work on a large project using programming team techniques. Persons planning on a bachelor's degree should take CPTR 441, 442. Prerequisite: CPTR 135 or CPTR 136. AWS
- CPTR 245 INTERMEDIATE COBOL** 4
See the Business section of this bulletin.
- CPTR 331 COMPUTERS IN THE LABORATORY** 3
Study of the application of computers in the control of laboratory equipment and the acquisition of data. Considers the choice of hardware for specific applications. Prerequisites: CPTR 134; CPTR 215 recommended; ELCT 241 or ENGR 324. S
- CPTR 341 PROGRAMMING LANGUAGES** 4
Analysis of programming languages, including techniques of formal specification and analysis such as Backus-Naur form and syntax diagrams, lexical analysis and parsing. Analysis of several specific languages including both compiler and interpretive languages. The study of run-time behavior or program features. Prerequisite: CPTR 236. A
- CPTR 342 COMPUTER ARCHITECTURE AND OPERATING SYSTEMS** 4
Study of organization and architecture of computer systems, operating system principles and their interrelationships. Topics include I/O and interrupt structures, addressing schemes, multiprogramming, microprogramming, procedure implementation, memory management and recovery procedures. Prerequisite: CPTR 341. Offered alternate years. W
- CPTR 351 MEMORY AND I/O SYSTEMS** 4
Study of the interfacing of memory and I/O devices to computer systems. Topics include random, semirandom, sequential and direct access methods, I/O devices and their characteristics, channels, and I/O programming. Prerequisites: CPTR 215 and ENGR 354. Offered alternate years. W
- CPTR 370 PRACTICUM IN COMPUTER PROGRAMMING** 4, 8; 8
Practical experience in computer programming in a professional computer center. The student's experience will be under direction of the cooperating computer center in consultation with the computer science staff. This course will be evaluated on the S or NC basis. A minimum of 30 hours of satisfactory work will be required for each credit hour. The instructor's permission must be obtained one quarter prior to registration. Prerequisite: CPTR 135 or CPTR 136.
- CPTR 374 SIMULATION AND MODELING** 3
Study of contemporary methods of simulation and modeling of deterministic and probabilistic systems using BASIC, FORTRAN and GASP. Applications to biology, business, engineering and physics. Prerequisites: CPTR 125 or CPTR 134; MATH 181 and MATH 289 or equivalent; BIOL 350 or GBUS 263 or MATH 311 or equivalent. S

CPTR 441, 442 ADVANCED COMPUTER PROJECTS 2, 2

Experience on a large-scale project of a practical nature. Usually a single project will be chosen in consultation with the instructor, or several students may work on a large project using programming team techniques. Prerequisite: CPTR 341. AWS

CPTR 445 ADVANCED COMPUTER OPERATIONS 2

Advanced experience in computer operations, using several computers and a wide variety of peripheral equipment. Prerequisites: CPTR 227 and CPTR 234. A

CPTR 454 ALGORITHM ANALYSIS 4

Basic techniques of design and analysis of efficient algorithms. The analysis of resource requirements of algorithms. Tests for computability. Prerequisite: CPTR 341. Offered alternate years. W

CPTR 464 LANGUAGE TRANSLATION 4

Study of the techniques of analyzing source language and generation of efficient object code. Considers construction of assemblers, interpreters and compilers. Prerequisite: CPTR 341. Offered alternate years. W

CPTR 465 DATABASE TECHNIQUES 4

Study of the techniques of management of large databases, using normal language-data structures and specialized database management systems. Compares commercially available systems, and emphasizes the design of databases. Prerequisite: CPTR 342. S



Education



Education and Psychology

Major Requirements:

PSYC 130	General Psychology	4
PSYC 215	Psychology of Childhood and Adolescence	4
PSYC 230	Systems and Theories in Psychology	4

EDUCATION AND PSYCHOLOGY

D. Wagner, Chairman; G. Brendel, G. Hicinbothom, D. Johnson, W. Knowling, H. Ochs, H. Phillips, D. Thomas, V. Ward.

The department offers programs leading to a Bachelor of Science degree with a major in elementary education or psychology and an Associate of Science degree in early childhood education. Minors are available in either education or psychology, and preparation is provided for state and denominational certification in elementary and/or secondary teaching. With careful planning, a bachelor's degree and the first teaching certificate may be earned in four years of study.

For work leading to a master's degree in education, see the *Graduate Bulletin*.

The psychology curriculum is sufficiently flexible to meet the needs of students preparing for a wide range of careers in the behavioral sciences or in related professions that involve working with people. More emphasis is placed on the applied dynamics of human behavior and relationships than on animal or laboratory psychology.

The major requirements and cognate courses are intended to provide a scientific base on which a balanced program of electives may be built in accordance with the individual needs and interests of each student.

Although specific requirements for admission to graduate programs in most universities will be met by the general major, the student should realize that his graduate work may be impeded or prolonged in certain areas of psychology if special preparation is not obtained at the undergraduate level. For this reason, students who plan to continue academic work in psychology beyond the bachelor's degree are urged to consult with their advisers very early in their college careers.

The Associate of Science degree (offered cooperatively between the departments of education and psychology and home economics) with a specialization in early childhood education requires the completion of 96 quarter hours. The degree is designed to be completed in two years.

The purpose of the degree is to prepare the student for employment in nursery schools, day care centers, Head Start programs, parent cooperatives and in other early childhood education programs.

MAJOR IN ELEMENTARY EDUCATION (Bachelor of Science)

A student majoring in elementary education must complete 61 quarter hours in the major, as well as completing (1) an approved second major; or (2) an approved minor plus 27 quarter hours of academic support in content areas such as mathematics, science, social science and English; or (3) two approved minors. Any course graded lower than a C cannot apply. Program approval must be obtained from the academic adviser assigned by the department chairman.

EDUCATION AND PSYCHOLOGY

Major Requirements:

Phase I

Phase I must be completed with a minimum grade-point average of 2.5 before a student is permitted to proceed to Phase II. Students may request permission to begin Phase II during the last quarter of Phase I.

EDUC 110	Principles and Concepts of Christian Education	2
EDUC 210	Foundations of Education	3
EDUC 247	Elementary School Exploratory	1
EDUC 255	Orientation to Elementary Teaching	1
PSYC 130	General Psychology	4
PSYC 215	Psychology of Childhood and Adolescence	4
PSYC 220	Educational Psychology	4

Additional requirements for admission to Phase II include:

1. Health clearance.
2. Speech and hearing clearance.
3. Complete 4 hours of mathematics from the general studies requirement.
4. Meet English competency requirements (minimum grade-point average of 2.5 in College Writing; ENGL 229 may be used.)
5. Pass proficiency examinations in basic skills (see department chairman).
6. Acceptance into teacher education program.

Phase II

Formal acceptance into the teacher education program is required before registering for the following courses.

EDUC 361	Language Arts in the Elementary School	4
EDUC 362	Reading in the Elementary School	4
EDUC 373	Mathematics in the Elementary School	4
EDUC 375	Classroom Management	3
EDUC 390	Educational Evaluation	3
EDUC 428	Exceptional Students in the Classroom	3
EDUC 450	Social Studies, Religion, Science and Health in the Elementary School	4
EDUC 478	Elementary Microteaching	3
EDUC 480	Elementary Directed Teaching	14
		<hr style="width: 100%; border: 0; border-top: 1px solid black; margin-bottom: 5px;"/>
		61

Students must demonstrate knowledge and/or skills in the minimum basic competencies required by the state. Please see the Department of Education and Psychology.

Students wishing denominational certification should refer to that section under certification.

MAJOR IN PSYCHOLOGY (Bachelor of Science)

A student majoring in psychology must complete 50 quarter hours in the major, the required cognates, the general studies program and all baccalaureate degree requirements as outlined in this bulletin.

Major Requirements:

PSYC 130	General Psychology	4
PSYC 215	Psychology of Childhood and Adolescence	4
PSYC 230	Systems and Theories in Psychology	4

EDUCATION AND PSYCHOLOGY

PSYC 350	Elementary Statistics	4
PSYC 375	Experimental Problems	3
PSYC 444	Social Psychology	3
PSYC 446	Psychology of Personality	3
PSYC 495	Analysis of Psychological Experiments	2
	Electives (15 must be upper division)	23
		<u>50</u>

Electives must be chosen in consultation with and approved by the department chairman. Maximum of 9 credits may be approved from BIOL, CPTR.

Cognates:

A minimum of 20 quarter hours must be completed. An entire course sequence must be taken in at least one area. Courses should be chosen from the following with approval of department adviser (advanced courses may be substituted):

BIOL 101, 102, 103	General Biology	12
BIOL 201, 202	Anatomy and Physiology	8
BIOL 261	Genetics	4
CHEM 101, 102	Introductory Chemistry	8
CPTR 124	Introduction to BASIC	} 2-5
or		
CPTR 125	Principles of BASIC	
and/or		
CPTR 134	Introduction to Computing	} 8
MATH 121, 122	Fundamentals of Mathematics	
PHYS 211, 212, 213	General Physics	9
PHYS 214, 215, 216	General Physics Laboratory	3

CERTIFICATION

The Walla Walla College Department of Education and Psychology is authorized by the Washington State Board of Education to recommend the following elementary and secondary teaching certificates:

Initial

Continuing

Those who intend to enter the teaching profession and to qualify for teaching certification should initiate the following steps early in their academic program:

- Consult with the assigned academic adviser regarding specific requirements for the major chosen. Special attention should be given requirements within the major, minor or certification which present difficulties when taken out of sequence.
- Schedule regular consultation with the certification consultant in the department of education and psychology. This will facilitate the proper scheduling of professional education experiences.

Courses applying toward specific certification requirements require a grade of C or above. To be recommended for certification, the candidate must have after August 1985, a grade-point average of not less than 2.5 in professional education/psychology coursework and also in all areas of certificate endorsement. Course age limits vary with the credential.

Application for certification must be made through the certification consultant in the department. If U.S. citizenship is not held, please check with the department.

Elementary Certification (Washington State):

Elementary education majors will choose a second major or minor from the following list. Please note the grade and grade-point average requirements as listed under certification on the previous page. For details regarding specific requirements, consult with the department chairman.

Majors:

Art	Mathematics
Biology	Modern Language (only one)
Business Education	Music Education
English	Physical Education
History	Speech Pathology and Audiology
Home Economics	

Minors:

Art	Library Science
Biology	Mathematics
Chemistry	Modern Language (only one)
English	Music Teaching
Health	Office Administration
History	Physical Education
Home Economics	Physics
Industrial Arts Education	Political Science
Journalism	Religion
	Speech Communication

Secondary Certification (Washington State):

The following certification program requires the completion of majors and minors approved for certification. To be recommended for certification, the candidate must have after August 1985, a grade-point average of not less than 2.5 in professional education/psychology coursework and also in all areas of certificate endorsement. No grade lower than C will apply.

Phase I

Phase I must be completed with a minimum grade-point average of 2.5 before a student registers for coursework in Phase II. Students may request permission to begin Phase II during the last quarter of Phase I.

EDUC 110	Principles and Concepts of Christian Education	2
EDUC 210	Foundations of Education	3
EDUC 267	Secondary Tutoring	1
PSYC 130	General Psychology	4
PSYC 215	Psychology of Childhood and Adolescence	4
PSYC 220	Educational Psychology	4

EDUCATION AND PSYCHOLOGY

Additional requirements for admission to Phase II include:

1. Health clearance.
2. Speech and hearing clearance.
3. Competencies as required.
4. Acceptance into teacher education program.

Phase II

Formal acceptance into the teacher education program is required before registering for the following:

+EDUC 390	Educational Evaluation	3
+EDUC 471	General Secondary Methods	2
*472	Methods course in major or minor academic field of study	3
EDUC 479	Secondary Microteaching (spring quarter, junior year; autumn or winter quarter, senior year)	3
EDUC 481	Secondary Directed Teaching	14
PSYC 360	Small Group Procedures	} 3
or		
SPCH 207	Small Group Communication	
		46

The following courses are highly recommended:

EDUC 248	Secondary School Exploratory	1
EDUC 428	Exceptional Students in the Classroom	3
EDUC 461	Methods of Audiovisual Education	2
EDUC 475	Teaching Reading Skills in Content Areas	3

+These courses should precede departmental methods courses.

*Secondary methods courses are listed under respective departments as course number 472 with the appropriate prefix. Consult the appropriate department for details.

SPECIAL EDUCATION:

A special education program with Washington certification is available. Consult the special education adviser and the *Graduate Bulletin*.

Denominational Certification:

For those planning denominational certification, additional specific course work (e.g., Educational Evaluation, an approved health course (HLED 215 or HLED 238 or HLED 384 or HLED 453), 18 hours of religion including Basic Christian Beliefs, Inspiration and Revelation, History of Adventism) are required. Please note requirements regarding grade-point average under Certification. Please confer with the certification consultant in the department.

EARLY CHILDHOOD EDUCATION (Associate of Science)

A student specializing in early childhood education must complete 50 quarter hours in the area, the required cognates, the general studies program, and all associate degree requirements as outlined in this bulletin. This program is offered cooperatively between the departments of education and home economics.

Area Requirements:

CFSC 282	Child Development	3
EDUC 110	Principles and Concepts of Christian Education	2
EDUC 195	Creative Activities for Children	2
EDUC 196	Learning Activities for Children	2
EDUC 251	Laboratory Experiences in Preschool Education	10
EDUC 294	Planning Learning Environments for Children	2
EDUC 296	Administration in Early Childhood Education	2
EDUC 297	Head Teacher Practicum	4
PSYC 130	General Psychology	4
PSYC 215	Psychology of Childhood and Adolescence	4
PSYC 431	Psychology of Exceptional Children	3
	Electives (from home economics and/or education and psychology; may include up to six hours from sociology/social work and health education)	<u>12</u>
	Electives must be chosen in consultation with and approved by the adviser assigned by the department chairman.	50

Cognates:

ENGL 374	Literature in the Elementary School	} 3
or		
LIBR 374	Library Materials for Children	
SOCI 204	General Sociology	4
SOCI 325	Social Psychology of Family Life	3
SPPA 210	Survey of Speech Pathology and Audiology	} 2-3
or		
SPPA 299	Normal Language Development	

MINOR IN EDUCATION

A student minoring in education must complete 30 quarter hours in professional education courses:

Electives (3 must be upper division)	30
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Approval of education adviser required.

EDUCATION AND PSYCHOLOGY

MINOR IN PSYCHOLOGY

A student minoring in psychology must complete 28 quarter hours:		
PSYC 130	General Psychology	4
PSYC 215	Psychology of Childhood and Adolescence	4
PSYC 230	Systems and Theories in Psychology	4
PSYC 444	Social Psychology	3
	Electives (3 must be upper division)	<u>13</u>
Approval of psychology adviser required.		28

EDUCATION (EDUC)

EDUC 110 PRINCIPLES AND CONCEPTS OF CHRISTIAN EDUCATION	2
Study of the ideals and principles of Christian education, especially as interpreted by the Seventh-day Adventist Church.	
EDUC 195 CREATIVE ACTIVITIES FOR CHILDREN	2
Study of the theory for planning activities involving art, music, poetry, storytelling and dramatic play in early childhood education.	
EDUC 196 LEARNING ACTIVITIES FOR CHILDREN	2
Survey and planning of appropriate activities to acquaint children with their world. Includes personal health, nutrition and safety practices; natural science observation and simple quantification concepts.	
EDUC 210 FOUNDATIONS OF EDUCATION	3
Study of social and philosophical foundations underlying the current organization and objectives of American education.	
EDUC 247 ELEMENTARY SCHOOL EXPLORATORY	1
Opportunity to participate in professionally structured experiences prepared for elementary school faculties prior to the opening activities in the organizational period of the school year. Time involved: one to two weeks full time. (S or NC only)	
EDUC 248 SECONDARY SCHOOL EXPLORATORY	1
Opportunity to participate in professionally structured experiences prepared for secondary school faculties prior to the opening activities in the organizational period of the school year. Time involved: one to two weeks full time. (S/NC only)	
EDUC 251 LABORATORY EXPERIENCES IN PRESCHOOL EDUCATION 2, 4; 10	
Application of preschool education theory to teaching situations. Emphasis on participation as a team member in planning and teaching a distinct area of the curriculum each quarter. Two or four hours each quarter; maximum 10.	
EDUC 255 ORIENTATION TO ELEMENTARY TEACHING	1
Examination of current educational thought regarding the role of the teacher and the purpose of the school.	
EDUC 266 ELEMENTARY TUTORING	1; 3
Supervised experiences in the elementary school classroom designed to acquaint the tutor with students of the grade level assigned, teacher responsibilities, and classroom routine. (S or NC only)	
EDUC 267 SECONDARY TUTORING	1; 3
Supervised experiences in the secondary school classroom designed to acquaint the tutor with students of the grade level assigned, teacher responsibilities, and classroom routine. (S or NC only)	
EDUC 294 PLANNING LEARNING ENVIRONMENTS FOR CHILDREN	2
Study of building and playground design, materials selection and room arrangement to provide optimal learning environments for young children.	
EDUC 296 ADMINISTRATION IN EARLY CHILDHOOD EDUCATION	2
Administration of programs providing services to children and families including program goal setting, budget preparation, personnel management and program evaluation for program directors.	

- EDUC 297 HEAD TEACHER PRACTICUM** 4
 Integration of theories and skills developed in the early childhood education program. Emphasis on team leader skills, parent education participation and Child Development Associate portfolio preparation.
- ART 301 ART IN THE ELEMENTARY SCHOOL** 3
 See Art section of this bulletin.
- MUED 344 ELEMENTARY SCHOOL MUSIC LITERATURE** 2
 See Music section of this bulletin.
- EDUC 361 LANGUAGE ARTS IN THE ELEMENTARY SCHOOL** 4
 Study of issues currently important in language arts education, with emphasis on research and its practical implications for teaching, functions and programs of the language arts in the elementary school curriculum. Prerequisite: Acceptance into Phase II.
- EDUC 362 READING IN THE ELEMENTARY SCHOOL** 4
 Study of current theory, effective instructional procedures, learning resources and field experience for teachers of reading in the primary and intermediate grades of the elementary school. Prerequisites: Acceptance into Phase II; EDUC 361.
- EDUC 373 MATHEMATICS IN THE ELEMENTARY SCHOOL** 4
 Survey of the content, media and processes used in teaching mathematics in the elementary school; emphasis on newer approaches. Prerequisites: Acceptance into Phase II; MATH 115 or 121.
- ENGL 374 LITERATURE IN THE ELEMENTARY SCHOOL** 3
 See the English section of this bulletin. Same as LIBR 374.
- LIBR 374 LIBRARY MATERIALS FOR CHILDREN** 3
 See the Library Science section of this bulletin. Same as ENGL 374.
- ENGL 375 LITERATURE IN THE SECONDARY SCHOOL** 3
 See the English section of this bulletin.
- EDUC 375 CLASSROOM MANAGEMENT** 3
 Introduction to varied structuring of the learning environment and the special considerations required in small schools and multigrade classrooms. Explores the human relations within the teaching profession.
- EDUC 390 EDUCATIONAL EVALUATION** 3
 Introduction to principles and techniques of evaluating classroom activities in elementary and secondary schools.
- EDUC 404 HISTORY OF EDUCATION** 2
 Survey of the history of education.
- EDUC 426 PRINCIPLES AND PROCEDURES OF GUIDANCE** 3
 Introduction to the philosophy, functions, organization and evaluation of guidance programs.
- EDUC 428 EXCEPTIONAL STUDENTS IN THE CLASSROOM** 3
 Survey of current special education laws; materials and techniques for teaching exceptional children within the educational mainstream. Prerequisite: PSYC 220 or permission of instructor.
- INDS 428 HANDWORK ACTIVITIES** 3
 See the Industrial Technology section of this bulletin.
- SOCI 444 SOCIOLOGY OF EDUCATION** 3
 See the Sociology and Social Work section of this bulletin.
- EDUC 450 SOCIAL STUDIES, RELIGION, SCIENCE AND HEALTH IN THE ELEMENTARY SCHOOL** 4
 Examination of current materials and methodology used in the elementary curriculum in the areas of social studies, religion, science and health. Classroom observation and teaching will be required. Prerequisite: Acceptance into Phase II.

EDUCATION AND PSYCHOLOGY

- EDUC 452 DIRECTED TEACHING — In-Service** 6
Directed laboratory experience for a teacher desiring to improve his professional skills. Includes training in methods of analysis of teaching and practice in methods of self-analysis. Registration only by permission of the Student Teaching Committee after completion of the required courses in professional education. (S or NC only)
- EDUC 461 METHODS OF AUDIOVISUAL EDUCATION** 2
Survey of the methods of instruction through the use of audiovisual aids.
- EDUC 462 INSTRUCTIONAL AIDS — PRODUCTION** 2
Experiences in the production of instructional aids.
- EDUC 471 GENERAL SECONDARY METHODS** 2
Study of the role of the secondary teacher in the classroom, school and community. Topics examined include methods of instruction, planning, ethics, legal aspects, professional growth and general principles for success in the role of a secondary teacher. Prerequisite: Admission into Phase II.
- Secondary methods courses are listed under respective departments as course number 472 with the appropriate prefix. Consult the appropriate department for details.*
- PETH 473 PHYSICAL EDUCATION IN THE ELEMENTARY SCHOOL** 3
See the Health, Physical Education and Recreation section of this bulletin.
- EDUC 475 TEACHING READING SKILLS IN CONTENT AREAS** 3
Introduction to diagnosis, vocabulary, comprehension skills, rate variation, management and study skills in junior high and secondary reading.
- EDUC 478 ELEMENTARY MICROTEACHING** 3
A teaching laboratory to prepare elementary teachers in skills necessary to effective teaching. Students present brief demonstration lessons to a small class of children. Self-evaluation is supplemented by evaluation of supervisors, practicing teachers and peers, along with video recordings. Prerequisites: Admission into Phase II and two methods courses.
- EDUC 479 SECONDARY MICROTEACHING** 3
Teaching procedures which are applicable at any level are considered. Laboratory practice in certain teaching skills will be provided following the microteaching model. The class will meet one night each week and each student will participate weekly in an afternoon teaching laboratory. Prerequisites: Admission into Phase II and one methods course in the student's major or minor area of study.
- EDUC 480 ELEMENTARY DIRECTED TEACHING** 14
A practicum providing professional teaching experience for students preparing to teach on the elementary level. Generally begins mid-August. Prerequisites: EDUC 361; EDUC 362; EDUC 373; EDUC 478; by permission of the Student Teaching Committee.
- EDUC 481 SECONDARY DIRECTED TEACHING** 14
Professional laboratory experience for students preparing to teach at the secondary level. Application for the autumn quarter is to be made during the preceding spring quarter; application for the winter and spring quarters should be made during the first week of the autumn quarter. Prerequisites: EDUC 479; by permission of the Student Teaching Committee. (S or NC only)
- EDUC 492 EDUCATION OF THE GIFTED** 3
Introduction to the design of learning opportunities for gifted children in the light of their psychological characteristics.
- EDUC 493 SYSTEMS OF THOUGHT** 3
Intensive study of various aspects of philosophical thinking and their bearing upon education. Emphasizes current writing in education.
- EDUC 495 ELEMENTARY SCHOOL GUIDANCE** 3
Study of the rationale for elementary school guidance with emphasis upon current research and issues. Focuses on the tools and techniques of both classroom and out-of-class guidance functions and services.

Please see the *Graduate Bulletin* for a listing of graduate courses in education, special education and psychology.

PSYCHOLOGY (PSYC)

PSYC 130 is prerequisite to all other courses in psychology.

- PSYC 130 GENERAL PSYCHOLOGY** 4
Survey of the major areas of psychology emphasizing the scientific bases of psychological investigation. Introduction to the fundamental vocabulary, methodologies, established facts and sound principles of psychology.
- PSYC 210 LEISURE COUNSELING** 3
Study of the basic theoretical foundations of leisure counseling; includes the practice of individual and group processes of leisure counseling.
- PSYC 215 PSYCHOLOGY OF CHILDHOOD AND ADOLESCENCE** 4
Analysis of psychological development from infancy through adolescence.
- PSYC 220 EDUCATIONAL PSYCHOLOGY** 4
Application of psychological principles to the art of teaching. Laboratory included which requires Washington State health clearance.
- PSYC 230 SYSTEMS AND THEORIES IN PSYCHOLOGY** 4
Introduction to the historical development of the various systems and theories in psychology with emphasis on learning theory.
- PSYC 350 ELEMENTARY STATISTICS** 4
Introduction to fundamental procedures for summarizing and interpreting quantitative data from tests and research in the social sciences.
- PSYC 360 SMALL GROUP PROCEDURES** 3
Study of small group process by the use of simulations, confrontation techniques and role playing. Especially useful for teachers, ministers, nurses and social workers.
- PSYC 375 EXPERIMENTAL PROBLEMS** 3
Advanced study of experimental design with application to an individual research project. Prerequisite: PSYC 350 or equivalent.
- PSYC 405 PSYCHOLOGY OF ORGANIZATIONAL CHANGE** 3
Exploration of the characteristics of social organizations, their structure and systems of communication with particular emphasis on the problems of bringing about change within social organizations (i.e., churches, communities, schools, businesses, etc.).
- PSYC 410 BEHAVIOR MODIFICATION** 3
Study of the principles and processes of learning with special emphasis on the shaping and changing of human behavior.
- PSYC 415 DYNAMICS OF BEHAVIOR** 3
Introduction to the dynamic mechanisms of human adjustment and behavior.
- PSYC 420 INTRODUCTION TO CLINICAL PSYCHOLOGY** 3
Introduction to the application of psychological theories and techniques as used in the clinical setting. Surveys various approaches to treatment of emotional problems in clinical practice, hospital and community settings.
- PSYC 425 PSYCHOLOGY AND RELIGION** 3
Examination of psychological concepts and human behavior from a biblical and theological perspective.
- PSYC 430 PSYCHOLOGICAL TESTING** 3
Study of the principles of test selection, administration and interpretation; consideration of the contributions and limitation of the major types of standardized tests and inventories used in the behavioral sciences.
- PSYC 431 PSYCHOLOGY OF EXCEPTIONAL CHILDREN** 3
Study of the characteristics and problems of exceptional children; consideration of essential educational adaptation.
- PSYC 442 MOTIVATION** 3
Study of basic drives and causes of behavior in organisms with emphasis upon human behavior.

EDUCATION AND PSYCHOLOGY

PSYC 444 SOCIAL PSYCHOLOGY	3
Study of the dynamics of social interaction and interpersonal behavior with application to contemporary society.	
PSYC 445 SOCIAL PSYCHOLOGY LABORATORY	1
Corequisite: PSYC 444.	
PSYC 446 PSYCHOLOGY OF PERSONALITY	3
Study of theories concerning personality development, assessment and adjustment.	
PSYC 449 MENTAL HEALTH	3
Study of physiological and psychological factors related to emotional maturity; individual mental health, classroom climate, patterns of acceptance and rejection.	
PSYC 460 CHILDHOOD LEARNING DISORDERS	3
Introduction to play therapy and psychoeducational programs with emphasis on perceptual, sensory and motor areas. Designed for teachers and counselors of young children in both early childhood and elementary school levels. Prerequisite: PSYC 215.	
PSYC 464 COUNSELING RELATIONSHIPS	3
Introduction to psychological theory and skills essential for developing effective and helping relationships with individuals and groups.	
PSYC 465 COUNSELING SEMINAR	1; 3
Group discussions of counseling experiences for students planning on counseling careers. Prerequisite: PSYC 464 or permission of the instructor.	
PSYC 489 VOCATIONAL DEVELOPMENT THEORY	3
Study of theories of vocational choice and methods of studying occupations and occupational information as they relate to educational and vocational guidance.	
PSYC 490 ABNORMAL PSYCHOLOGY	3
Study of behavioral disturbances, therapeutic measures and theories.	
PSYC 495 ANALYSIS OF PSYCHOLOGICAL EXPERIMENTS	2
Experience in the analysis of psychological research.	

Please see the *Graduate Bulletin* for a listing of graduate courses in education, special education and psychology.

ENGINEERING

_____, Dean; F. Bennett, J. Bregar, J. Cole, C. Cross, R. Cuffel, G. Masden, S. Myers, R. Noel, C. Thomas, R. Wood.

Engineering is the profession in which the principles of mathematics, science, economics, ethics and humanistic-social relationships are applied with judgment to utilize the materials and forces of nature for the benefit of mankind. The fundamental objective of the School of Engineering is to provide its students with an engineering education of the highest possible caliber that will qualify them to enter directly the professional practice of engineering or advanced studies in engineering or other professional areas. Within its efforts to achieve this objective, the faculty is inherently dedicated to encouraging its students to develop a commitment to Christian principles of conduct in their personal and professional activities.

Degrees Offered. The School of Engineering offers curricula leading to two distinct degrees. The Bachelor of Science in Engineering (B.S.E.) degree is designed to prepare students to enter professional engineering practice and, also, to provide undergraduate instruction which will serve as an adequate foundation for graduate studies. This curriculum, which includes elective concentrations in civil, electrical and mechanical engineering, is accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology, Inc. (formerly Engineers' Council for Professional Development).

The Bachelor of Science (B.S.) degree with a major in bioengineering is intended primarily for students planning to pursue advanced studies in bioengineering, medicine, dentistry, public health or physiology. It is not designed for students desiring to enter directly into the practice of professional engineering following their undergraduate study.

Admission Requirements. Requirements for admission to the School of Engineering are 40 semester periods of English, 10 semester periods of science, 30 semester periods of mathematics (beyond general mathematics) and 20 semester periods of history. The mathematics background should include algebra, geometry and trigonometry. Prospective engineering students are encouraged to prepare themselves broadly by taking as many additional courses as possible in high school mathematics, English, science, social studies and humanities. Studies in foreign languages and the practical arts are also valuable.

Students with entrance deficiencies may be admitted. However, such deficiencies must be removed before the beginning of the sophomore year. Students who present a transcript of previous successful studies at another approved college or university may be admitted with advanced standing.

Admission to engineering studies is normally made only in September. However, students may be admitted in January or March provided that an acceptable program can be scheduled.

Affiliation Program: North American Seventh-day Adventist colleges and universities are affiliated with Walla Walla College under a program which provides the opportunity for students to complete the first one or two years of engineering instruction at any participating institution. After the conclusion

of these initial studies, students complete degree requirements at Walla Walla College. Each affiliated campus has an engineering coordinator who has been appointed to provide the necessary guidance to insure a smooth transition from the affiliated campus to Walla Walla College. Details of this program can be obtained from the Dean of the School of Engineering.

ENGINEERING (Bachelor of Science in Engineering)

The professional engineering curriculum at Walla Walla College emphasizes those subject areas which are common to the broad field of engineering while allowing for the development of professional competence within one of three specific engineering disciplines. The curriculum is also designed to provide for the attainment of cultural and intellectual maturity, the encouragement of personal growth and the development of moral, ethical and social responsibility. The development of broad technical competence within engineering is achieved through a group of mathematics, science and engineering core courses which emphasize fundamental knowledge, techniques and processes. Specific professional competence is assured by the completion of a coherent group of courses chosen from civil, electrical or mechanical engineering. Intellectual, cultural and moral development is encouraged through the selection of General Studies courses within the curriculum.

Flexibility in this program is provided by elective course selection and limited substitutions, individually chosen in consultation with an adviser and approved by the School of Engineering to form an integral professional engineering program. Students wishing to follow careers in other specialized fields, such as architectural engineering, computer engineering, highway engineering, sanitary engineering, aerospace engineering, electronics engineering, nuclear engineering or other areas, will be prepared to do so through subsequent professional experience or graduate study.

Satisfactory progress is contingent upon attendance for the full academic year and the maintenance of a 2.00 minimum grade point average. Since there is no designated major or minor in the professional engineering curriculum (B.S.E.), the grade of D in any subject in this program will be accepted for credit toward the degree provided that the student receives grades below the grade of C in no more than two courses taken during the given quarter, and further provided that the grade point average for that quarter is not lower than 2.00 when calculated using only courses required for graduation. When these conditions are not met, all required courses for which a grade below C was received must be repeated.

Students enrolled in the professional curriculum must complete a total of 200 quarter hours including the engineering general studies requirements, the core requirements, the mathematics and science requirements, and one engineering concentration. In addition, during the senior year, all students are required to participate in the Senior Engineering Tour and sit for the Graduate Record (general and subject portions) and the Engineer-In-Training examinations.

ENGINEERING GENERAL STUDIES REQUIREMENTS (44 credits)

Although the general studies content within the engineering curriculum is similar to the standard general studies requirements for the baccalaureate degree at Walla Walla College, there are important differences which must be observed. The following summary is intended to give students a broad overview of the general studies portion of the engineering curriculum:

ENGINEERING

Subject Area	Credits	
English Composition	8-9	
Physical Education	2-3	
Religion	16-18	
Approved Electives	0-4	
Social Studies	4-14	}
Humanities	4-14	
Total General Studies Requirements	44	12-18

Complete details of the general studies program for engineering students including specific course requirements are available from the School of Engineering.

ENGINEERING CORE REQUIREMENTS (47 to 59 credits)

The engineering core consists of a group of studies which emphasize the enduring fundamentals common to the many branches of engineering and the applied sciences. These studies help ensure that the student will enjoy a truly professional career and be prepared to move into new or developing technical areas with confidence. Limited flexibility is provided within the core. However, this flexibility is affected by specific course requirements within each engineering concentration. Students are therefore cautioned to consult with their advisers before selecting these courses.

All students are required to present 47 to 59 credits of core courses depending upon the engineering concentration selected. In addition, the indicated minimum requirements must be satisfied within each individual section of the core.

In the following listings the symbols CE, EE, and ME indicate the core organization for the civil, electrical and mechanical engineering concentrations respectively. The letter (e) indicates that the marked course is a possible elective, whereas the letter (r) indicates that the marked course is required for that concentration.

Functional Techniques		Credits	CE	EE	ME
CPTR 134	Introduction to Computing	3	r	r	r
DRFT 226	Architectural Drawing	3	e	e	e
DRFT 236	Electrical and Electronic Drawing	3	e	e	e
ENGR 121, 122	Introduction to Engineering	4	r	r	r
ENGR 123	Introduction to Engineering	2	e	e	e
ENGR 215	Computer Graphics	2	e	e	e
ENGR 326	Engineering Economy	3	r	r	r
ENGR 495	Colloquium (4 quarters required)	0	r	r	r
ENGR 496, 497, 498	Seminar	3	<u>r</u>	<u>r</u>	<u>r</u>
	Minimum Requirements		15	15	15

ENGINEERING

Electrical Fundamentals		Credits	CE	EE	ME
ENGR 228	Circuit Analysis	4	r	r	r
ENGR 325	Instrumentation	3	e	r	r
ENGR 351	Linear Network Analysis	4	e	r	r
ENGR 431	Electromechanical Energy Conversion	4	<u>e</u>	<u>r</u>	<u>r</u>
	Minimum Requirements		7	15	15

Engineering Mechanics		Credits	CE	EE	ME
ENGR 221, 222, 223 or ENGR 224, 225 ENGR 321	Engineering Mechanics Engineering Mechanics Mechanics of Materials Minimum Requirements	9 4 13	r <u>r</u> 13	r <u>e</u> 9	r <u>r</u> 13

Materials Science		Credits	CE	EE	ME
ENGR 322	Engineering Materials	4	r	e	r
PHYS 312, 315	Physical Electronics and Laboratory	4	—	<u>e</u>	—
	Minimum Requirements		4	4	4

Transport Phenomena		Credits	CE	EE	ME
CHEM 352	Physical Chemistry	4	e		
ENGR 331	Fluid Mechanics	4	r	e	r
ENGR 332	Thermodynamics	4	e	r	r
ENGR 465	Heat Transfer	4	<u>e</u>	<u>e</u>	<u>r</u>
	Minimum Requirements		8	4	12

Core Elective		Credits	CE	EE	ME
ENGR or PHYS	Course Chosen from Core List	4	—	<u>r</u>	—
	Minimum Requirements		0	4	0
	Total Minimum Core Requirements		47	51	59

MATHEMATICS (27 to 31 credits)		Credits	CE	EE	ME
MATH 181, 281	Analytic Geometry and Calculus I, II	8	r	r	r
MATH 282, 283	Analytic Geometry and Calculus III, IV	8	r	r	r
MATH 289	Linear Algebra and Its Applications	3	r	r	r
MATH 311	Probability and Statistics	4	r	r	r
MATH 312	Ordinary Differential Equations	4	r	r	r

ENGINEERING

		Credits	CE	EE	ME
MATH 341 or MATH 423	Numerical Analysis Introduction to Complex Variables Minimum Mathematics Requirements	4		r	
			27	31	27

SCIENCE (28 credits)

		Credits	CE	EE	ME
CHEM 141, 142, 143	General Chemistry	12	r	r	r
PHYS 251, 252, 253	Principles of Physics	9	r	r	r
PHYS 254, 255, 256	Principles of Physics Laboratory	3	r	r	r
PHYS 311, 314	Modern Physics and Laboratory	4	e	r	r
BIOL, CHEM or PHYS	Approved Science Elective	4	e		
	Minimum Science Requirements		28	28	28

CONCENTRATION: Civil Engineering

ENGR 341	Geology and Soil Mechanics	3
ENGR 342	Hydrology	3
ENGR 343	Hydroenvironmental Engineering Analysis	4
ENGR 345	Contracts and Specifications	2
ENGR 346	Surveying	4
ENGR 348	Structural Analysis	5
ENGR 364	Fluid Mechanics Laboratory	1
ENGR 441, 442	Structures I, II	8
ENGR 445, 446	Hydroenvironmental Engineering I, II	8
ENGR 449	Transportation Engineering	4
	Approved Technical Electives	12

A minimum of 3 courses must be chosen from Civil Engineering Electives. The other may be chosen from approved BIOL, CHEM, CPTR, ENGR, MATH or PHYS.

CONCENTRATION: Electrical Engineering

CPTR 215	Assembly Language Programming I	3
ENGR 352	Feedback and Control Systems	4
ENGR 354	Digital Logic Circuits	3
ENGR 356, 357, 358	Engineering Electronics	11
ENGR 451	Electromagnetic Fields	4
ENGR 456	Energy Conversion Laboratory	1
ENGR 458	Direct Energy Conversion	4
ENGR	Approved EE Electives	12
CPTR, ENGR or MATH, PHYS	Approved Technical Elective	4

CONCENTRATION: Mechanical Engineering

ENGR 324	Mechanical Engineering Materials	2
ENGR 333	Thermodynamics and Thermal Systems	4
ENGR 352	Feedback and Control Systems	4
ENGR 364	Fluid Mechanics Laboratory	1
ENGR 365	Mechanical Systems Laboratory	1
ENGR 366	Vibrations	3
ENGR 461	Kinematics	4
ENGR 462, 463	Machine Design	8
ENGR 464	Compressible Flow and Transport Processes	4
ENGR 466	Mechanical Design	4
CPTR, ENGR or MATH	Approved Technical Electives	7

MAJOR IN BIOENGINEERING (Bachelor of Science)

Students majoring in bioengineering will take courses designed to insure a broad preparation in mathematics, physical and biological sciences and engineering fundamentals. By choosing electives in conference with an approved adviser, students will concentrate their studies in an area consistent with their career goals. Since the bioengineering curriculum is primarily designed to provide a foundation for graduate studies, students whose grade-point averages fall below 3.00 will be encouraged to reevaluate their career objectives.

Students majoring in bioengineering must complete a minimum of 60 quarter hours in the major, the required cognates and the general studies program for the baccalaureate degree as outlined beginning on page 39 in this bulletin.

Major Requirements:

CPTR 125	Principles of BASIC	}	2-3
or			
CPTR 134	Introduction to Computing	}	9
ENGR 221, 222, 223	Engineering Mechanics		
or		}	4
ENGR 224, 225	Engineering Mechanics		
ENGR 228	Circuit Analysis	}	3-5
ENGR 325	Instrumentation		
or		}	4
BIOL 470	Marine Biophysics		
ENGR 331	Fluid Mechanics	}	4-12
ENGR 332	Thermodynamics		
or		}	4
CHEM 351, 352, 353	Physical Chemistry		
ENGR 321	Mechanics of Materials		0
BIOL 495	*Colloquium (2-4 Quarters)		0
ENGR 495	*Colloquium (2-4 Quarters)		0
	Technical Electives:		30-35
BIOL	12 hours minimum		
ENGR	12 hours minimum		
	(21 must be upper division)		60 (minimum)

Electives must be chosen in consultation with and approved by the academic adviser assigned by the Dean of the School of Engineering.

*Six Quarters of Colloquium are Required.

ENGINEERING

Cognates:

BIOL 101, 102, 103	General Biology	12
CHEM 141, 142, 143	General Chemistry	12
CHEM 321, 322, 323	Organic Chemistry	12
MATH 181, 281	Analytic Geometry and Calculus I, II	8
MATH 282, 283	Analytic Geometry and Calculus III, IV	8
MATH 311	Probability and Statistics	4
MATH 312	Ordinary Differential Equations	4
PHYS 251, 252, 253	Principles of Physics	9
PHYS 254, 255, 256	Principles of Physics Laboratory	3

COMPUTER SCIENCE (CPTR)

CPTR 134 INTRODUCTION TO COMPUTING 3

Introduction to problem solving methods and algorithm development, using primarily the FORTRAN language; includes designing, coding, debugging and documenting programs emphasizing good programming style. Prerequisite: MATH 117 or MATH 121 or equivalent. A or W or S

CPTR 215 ASSEMBLY LANGUAGE PROGRAMMING I 3

Introduction to computer architecture, machine language and an assembly language using microprocessors. Laboratory work required. Prerequisite: CPTR 134. A or W or S

ENGINEERING (ENGR)

ENGR 121, 122, 123 INTRODUCTION TO ENGINEERING 2, 2, 2

Introduction to the design process and elements of professional engineering. Engineering communications, with emphasis upon sketching, conventional engineering drafting practices, pictorial representation; principles of descriptive geometry. Must be taken in sequence. Laboratory work required. AWS

ENGR 215 COMPUTER GRAPHICS 2

Introduction to the production of graphical representations of two- and three-dimensional objects using the computer. Theory and application of matrix transform methods to manipulate two- and three-dimensional data structures. Graphical operations include scaling, translation, rotation, and reflection; orthographic, axonometric, perspective, and stereographic projections. Surveys applications of computer plotting software for the production of graphs. Prerequisites: CPTR 134; MATH 117 or equivalent. A or S

ENGR 221, 222, 223 or 224, 225 ENGINEERING MECHANICS 3, 3, 3, or 4, 5

Introduction to two- and three-dimensional equilibria employing vector algebra; friction; centroids and centers of mass, virtual work, and moments of inertia. One- and two-dimensional kinetics and kinematics of rigid bodies by vector calculus; dynamics of rotation, translation and plane motion; relative motion; work and energy; impulse and momentum. Must be taken in sequence. May be taken as a 3, 3, 3 sequence Autumn, Winter, Spring or a 4, 5 sequence Winter and Spring. Corequisite for 221 and 224; MATH 282; Corequisite for 222 and 225: MATH 283.

ENGR 228 CIRCUIT ANALYSIS 4

Study of 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. Laboratory work required. Prerequisites: MATH 282; PHYS 252. A or S

ENGR 321 MECHANICS OF MATERIALS 4

Study of stresses and strains, deformations and deflections of posts, shafts, beams, columns; combined stresses; elasticity. Computational and demonstrational laboratory required. Prerequisite: ENGR 222 or 224. A

ENGR 322 ENGINEERING MATERIALS 4

Study of the science of engineering materials. Crystal structures, electron transport in solids, single-phase metals, multiphase materials, equilibria, microstructures and properties, thermal processing, and corrosion of metals. Laboratory work required. Prerequisite: CHEM 143 or equivalent. W

- ENGR 323 CIVIL ENGINEERING MATERIALS** 3
Study of molecular phases, ceramic materials, concrete, wood, welding processes and welding effects on metals; asphalts; asphaltic concretes and highway base materials. Laboratory work required. Prerequisite: ENGR 322 or permission of instructor. S
- ENGR 324 MECHANICAL ENGINEERING MATERIALS** 2
Study of molecular phases, ceramic materials, concrete, wood, welding processes and welding effects on metals. Laboratory work required. Prerequisite: ENGR 322 or permission of instructor. S
- ENGR 325 INSTRUMENTATION** 3
Study of theory and application of modern instrumentation; validation of experimental data. Laboratory work required. Prerequisite: ENGR 228 or permission of instructor. A
- ENGR 326 ENGINEERING ECONOMY** 3
Study of business, economic and ethical aspects of engineering practice. Introduction to engineering organization and program management techniques. Prerequisite: junior standing in engineering. A or S
- ENGR 331 FLUID MECHANICS** 4
Introduction to fluid statics and the dynamics of fluid motion; transport phenomena as represented by the conservation of mass, momentum and energy in laminar and turbulent flowing systems using the control volume formulations; dimensional analysis and similitude; inviscid and viscous flow in pipes and an introductory analysis of boundary layer flow. Prerequisites: ENGR 223 or ENGR 225; CPTR 134; MATH 283; MATH 289. Recommended: PHYS 251, 252, 253. A
- ENGR 332 THERMODYNAMICS** 4
Introduction to the nature of energy and study of energy transport and conservation in closed and flowing systems; properties and states of solids, liquids, vapors and gases; enthalpy; meaning and production of entropy and introduction to cyclic systems. Prerequisite: PHYS 253. Corequisite: MATH 312. Recommended: ENGR 331. W
- ENGR 333 THERMODYNAMICS AND THERMAL SYSTEMS** 4
Study of thermodynamics of state for complex systems, detailed analysis of power and reversed cycle systems, thermodynamics and equilibrium principles of nonreacting and reacting mixtures; application of the principles of global thermochemical energy balances to real power systems; introduction to nuclear processes and alternate energy production techniques. Prerequisite: ENGR 332. S
- ENGR 341 GEOLOGY AND SOIL MECHANICS** 3
Introduction to geological structure, process and weathering; soils properties, classification and interpretation; subsurface investigation; flow of water through soils. Prerequisite: CHEM 143. Corequisite: ENGR 331. A
- ENGR 342 HYDROLOGY** 3
Introduction to precipitation; occurrence, measurement, transport and storage of ground and surface waters; statistical models. Laboratory work required. Prerequisites: CPTR 134; ENGR 321; ENGR 341; MATH 311. W
- ENGR 343 HYDROENVIRONMENTAL ENGINEERING ANALYSIS** 4
Study of characteristics of water and wastewater; analysis of physical, chemical and biological treatment processes; equilibrium and dynamic systems. Prerequisites: ENGR 342; ENGR 364; MATH 312. S
- ENGR 344 THE ENVIRONMENT AND MAN** 4
Interdisciplinary consideration of current topics involving the interrelations between man and his environment. W
- ENGR 345 CONTRACTS AND SPECIFICATIONS** 2
Introduction to the preparation and interpretation of contracts and specifications; ethical, legal and contractual relations of the professional engineer to the public, the owner and the contractor. Prerequisite: junior standing in engineering. A
- ENGR 346 SURVEYING** 4
Use of basic surveying instruments; computational methods for traverses, routes and earthwork, mapping. Prerequisites: CPTR 134; ENGR 123. S

ENGINEERING

- ENGR 348 STRUCTURAL ANALYSIS** 5
Study of graphical, algebraic and matrical analyses of determinate and indeterminate foundations and structures; basic concepts of soils, interactions with loads and structures; load-stress parameters for beams, girders, columns, trusses, connections and frames. Computation laboratory required. Prerequisites: CPTR 134; ENGR 321; ENGR 322. S
- ENGR 351 LINEAR NETWORK ANALYSIS** 4
Application of Laplace transform techniques to the analysis of linear networks. Fourier analysis of periodic signals. Prerequisites: ENGR 228; MATH 283. A
- ENGR 352 FEEDBACK AND CONTROL SYSTEMS** 4
Introduction to classical feedback and control analysis and design; signal flow graphs, root locus and classical frequency response techniques. Prerequisite: ENGR 351 or permission of instructor. Prerequisite or corequisite: MATH 312. W
- ENGR 354 DIGITAL LOGIC CIRCUITS** 3
Introduction to the theory and application of digital logic circuits, logic functions; logic gates, flip-flops, counters, state machines, and modern integrated logic families. Laboratory work required. S
- ENGR 356, 357, 358 ENGINEERING ELECTRONICS** 3, 4, 4
Study of characteristics and applications of discrete solid-state electronic devices and circuits; large signal analysis, biasing; small signal analysis, low and high frequency models, feedback amplifiers, theory and applications of operational amplifiers, integrated circuit electronics, analog-to-digital conversion, modulation, multiplexing, and digital logic families. Laboratory work required Winter and Spring. Corequisite for ENGR 356: ENGR 351. Corequisite for ENGR 358; ENGR 354. AWS
- ENGR 364 FLUID MECHANICS LABORATORY** 1
Laboratory instruction in fluid mechanics. Incompressible and elementary compressible fluid flow with special application of steady state and conservation principles of mass, momentum and energy; fluid flow measurements and real fluid phenomena in pipelines. Theoretical and experimental analysis of open channel flow. Prerequisite: ENGR 331. W
- ENGR 365 MECHANICAL SYSTEMS LABORATORY** 1
Laboratory instruction in thermodynamics, heat transfer and mechanical vibrations. Applications selected from heat transfer, combustion phenomena, steam power plants, internal combustion in compressible fluid flows, and dynamics of structures. Corequisites: ENGR 333; ENGR 366. S
- ENGR 366 VIBRATIONS** 3
Study of periodic motion; free and forced vibrations of single and multi-degree-of-freedom systems, nonsinusoidal forcing functions, and normal modes. Prerequisites: ENGR 223 or 225; ENGR 351; ENGR 352; MATH 289; MATH 312. S
- ENGR 431 ELECTROMECHANICAL ENERGY CONVERSION** 4
Study of electromechanical energy conversion principles and applications to electrical machinery; transformers, three-phase systems, DC machines, induction motors, synchronous machines, single-phase motors; emphasis on performance, control and applications. Laboratory work required. Prerequisite: ENGR 228. W
- ENGR 441, 442 STRUCTURES I, II** 4, 4
Study of timber, basic concrete, reinforced concrete and steel, elastic design concepts for determinate and indeterminate structures; industrial and multistory buildings, bridges, rigid frames and arches. Computation laboratory required. Prerequisite: ENGR 348. AW
- ENGR 443 STRUCTURES III** 3
Study of elastic designs of timber, concrete and steel determinate and indeterminate structures; applications to foundation and soils problems; general and matrix analyses; total building layout and design problems. Computation laboratory required. Prerequisite: ENGR 442. S
- ENGR 444 STRUCTURAL DESIGN** 3
Study of design concepts as applied to structural systems from roof framing to foundations. Design examples are chosen to illustrate the use of different materials, analysis techniques and methods of production. Computation laboratory required. Corequisite: ENGR 443. S

- ENGR 445 HYDROENVIRONMENTAL ENGINEERING I** 4
Analysis and design of water distribution systems, sewage and stormwater collection systems. Computation laboratory required. Prerequisites: CPTR 134; ENGR 343. A
- ENGR 446 HYDROENVIRONMENTAL ENGINEERING II** 4
Design of physical, chemical and biological treatment processes for water and wastewater treatment. Laboratory work required. Prerequisites: CHEM 143; ENGR 445. W
- ENGR 447 RECEIVING WATER ANALYSIS** 3
Design of facilities for disposal of wastewaters to land and water systems; analysis of surface waters receiving wastewater effluents. Laboratory work required. Prerequisite: ENGR 446.
- ENGR 448 HYDROENVIRONMENTAL DESIGN** 3
Study of advanced water and wastewater treatment processes and practices. Emphasis will be placed upon current literature and recent developments in the state-of-the-art. Prerequisite: ENGR 446.
- ENGR 449 TRANSPORTATION ENGINEERING** 4
Use of soils and construction materials in the design of highways, waterways, airway terminals and railways; introduction to traffic engineering. Prerequisites: ENGR 342; ENGR 442; ENGR 445. S
- ENGR 450 GEOTECHNICAL ENGINEERING** 3
Stress distribution and deformation of soils; applications to foundation and slope stability. Laboratory work required. Prerequisites: ENGR 321; ENGR 341.
- ENGR 451 ELECTROMAGNETIC FIELDS** 4
Study, by vector calculus, of static and dynamic electric and magnetic fields. Unbounded and bounded fields, fields in material media, force and torque, energy and potential functions, and Faraday induction. Prerequisites: MATH 312; PHYS 253. A
- ENGR 452 ELECTROMAGNETIC PROPAGATION AND RADIATION** 4
Study of the propagation of electromagnetic energy; plane waves, transmission lines, and wave guides. Radiation from dipole antennas; introduction to arrays. Laboratory work required. Prerequisite: ENGR 451. W
- ENGR 454 DIGITAL CONTROL SYSTEMS** 4
Study of the design and application of digital control methods to real-time dynamic systems such as servomechanisms, chemical processes and vehicles. Analytical techniques include both transform (classical control) and state-space (modern control) methods. Prerequisites: CPTR 215; ENGR 352; ENGR 354. Recommended: MATH 311. W
- ENGR 455 SIGNALS AND SYSTEMS** 4
Introduction to continuous and discrete signal and system analysis; Fourier series, convolution, Fourier transforms, and discrete Fourier transforms. Prerequisites: ENGR 351; MATH 312. A
- ENGR 456 ENERGY CONVERSION LABORATORY** 1
Study of topics in electromechanical energy conversion emphasizing laboratory investigation. Synchronous machinery, systems, control and performance. Prerequisite: ENGR 431. S
- ENGR 457 LINEAR NETWORK DESIGN** 4
Introduction to the synthesis of linear networks. Active filter design; approximation theory, active realization, sensitivity. Introduction to digital filters; description of discrete-time systems, recursive and non-recursive filters, impulse invariance and bilinear transformation, digital filter realization. Prerequisites: ENGR 351; ENGR 358; ENGR 455. S
- ENGR 458 DIRECT ENERGY CONVERSION** 4
Study of the principles of direct modes of energy conversion; thermoelectrics, thermionics, photovoltaics, fuel cells and magnetohydrodynamics. Prerequisites: ENGR 228; ENGR 332; PHYS 311. S
- ENGR 461 KINEMATICS** 4
Introduction to three-dimensional dynamics; geometrical kinematics including analysis of cams, linkages and curvature relations by analytical and graphical methods; analytical kinematics for position, velocity and acceleration analysis of plane mechanisms. Prerequisites: ENGR 223 or ENGR 225; MATH 289; MATH 312. A

ENGR 462, 463 MACHINE DESIGN

4, 4

Study of analytical dynamics; balancing of rotating machinery; practical application of materials, mechanics and mechanical processes to the design of machines and machine elements; calculations, layouts and detail drawings required. Must be taken in sequence. Laboratory work required in ENGR 463. Prerequisites: MATH 311; ENGR 324; ENGR 461. WS

ENGR 464 COMPRESSIBLE FLOW AND TRANSPORT PROCESSES

4

Introduction to the thermodynamics of chemical equilibrium and the general differential and global equations of motion for multicomponent nonreacting and reacting flows of homogeneous Newtonian fluids; introductory treatment of transport properties and processes. Primary applications are to one- and two-dimensional gas dynamics and propulsion systems with an introductory treatment of compressible and incompressible laminar and turbulent boundary layers. Prerequisites: ENGR 331; ENGR 333. A

ENGR 465 HEAT TRANSFER

4

Study of single and multidimensional steady-state and transient heat conduction; thermal radiation involving black and gray bodies and gas-filled enclosures; solar radiation; free and forced convection through ducts and over exterior surfaces; heat exchangers; combined heat transfer problems. Prerequisites: ENGR 332; MATH 312. Recommended: ENGR 464. W

ENGR 466 MECHANICAL DESIGN

4

Study of design of mechanical systems and controls, particularly related to buildings and power generation. Prerequisites: ENGR 333; ENGR 364; ENGR 365; ENGR 465. S

ENGR 495 COLLOQUIUM

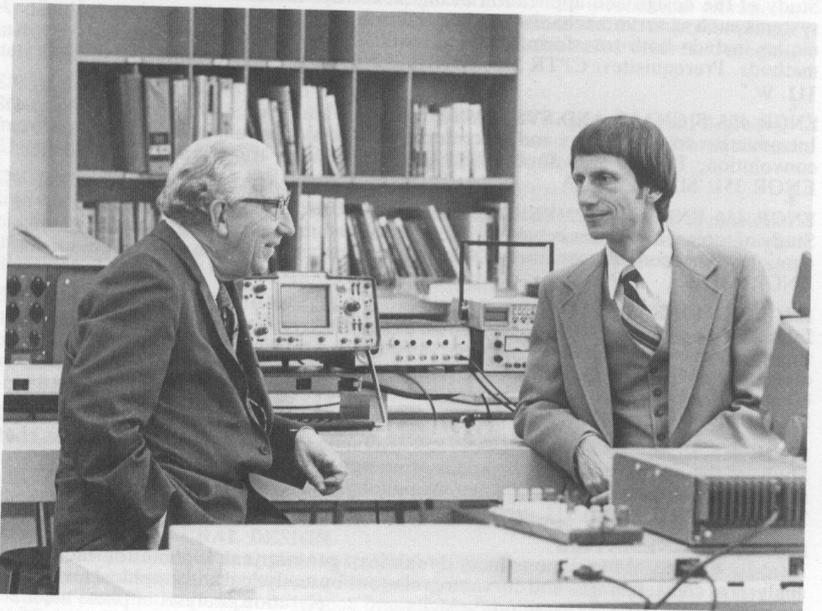
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Lectures on current engineering practice and other selected topics related to the engineering profession. Engineering degree candidates must satisfactorily complete four quarters; at least one must be during the senior year. Graded S or NC. A or W or S

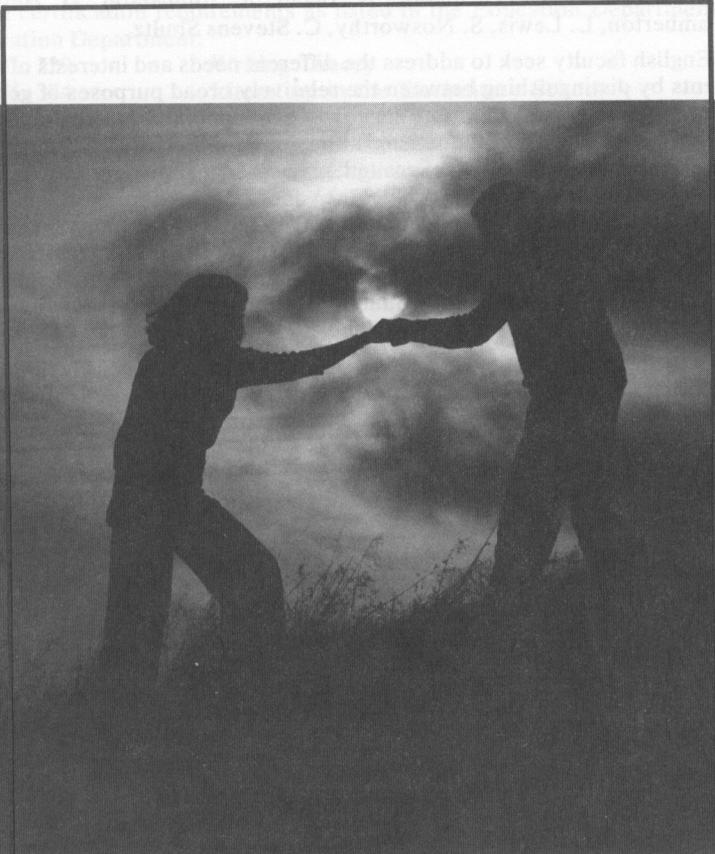
ENGR 496, 497, 498 SEMINAR

1, 1, 1

Presentation and discussion of current topics of interest within professional engineering. Each student is required to conduct an approved engineering design project from conception to final oral and written reports. Prerequisite: senior standing in engineering. AWS



ENGLISH



English

Intensive, guided writing in a workshop environment adapted to the individual needs and projects of the student. Limited enrollment; admission by departmental approval. Prerequisites: ENGL 111, 122, 123 or equivalent.

ENGLISH

G. Wiss, Chairman; T. Aamodt, B. Beem, R. Emmerson, D. Hepker, D. Lamberton, L. Lewis, S. Nosworthy, C. Stevens Shultz.

The English faculty seek to address the different needs and interests of their students by distinguishing between the relatively broad purposes of general education courses and the more narrowly academic and professional purposes of courses taught for the English major or minor. Building upon the student's secondary school background, general education courses in writing are intended to develop the competence in effective writing essential to success both in college studies generally and in postcollege careers. General education courses in literature are intended to foster the habit of reading with critical understanding and discrimination from a variety of literary forms and traditions and to provide an introduction to literature as an art which addresses significant and enduring issues.

Students choosing a major or minor in English will find much flexibility in structuring a curriculum. In consultation with their advisers, they can select a pattern of courses in literature, language and writing which will prepare them for teaching, for entry into such schools as those of law, medicine and librarianship, for writing professionally, or for entering a variety of vocations for which the major in English provides a strong cultural and practical background.

MAJOR IN ENGLISH (Bachelor of Arts)

A student majoring in English must complete 48 quarter hours in the major, the required cognates, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin. The Graduate Record Examination in English is required.

Major Requirements:

ENGL 234	Literary Analysis and Criticism	3
ENGL 235	Literary History and Research	3
ENGL 324 to 336	Writing (choose one course)	3
ENGL 344 to 356	English Literature (choose three courses)	12
ENGL 364 to 366	American Literature (choose one course)	4
ENGL 484, 485	Language (choose one course)	3
ENGL 444, 445	Major Author (choose one course)	3
ENGL 454 to 466	Genre or Special Area (choose one course)	3-4
ENGL 496, 497	Seminar	3
	Electives	10-11
		<hr/> 48

Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman.

Cognate:

HIST 274, 275	History of England	8
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Teacher Certification:

Students wishing teacher certification must take the following courses and fulfill certification requirements as listed in the Education Department.

Education Department:

ENGL 329	Writing Theory	3
ENGL 374	Literature in the Elementary School	} 3
or		
ENGL 375	Literature in the Secondary School	} 3
ENGL 384	Advanced English Grammars	
ENGL 472	Methods of Teaching High School English	

MINOR IN ENGLISH

A student minoring in English must complete 30 quarter hours; 12 must be upper division:

ENGL 234	Literary Analysis and Criticism	3
ENGL 235	Literary History and Research	3
ENGL 344 to 356	English Literature (choose one course)	4
ENGL 364 to 366	American Literature (choose one course)	4
	Electives (8 may be General Studies literature; 3 may be ENGL 374 or 375)	<u>16</u>

Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman. 30

GENERAL STUDIES WRITING (ENGL)

The following courses do not apply toward an English major or minor.

ENGL 100 BASIC COMMUNICATION SKILLS 4
 Study of basic grammar, usage and punctuation; includes writing practice. Required of students who do not place in College Writing 101, 121 or 141. Corequisite: RDNG 100. Credit does not apply toward graduation.

ENGL 101, 102 TECHNICAL AND BUSINESS WRITING 4, 4
 Study and practice in the basic writing skills necessary for associate degree programs. In the first quarter, basic grammar, mechanics, business letters and informal technical reports; in the second quarter, formal, technical and business reports. Completion of ENGL 102 is equivalent to ENGL 122.

ENGL 111, 112 ENGLISH AS A SECOND LANGUAGE 3, 3
 Study and practice of English in its written form, designed for students whose native language is not English. In the first quarter, intensive grammar review; in the second quarter, the basic modes of expository writing and argument with further emphasis on grammar. The student who reaches an adequate performance level in ENGL 112 may be granted permission by the department to enter ENGL 122. Language laboratory may be required.

ENGL 121, 122, 123 COLLEGE WRITING 3, 3, 2
 Study and practice in the forms of writing necessary for all college writing. In the first quarter, personal and expository writing forms with emphasis on understanding the writing process; in the second quarter, expository and persuasive writing techniques, analysis, argument, and an introduction to the library and research techniques, with emphasis on developing a clear writing style; in the third quarter, research and information-gathering techniques and writing with emphasis on the research paper. Must be taken in sequence. Prerequisite: satisfactory scores on placement tests.

ENGL 141, 142, 143 COLLEGE WRITING (HONORS) 3, 3, 2
 See the honors program listed under the Interdisciplinary section of this bulletin.

ENGL 229 WRITING PROJECTS 2
 Intensive, guided writing in a workshop environment adapted to the individual needs and projects of the student. Limited enrollment; admission by departmental approval. Prerequisites: ENGL 121, 122, 123 or equivalent.

ENGLISH

GENERAL STUDIES LITERATURE (ENGL)

The following courses do not apply toward an English major.

- ENGL 204 INTRODUCTION TO LITERATURE** 4
Introduction to the art of reading and studying literature, emphasizing the methods of analyzing poetry, stories and drama.
- ENGL 205 AMERICAN LITERATURE** 4
Study of literary masterpieces selected from representative American authors.
- ENGL 206 ENGLISH LITERATURE** 4
Study of selected English literary masterpieces of poetry, prose and drama.
- ENGL 207 WORLD LITERATURE** 4
Study of selected literary masterpieces from classical times to the present, emphasizing the literature of the Western world.
- ENGL 209 RELIGIOUS LITERATURE** 4
Study of the works of major Christian writers.
- ENGL 214 THEMES IN LITERATURE** 4
Study of selected works that develop a particular literary theme. Specific themes to be studied vary from quarter to quarter; see *Class Schedule*.
- ENGL 215 FILM LITERATURE** 4
History of film development and introduction to the basic techniques of film expression leading to a study of film genres. Intended to broaden the students' critical appreciation of literature and to encourage responsible, mature criteria for judging film literature.
- ENGL 311, 312, 313 WESTERN THOUGHT II (HONORS)** 4, 4, 4
See the honors program listed under the Interdisciplinary section of this bulletin.

WRITING (ENGL)

ENGL 101, 102; 121, 122, 123; or 141, 142, 143 are prerequisites to all other writing courses.

- ENGL 224 RESEARCH WRITING IN RELIGION** 3
Study of the skills in research and writing in the area of religion; instruction in the use of library materials and in the effective planning and writing of upper-division research papers. This course is prerequisite to all upper-division theology seminars. Same as RELG 224.
- ENGL 234 LITERARY ANALYSIS AND CRITICISM** 3
Instruction and practice in close analysis, interpretation, and evaluation of literature in the major genres; includes an introduction to various critical approaches and practice in writing critical essays. Intended to prepare the student for upper division literature courses.
- ENGL 235 LITERARY HISTORY AND RESEARCH** 3
Introduction to the study of literary history, including theories concerning, and characteristics of, English and American literary periods. Includes methods and practice of research in literary history as preparation for upper division courses in literary periods. Prerequisite: ENGL 234.
- ENGL 324 ADVANCED EXPOSITORY WRITING** 3
Techniques of writing expository prose that is clear, effective and beautiful, with emphasis on revision and intensive practice in developing and refining a variety of sentence patterns. Designed to aid students to write essays, theses and seminar papers.
- ENGL 325 ADVANCED TECHNICAL WRITING** 3
Techniques of researching, organizing and writing technical proposals and reports. Designed to aid students in writing papers in their major fields and in their professional careers. Will not apply on English major.
- ENGL 329 WRITING THEORY** 3
A study of composition theory and the writing process. Through writing practice, students study the application of this theory to their own work and to the teaching of writing.

ENGL 334, 335, 336 CREATIVE WRITING 3, 3, 3
Techniques of writing in several creative forms, with analysis and discussion of student work. Designed to develop a critical appreciation of the art of writing. Poetry (334), narrative (335), drama (336).

ENGL 338 DIRECTED WRITING 1-3
Refinement of writing skills through a program adapted to the student's personal interests. Limited enrollment; admission by departmental approval.

LITERATURE AND LANGUAGE (ENGL)

Unless otherwise stated, ENGL 234 and ENGL 235 or permission of instructor is prerequisite to all upper-division literature courses.

ENGL 344 MEDIEVAL LITERATURE 4
Study of English literature from its origins to about 1500. Literature in Old and Middle English to be read in translation; Chaucer's works to be read in the original Middle English.

ENGL 345 RENAISSANCE LITERATURE 4
Study of the major authors and literary movements of the English Renaissance.

ENGL 346 RESTORATION AND NEOCLASSIC LITERATURE 4
Study of selected works of important seventeenth- and eighteenth-century English authors, including Dryden, Swift, Pope and Johnson.

ENGL 354 ROMANTIC ENGLISH LITERATURE 4
Study of major romantic English authors, including Wordsworth, Coleridge, Byron, Shelley and Keats.

ENGL 355 VICTORIAN LITERATURE 4
Study of representative works of major nineteenth-century British authors, including poetry and prose.

ENGL 356 TWENTIETH-CENTURY ENGLISH LITERATURE 4
Study of English literature since 1900; significant works studied in relation to intellectual and historical developments.

ENGL 364 ROMANTIC AMERICAN LITERATURE 4
Study of major romantic American authors, including Emerson, Thoreau, Hawthorne and Melville.

ENGL 365 AMERICAN REALISM AND NATURALISM 4
Study of major American authors who typify nineteenth-century realism and naturalism.

ENGL 366 TWENTIETH-CENTURY AMERICAN LITERATURE 4
Study of American literature since 1900; significant works studied in relation to intellectual and historical developments.

ENGL 384 ADVANCED ENGLISH GRAMMARS 3
Study of traditional and transformational grammars; taught especially for prospective teachers and writers.

ENGL 394 DIRECTED READING 1-3
Independent reading for upper-division students who wish to continue broadening their knowledge of literature by extensive reading; admission only by departmental approval. Prerequisite: General studies literature or ENGL 234, ENGL 235.

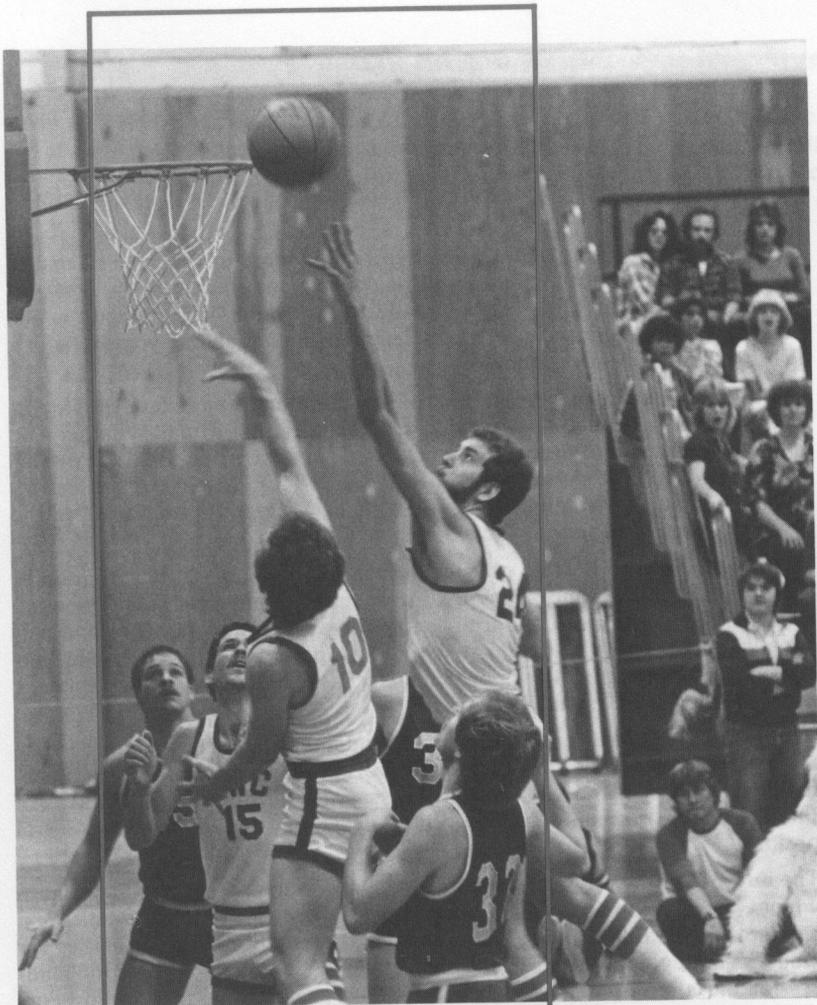
ENGL 444 MAJOR AUTHOR 3
Advanced study of the work of a major author or group of authors of English, American and world literature. Specific authors to be studied vary from quarter to quarter.

ENGL 445 SHAKESPEARE 3
Advanced study of selected plays and poems of Shakespeare.

ENGL 454 LITERATURE OF THE BIBLE 4
Study of biblical poetry and prose from a literary perspective. Prerequisites: General studies literature or ENGL 234, 235.

ENGLISH

- ENGL 455 CLASSICAL BACKGROUNDS** 3
Introduction to classical legend and thought as developed in major Greek, Roman and medieval literary works. Intended as background for the study of Renaissance and modern literature and art. Prerequisites: General studies literature, ENGL 234, 235 or ART 324, 325, 326.
- ENGL 464 DEVELOPMENT OF ENGLISH DRAMA** 3
Survey of the development of English drama from the medieval mystery plays to the twentieth century.
- ENGL 465 DEVELOPMENT OF THE ENGLISH NOVEL** 4
Survey of major English novels, primarily of the eighteenth and nineteenth centuries. Authors represented generally include Fielding, Austen, the Brontes, Dickens, Eliot, Hardy and Conrad.
- ENGL 466 LITERARY AND CRITICAL THEORY** 3
Study of the theory and practice of literary criticism, surveying the classical sources and major critics up to the present.
- ENGL 484 HISTORY OF THE ENGLISH LANGUAGE** 3
Study of premodern and early modern English, with reference to Indo-European antecedents. Intended to illuminate major trends in English language history.
- ENGL 485 LINGUISTICS** 3
Survey of approaches to modern linguistic science, with emphasis on the materials and methods of descriptive linguistics in phonology, morphology, syntax and semantics. Designed for English, communications, and modern languages majors.
- ENGL 496, 497 SEMINAR** 2, 1
An integrating course required of English majors in the senior year. The study includes practice in bibliography and research methods, problems in areas of special interest to class members, group conferences and reports.
- ENGLISH EDUCATION (ENGL)**
The following courses do not apply toward an English major.
- ENGL 276 TEACHING ENGLISH AS A FOREIGN LANGUAGE** 2
Specialized approaches and materials useful for teaching oral and written English to speakers of other languages. Prerequisites: ENGL 101, 102 or ENGL 121, 122, 123, or ENGL 141, 142, 143. Does not apply toward an English minor.
- ENGL 374 LITERATURE IN THE ELEMENTARY SCHOOL** 3
The philosophy of the selection and study of literature on the elementary school level, emphasizing appropriate content, good style and suitability for various age groups. Extensive reading and sharing of children's literature are required. Same as LIBR 374. Applies toward an English minor.
- ENGL 375 LITERATURE IN THE SECONDARY SCHOOL** 3
The philosophy of the selection and study of literature on the secondary level, emphasizing choosing literature related to student problems and goals as well as literature appreciation. Extensive reading of literature for adolescents is required. Applies toward an English minor.
- ENGL 472 METHODS OF TEACHING HIGH SCHOOL ENGLISH** 3
A study of objectives for and methods of teaching grammar, composition and literature in grades seven through twelve. Students prepare and present lessons, evaluate student work, and collect and organize a file of teaching materials. Prerequisites: ENGL 329; ENGL 375; ENGL 384. Does not apply toward an English minor.



Health, Physical Education, and Recreation

MATH 106
PSYC 130

Applied Statistics
General Psychology

HEALTH, PHYSICAL EDUCATION AND RECREATION

G. Hamburg, Chairman, C. Kuhlman, H. Lacey, R. Perrin, T. Windemuth.

Walla Walla College is one of the church's pioneers in the field of health, physical education and recreation. This department graduated the first professional student in 1949 and has made a tremendous contribution to the church and community in terms of teachers, researchers, youth leaders, health educators and workers for God.

The liberally educated person must understand and appreciate the importance of health as it relates to the physical, mental and spiritual. Whether it be in the development of fitness, the understanding of a proper diet, the opportunity of understanding oneself, the skill learned for later life or the lessons involving group interaction, the center of the program is found within the Christian context of service for others.

Candidates for the health, physical education and recreation program at Walla Walla College must demonstrate acceptable physical qualities, intellectual ability, and more importantly, positive Christian character and personality traits. These programs seek to develop the quality of human leadership and professional skills which will foster in the individual a desire to serve others in their professional growth.

The health program attempts to provide students with the training necessary to work in overseas missions, innercity work, public health work and teaching. It also provides the background necessary for further study in a Master of Public Health program. The program is designed to give students several options.

The purpose of the physical education program is to provide a total program which will develop a physical life style harmonious with the "whole-man concept" of healthful living, intramural and recreational opportunities for students, and preparation of health, physical education and recreation leaders for the church and the community. The professional preparation curriculum contains three concentrations: certification in elementary physical education, certification in secondary physical education and preparation for graduate research in biomechanical or physiological basis of physical education.

The recreation curriculum is designed to meet the needs of students who wish to develop professional competency in the service of the church, school and community. The department draws upon various other departments and schools within the college for courses to balance and enrich its offerings for the recreation curriculum. Students may select programs from community recreation, correctional recreation and youth leadership.

HEALTH, PHYSICAL EDUCATION AND RECREATION

MAJOR IN HEALTH (Bachelor of Science)

A student majoring in health must complete 60 quarter hours of interdisciplinary courses as listed below, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin.

Major Requirements:

FDNT 220	Human Nutrition	4
HLED 208	Drugs and Society	2
HLED 215	Contemporary Health Issues	2
HLED 217	First Aid	2
HLED 238	Health Behavior Change	2
HLED 265	School Safety	2
HLED 308	Community Health Education	3
HLED 328	Basic Therapy	2
HLED 366	Health Education in Church Programs	3
HLED 370	Field Training	3
HLED 384	School Health Programs	3
HLED 453	Principles of Health	3
HLED 472	Methods of School Health Instruction	3
PETH 323	Measurements and Research in Health, Physical Education and Recreation	2
PETH 426	Physiology of Exercise	4
PSYC 215	Psychology of Childhood and Adolescence	4
PSYC 449	Mental Health	3

Electives (chosen from the following) 13

ENGR 344	Environment and Man	4
FDNT 437	Community Nutrition	3
FDNT 441	Advanced Nutrition	3
FDNT 443	Diet in Disease	4
HMEC 301	Consumer Education	4
MGMT 273	Introduction to Health Care Organizations	2
PSYC 415	Dynamics of Behavior	3
PSYC 442	Motivation	3
PSYC 446	Psychology of Personality	3
SOCI 435	Social Gerontology	3
SOCI 437	Death and Dying	3

Cognates:

BIOL 101, 102, 103 or BIOL 201, 202 BIOL 222	General Biology } Anatomy and Physiology } Microbiology }	60 8-12 5
CHEM 101, 102 or CHEM 141, 142, 143	Introductory Chemistry } General Chemistry }	8-12
MATH 105 or MATH 106	Mathematics With Applications } Applied Statistics }	4
PSYC 130	General Psychology	4

HEALTH, PHYSICAL EDUCATION AND RECREATION

MAJOR IN PHYSICAL EDUCATION (Bachelor of Science)

A student majoring in physical education must complete the core requirements, one concentration, the required cognates for that concentration, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin. Students pursuing the concentrations; physical education for elementary schools and physical education for secondary schools must also complete the certification requirements as listed in the education section of this bulletin.

Core Requirements:

PETH 214	Introduction to Physical Education and Recreation	2
PETH 225	Prevention of Injuries	2
PETH 323	Measurements and Research in Health, Physical Education and Recreation	2
PETH 324	Adapted Physical Education and Recreation	3
PETH 325	Kinesiology	3
PETH 425	Motor Learning	3
PETH 494	History of Health, Physical Education and Recreation	3
PETH 496	Seminar	<u>2</u>
		20

CONCENTRATION: Physical Education for Elementary Schools

HLED 208	Drugs and Society	2
HLED 215	Contemporary Health Issues	2
HLED 238	Health Behavior Change	2
HLED 384	School Health Programs	3
PEAC 101-277	Physical Activity Courses	10
Physical activity courses must be chosen in consultation with and approved by the academic adviser assigned by the department chairman.		
PETH 370	Practicum in Movement Education	2
PETH 473	Physical Education in the Elementary School	3
	Electives	<u>11</u>

Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman.

Cognates:

BIOL 201, 202	Anatomy and Physiology	8
MATH 105 or MATH 106	Mathematics With Applications Applied Statistics	4

CONCENTRATION: Physical Education for Secondary Schools

HLED 215	Contemporary Health Issues	2
PEAC 101-277	Physical Activity Courses	15
Physical activity courses must be chosen in consultation with and approved by the academic adviser assigned by the department chairman.		
PETH 205	Water Safety Instructor's Course	2
PETH 261, 262, 263	Officiating of Sports Activities	6

HEALTH, PHYSICAL EDUCATION AND RECREATION

PETH 363, 364, 365	Analysis of Team Activities	6
PETH 426	Physiology of Exercise	4
PETH 472	Methods of Teaching Secondary Physical Education	3
PETH 484	Administration of Health, Physical Education and Recreation	3
RECR 278	Programming of Intramural and Recreational Activities	2
	Electives	<u>3</u>
	Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman.	46

Cognates:

BIOL 201, 202	Anatomy and Physiology	8
MATH 105	Mathematics With Applications	4
or		
MATH 106	Applied Statistics	4

CONCENTRATION: Biomechanical Basis

BIOL 201, 202	Anatomy and Physiology	8
BIOL 350	Biostatistics	4
or		
PSYC 350	Elementary Statistics	4
PETH 426	Physiology of Exercise	4
PETH 479	Directed Study/Research	3
PETH 484	Administration of Health, Physical Education and Recreation	3
RECR 278	Programming Intramural and Recreational Activities	2
	Electives	<u>11</u>
	Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman.	35

Cognates: Biomechanical Basis

CHEM 141, 142, 143	General Chemistry	12
CPTR 125	Principles of BASIC	8
CPTR 134	Introduction to Computing	4
CPTR 215	Assembly Language Programming I	4
or		
FREN 202, 203	Intermediate French	8
or		
GRMN 212, 213	Intermediate German	8
MATH 181, 281	Analytic Geometry and Calculus I, II	9
PHYS 211, 212, 213	General Physics	3
PHYS 214, 215, 216	General Physics Laboratory	3

CONCENTRATION: Physiological Basis

BIOL 201, 202	Anatomy and Physiology	8
BIOL 393	Animal Physiology	4
PETH 426	Physiology of Exercise	4
PETH 479	Directed Study/Research	3
PETH 484	Administration of Health, Physical Education and Recreation	3

HEALTH, PHYSICAL EDUCATION AND RECREATION

RECR 278	Programming Intramural and Recreational Activities	2
	Electives	<u>11</u>
	Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman.	35

Cognates: Physiological Basis

BIOL 101, 102, 103	General Biology	12
BIOL 392	Cell Physiology	}
or		
CHEM 431	Biochemistry	}
BIOL 350	Biostatistics	
or		4
PSYC 350	Elementary Statistics	}
CHEM 141, 142, 143	General Chemistry	
CHEM 321, 322, 323	Organic Chemistry	12
CPTR 125	Principles of BASIC	12
CPTR 134	Introduction to Computing	}
CPTR 215	Assembly Language Programming I	
or		
FREN 202, 203	Intermediate French	}
or		
GRMN 212, 213	Intermediate German	
MATH 117	Precalculus	}
or		
MATH 121, 122	Fundamentals of Mathematics	
		5-8

MAJOR IN RECREATION (Bachelor of Science)

A student majoring in recreation must complete the core requirements, one concentration, the required cognates for that concentration, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin.

Core Requirements:

PETH 214	Introduction to Physical Education and Recreation	2
PETH 323	Measurements and Research in Health, Physical Education and Recreation	2
PETH 484	Administration of Health, Physical Education and Recreation	3
PETH 496	Seminar	2
RECR 278	Programming Intramurals and Recreational Activities	2
RECR 356	Recreation, Leisure and Society	3
RECR 364	Recreational Programs	3
RECR 484	Leadership in Recreation	2
RECR 490	Practicum in Recreation	<u>12</u>
		31

CONCENTRATION: Community Recreation

MKTG 481	Public Relations	4
PEAC 101-277	Physical Activity Courses	8
	Physical activity courses must be chosen in consultation with and approved by the academic adviser assigned by the department chairman.	
PETH 205	Water Safety Instructor's Course	2

HEALTH, PHYSICAL EDUCATION AND RECREATION

RECR 234	Youth Camp Leadership	2
RECR 387	Youth Services Leadership	3
SPCH 207	Small Group Communication	3
	Electives	<u>22</u>

Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman.

Cognates: Community Recreation

BIOL 101, 102, 103	General Biology	12
MGMT 272	Principles of Management	4
MATH 105	Mathematics With Applications	} 4
or		
MATH 106	Applied Statistics	

CONCENTRATION: Correctional Recreation

HLED 217	First Aid	2
PEAC 101-277	Physical Activity Courses	10
Physical activity courses must be chosen in consultation with and approved by the academic adviser assigned by the department chairman.		
PETH 261, 262, 263	Officiating of Sports Activities	6
PETH 324	Adapted Physical Education and Recreation	3
PETH 425	Motor Learning	3
RECR 387	Youth Services Leadership	3
RECR 475	Recreation for Special Populations	3
	Electives	<u>26</u>

Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman.

Cognates: Correctional Recreation

MATH 105	Mathematics With Applications	} 4
or		
MATH 106	Applied Statistics	
PLSC 224	American Government	4
SOCI 204	General Sociology	4
SPCH 207	Small Group Communication	3

CONCENTRATION: Youth Services Leadership

HLED 217	First Aid	2
PEAC 101-277	Physical Activity Courses	6
Physical activity courses must be chosen in consultation with and approved by the academic adviser assigned by the department chairman.		
PETH 205	Water Safety Instructor's Course	2
RECR 234	Youth Camp Leadership	2
RECR 375	Camping, Survival and Wilderness Living	3
RECR 387	Youth Services Leadership	3
RECR 389	Camp Administration	2
	Electives	<u>23</u>

Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman.

HEALTH, PHYSICAL EDUCATION AND RECREATION

Cognates: Youth Services Leadership

BIOL 407	Philosophy of Science	4
MATH 105	Mathematics With Applications	} 4
or		
MATH 106	Applied Statistics	4
PSYC 215	Psychology of Childhood and Adolescence	4
SOCI 449	Sociology of Religion	2
SPCH 207	Small Group Communication	3

MINOR IN HEALTH

A student minoring in health must complete 27 quarter hours:

HLED 215	Contemporary Health Issues	2
HLED 308	Community Health Education	3
	Electives (6 must be upper division)	22
		<u>27</u>

Approval of health adviser required.

MINOR IN PHYSICAL EDUCATION

A student minoring in physical education must complete 30 quarter hours:

PETH 214	Introduction to Physical Education and Recreation	2
PETH 261, 262, 263	Officiating of Sports Activities	6
PETH 484	Administration of Health, Physical Education and Recreation	3
	Electives	19
		<u>30</u>

Approval of physical education adviser required.

MINOR IN RECREATION

A student minoring in recreation (youth services, outdoor education and community recreation) must complete 30 quarter hours.

PETH 214	Introduction to Physical Education and Recreation	2
RECR 234	Youth Camp Leadership	2
RECR 278	Programming Intramural and Recreational Activities	2
RECR 356	Recreation, Leisure and Society	3
RECR 490	Practicum in Recreation	4
	Electives	17
		<u>30</u>

Approval of recreation adviser required.

HEALTH EDUCATION (HLED)

HLED 208 DRUGS AND SOCIETY 2
Study of the effects of drugs, including narcotics and alcohol; their relationship to social problems.

HLED 215 CONTEMPORARY HEALTH ISSUES 2
Study of current health issues and problems emphasizing modern preventive measures.

HLED 217 FIRST AID 2
Standard and advanced American Red Cross first aid, including the civil defense medical self-help course; prepares the student to deal effectively with minor emergencies and injuries. Lecture and laboratory.

HLED 238 HEALTH BEHAVIOR CHANGE 2
Study of behavioral change in health practices; utilization of group processes and basic behavioral science concepts, relating them to learning and motivation in the health field.

HEALTH, PHYSICAL EDUCATION AND RECREATION

- HLED 265 SCHOOL SAFETY** 2
Methods of preventing accidents found in various school situations, with special emphasis on care of injuries associated with playground and gymnasium activities.
- HLED 308 COMMUNITY HEALTH EDUCATION** 3
Study of the health educator's role in the community, including his relationship to both public and private health agencies; emphasizes the prevention of disease and the promotion of health through organized community effort.
- HLED 328 BASIC THERAPY** 2
Study of simple, nondrug, and therapeutic practices; includes legal implications and quackery.
- HLED 366 HEALTH EDUCATION IN CHURCH PROGRAMS** 3
Methods of planning, implementing, evaluating church-sponsored health programs.
- HLED 370 FIELD TRAINING** 3
Supervised field experience in community and church health education. Prerequisite: HLED 308 or HLED 366.
- HLED 384 SCHOOL HEALTH PROGRAMS** 3
Study of the philosophy of school health programs; emphasizes health problems and how to deal with them.
- HLED 453 PRINCIPLES OF HEALTH** 3
Study of the principles of health and nature of man. Prerequisites: HLED 215; HLED 238; HLED 308 or HLED 366 or permission of instructor.
- HLED 472 METHODS OF SCHOOL HEALTH INSTRUCTION** 3
Concepts of unit planning, methods, techniques, sources and evaluation of instructional materials; students are required to read widely and collect material pertinent to the course.

PHYSICAL ACTIVITY COURSES (PEAC)

- PEAC 101-197 PHYSICAL EDUCATION ACTIVITY COURSES** 1
Motor skills are physiological development; adaptive programs as needed.
- | | |
|--|-----------------------------------|
| *PEAC 101 Canoeing I | PEAC 129 Weight Control |
| *PEAC 102 Canoeing II | PEAC 131 Movement Skill |
| PEAC 103 Springboard Diving I | PEAC 132 Developmental Movement |
| PEAC 104 Springboard Diving II | PEAC 133 Aerobic Rhythm |
| *PEAC 105 Kayaking and Rafting I | PEAC 134 Rhythms |
| *PEAC 106 Kayaking and Rafting II | PEAC 135 Singing Games |
| PEAC 107 Lifesaving | +*PEAC 136 Ice Skating I |
| *PEAC 108 Sailing I | +*PEAC 137 Ice Skating II |
| *PEAC 109 Sailing II | *PEAC 138 Roller Skating I |
| +*PEAC 110 Scuba I | *PEAC 139 Roller Skating II |
| *PEAC 111 Scuba II | PEAC 141 Archery |
| PEAC 112 Introductory Swimming | PEAC 142 Badminton I |
| PEAC 113 Beginning Swimming | PEAC 143 Badminton II |
| PEAC 114 Intermediate Swimming | *PEAC 144 Golf I |
| PEAC 115 Competitive Swimming and Conditioning | *PEAC 145 Golf II |
| PEAC 116 Synchronized Swimming I | PEAC 146 Tennis I |
| PEAC 117 Synchronized Swimming II | PEAC 147 Tennis II |
| *PEAC 118 Water Skiing | PEAC 148 Tennis III |
| PEAC 121 Adaptive | PEAC 149 Handball I |
| PEAC 122 Body Mechanics | PEAC 150 Handball II |
| PEAC 123 Conditioning | PEAC 151 Racquetball I |
| PEAC 124 Gymnastics I | PEAC 152 Racquetball II |
| PEAC 125 Gymnastics II | *PEAC 153 Western Horsemanship I |
| PEAC 126 Modern Gymnastics | *PEAC 154 Western Horsemanship II |
| PEAC 127 Tumbling | *PEAC 157 Backpacking |
| PEAC 128 Jogging | *PEAC 159 Cycling |
| | *PEAC 160 Cycle Touring |

HEALTH, PHYSICAL EDUCATION AND RECREATION

*PEAC 161	Orienteering	PEAC 175	Softball
*PEAC 162	Winter Mountaineering	PEAC 176	Track and Field
*PEAC 163	Rock Climbing	PEAC 177	Volleyball I
+*PEAC 164	Downhill Skiing I	PEAC 178	Volleyball II
+*PEAC 165	Downhill Skiing II	PEAC 179	Team Handball
*PEAC 166	Cross-Country Skiing I	PEAC 180	Water Polo
*PEAC 167	Cross-Country Skiing II	PEAC 181	Fencing I
PEAC 170	Baseball	PEAC 182	Fencing II
PEAC 171	Basketball	PEAC 187	Self-Defense
PEAC 172	Field Hockey	+PEAC 190	Independent Activity
PEAC 173	Flagball	PEAC 195	Gymnastics Team
PEAC 174	Soccer	PEAC 197	Modern Gymnastics Team

PROFESSIONAL ACTIVITIES (Individual)

PEAC 223	Pro Act Conditioning	PEAC 242	Pro Act Badminton I
PEAC 224	Pro Act Gymnastics I	*PEAC 244	Pro Act Golf
PEAC 225	Pro Act Gymnastics II	PEAC 246	Pro Act Tennis
PEAC 241	Pro Act Archery	PEAC 276	Pro Act Track and Field

PROFESSIONAL ACTIVITIES (Team)

PEAC 270	Pro Act Baseball	PEAC 274	Pro Act Soccer
PEAC 271	Pro Act Basketball	PEAC 275	Pro Act Softball
PEAC 272	Pro Act Field Hockey	PEAC 277	Pro Act Volleyball
PEAC 273	Pro Act Flagball		

*Special fee required. See Financial Information.

+Graded S or NC.

PHYSICAL EDUCATION THEORY (PETH)

PETH 205 WATER SAFETY INSTRUCTOR'S COURSE 2
Preparation to meet the requirements of the National Red Cross Certificate to instruct swimming and supervise swimming areas. Prerequisite: Lifesaving.

PETH 214 INTRODUCTION TO PHYSICAL EDUCATION AND RECREATION 2
Introduction and orientation to the field of physical education; includes survey of the philosophy and objectives, as well as the professional opportunities and responsibilities, of the physical educator.

PETH 225 PREVENTION OF INJURIES 2
Methods of prevention, evaluation, recognition and immediate care and rehabilitation of injuries. Lecture and laboratory.

PETH 261, 262, 263 OFFICIATING OF SPORTS ACTIVITIES 2, 2, 2
Introduction to officiating in a variety of activities covered in the service areas; students required to act as officials in the intramural activities sponsored by the department. Lecture and laboratory.

PETH 268 SKI INSTRUCTOR'S COURSE 2
Introduction for the advanced skiing student to the methods and skills of skiing instruction; students required to assist in ski classes. Lecture and laboratory.

PETH 323 MEASUREMENTS AND RESEARCH IN HEALTH, PHYSICAL EDUCATION AND RECREATION 2
Study of the tests used in health, physical education, and recreation; includes application of tests in the evaluation process of motor performance and other areas of physical fitness. Prerequisite: MATH 105 or 106.

PETH 324 ADAPTED PHYSICAL EDUCATION AND RECREATION 3
Study of common abnormalities found in students which may be corrected or helped by proper exercise; considers extent and limitations of the teacher's responsibility in this phase of education. Lecture and laboratory.

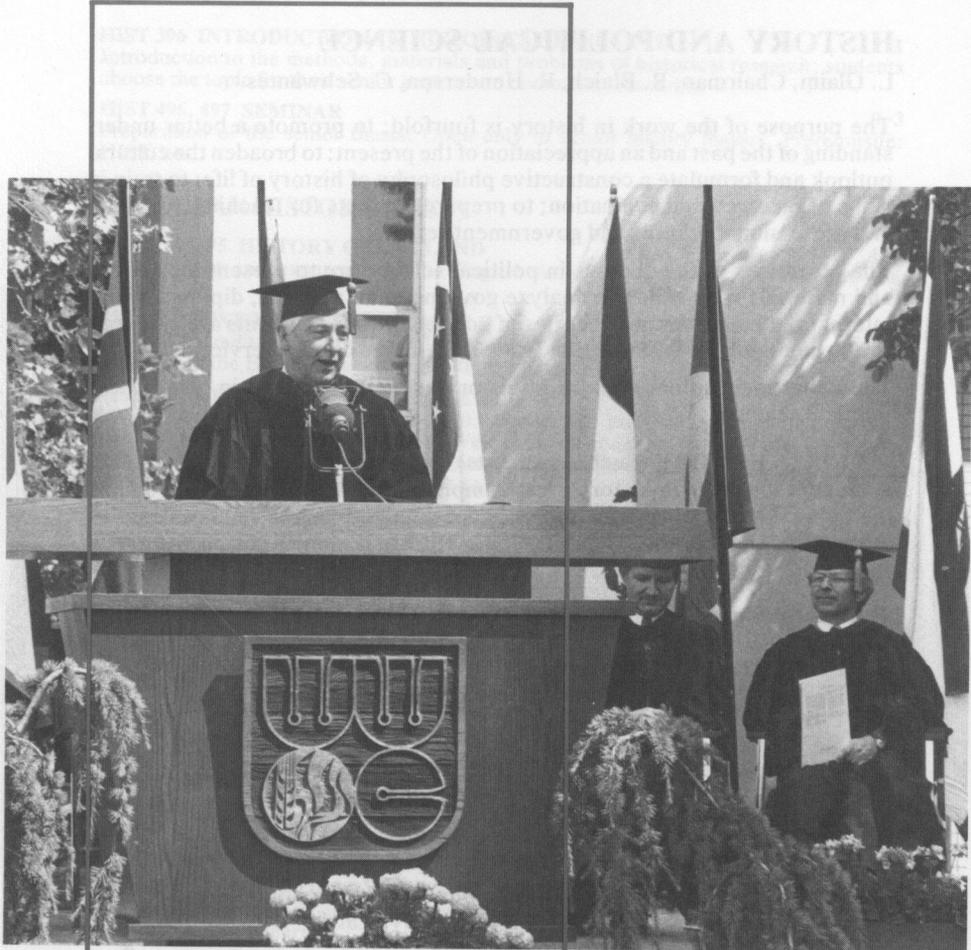
PETH 325 KINESIOLOGY 3
Study of joint and muscular mechanism action of muscles involved in fundamental movements; effect of gravity and other forces on motion. Prerequisites: BIOL 201, 202; PETH 323. Lecture and laboratory.

HEALTH, PHYSICAL EDUCATION AND RECREATION

- PETH 363, 364, 365 ANALYSIS OF TEAM ACTIVITIES** 2, 2, 2
Materials, methods, strategy and teaching progressions; **autumn**, flagball and soccer; **winter**, basketball and volleyball; **spring**, track and field and softball.
- PETH 370 PRACTICUM IN MOVEMENT EDUCATION** 2
Introduction to practical movement activities for the preschool and elementary child. Lecture and laboratory.
- PETH 425 MOTOR LEARNING** 3
Analysis of selected variables which influence the learning of motor skills. Prerequisite: PETH 323. Lecture and laboratory.
- PETH 426 PHYSIOLOGY OF EXERCISE** 4
Study of the physiological basis for motor fitness, factors limiting human performance in athletic competition, pertinent research from the sports medicine literature and laboratory techniques used in analysis of motor fitness. Prerequisites: BIOL 201, 202; PETH 323. Lecture and laboratory.
- PETH 472 METHODS OF TEACHING SECONDARY PHYSICAL EDUCATION** 3
Study of the methods and techniques of teaching physical education in the secondary school, indoors and outdoors; includes individual as well as group activities; students are required to observe and demonstrate in class. Lecture and laboratory.
- PETH 473 PHYSICAL EDUCATION IN THE ELEMENTARY SCHOOL** 3
Introduction to the planning of the curriculum in the elementary school and the organization of a balanced activities program; requires participation in the elementary school physical education program.
- PETH 479 DIRECTED STUDY/RESEARCH** 1-3
Additional research or study carried out under the direction of an assigned faculty member.
- PETH 484 ADMINISTRATION OF HEALTH, PHYSICAL EDUCATION AND RECREATION** 3
Study of the techniques of scheduling, organizing and planning suitable activities; includes purchasing of supplies and equipment, planning and use of facilities, and comparative cost and budgeting for the entire health and physical education program; related to either the elementary or secondary school depending on the need of the student.
- PETH 494 HISTORY OF HEALTH, PHYSICAL EDUCATION AND RECREATION** 3
Study of the history and theory of health, physical education and recreation; considers the reasons physical education should be included in the school program and the unique contribution it makes to education.
- PETH 496 SEMINAR** 2
Study of the modern trends in physical and recreational education; group discussion and presentation of current material in the field. Prerequisite: senior standing.
- RECREATION (RECR)**
- RECR 205 LAPIDARY** 2
Introduction to lapidary to help plan the leisure-time activity of young people, as well as to prepare for a hobby.
- RECR 234 YOUTH CAMP LEADERSHIP** 2
Introduction to the principles and techniques of camp counseling involving campers, counselors, cabin groups, and understanding problems of discipline and morale. Lecture and laboratory.
- RECR 278 PROGRAMMING INTRAMURAL AND RECREATIONAL ACTIVITIES** 2
Study of the mechanics of programming the intramural and recreational activities in the school and community.
- RECR 315 ADVANCED LAPIDARY** 2
Advanced study of lapidary; emphasizes teaching methods, preparation of teaching aids, sources of material and costs.

HEALTH, PHYSICAL EDUCATION AND RECREATION

- RECR 356 RECREATION, LEISURE AND SOCIETY** 3
Study of concepts promoting the most effective and widespread education for the worthy and creative use of leisure.
- RECR 364 RECREATIONAL PROGRAMS** 3
Methods of planning a balanced recreational program in the church or community for all age groups. Lecture and laboratory.
- RECR 375 CAMPING, SURVIVAL AND WILDERNESS LIVING** 3
Study of survival and wilderness living as preparation for summer camp leaders. Two lectures per week and a four-day camping experience.
- RECR 387 YOUTH SERVICES LEADERSHIP** 3
Introduction to youth leadership service for the community, youth agencies and the church; emphasizes understanding youth social problems.
- RECR 389 CAMP ADMINISTRATION** 2
Study of organizational and administrative procedures in organized camping, including committee work, budget, campsites, building, equipment, insurance, nutrition, health and safety.
- RECR 475 RECREATION FOR SPECIAL POPULATIONS** 3
Study of principles and practices involving the use of recreation programs in the therapeutic environment; includes investigation of hospitals, nursing homes, educational, correctional and other specialized programs which use recreational activities as therapy.
- RECR 484 LEADERSHIP IN RECREATION** 2
Study of leadership and group work as techniques for meeting program objectives, individual and group needs, individual development, human relations and the learning process of recreational leadership.
- RECR 490 PRACTICUM IN RECREATION** 4; 12
Field work at various private and public recreation agencies under supervision of qualified leadership and approved agencies. Application must be completed two months prior to placement, and all students will be screened by the department. All general education requirements must be completed. Prerequisites: PETH 214; PETH 484; RECR 356; RECR 364; RECR 484.



History and Political Science

HISTORY AND POLITICAL SCIENCE

L. Glaim, Chairman; R. Blauch, R. Henderson, C. Schwantes.

The purpose of the work in history is fourfold: to promote a better understanding of the past and an appreciation of the present; to broaden the cultural outlook and formulate a constructive philosophy of history of life; to train in skills of research and evaluation; to prepare students for teaching, graduate and professional schools and government service.

The objectives of the courses in political science are to present techniques and materials with which to analyze governmental systems, diplomacy and international relations and theories of political power. Students are prepared for further study in teaching, law, government and church service.

The department offers a major in history as well as minors in history and political science.

MAJOR IN HISTORY (Bachelor of Arts)

A student majoring in history must complete 52 quarter hours in the major, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin. The Graduate Record Examination in history is required.

Major Requirements:

HIST 121, 122	History of Western Civilization	8
HIST 221, 222	History of the United States	8
HIST 396	Introduction to Historical Research	1
HIST 496, 497	Seminar	3
	Electives (20 must be upper division)	<u>32</u>

8 quarter hours must be European; 8 quarter hours must be American; electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman. 52

MINOR IN HISTORY

A student minoring in history must complete 28 quarter hours:

HIST 121, 122	History of Western Civilization	8
HIST 221, 222	History of the United States	8
	Electives (4 must be upper division)	<u>12</u>

Approval of history adviser required. 28

MINOR IN POLITICAL SCIENCE

A student minoring in political science must complete 28 quarter hours:

Electives (3 must be upper division)	28
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Approval of political science adviser required.

HISTORY (HIST)

HIST 121, 122 HISTORY OF WESTERN CIVILIZATION	4, 4
Survey of European history from antiquity emphasizing the period since the Renaissance.	
HIST 131, 132, 133 WESTERN THOUGHT I (HONORS)	4, 4, 4
See the honors program listed under the Interdisciplinary section of this bulletin.	
HIST 221, 222 HISTORY OF THE UNITED STATES	4, 4
Survey of the colonial period, followed by a more detailed study of the national period.	

HIST 396 INTRODUCTION TO HISTORICAL RESEARCH 1
Introduction to the methods, materials and problems of historical research; students choose the topic for their senior papers and commence research.

HIST 496, 497 SEMINAR 0, 3
Preparation of the senior thesis. Open only to senior history majors. Prerequisite: HIST 396.

EUROPEAN HISTORY (HIST)

HIST 274, 275 HISTORY OF ENGLAND 4, 4
Development and expansion of the English nation from the earliest times to the present.

HIST 335 HISTORY OF WORLD WAR II 4
Study of the military, political and diplomatic events from the late 1930s through 1945; covers both the European and the Pacific theaters.

HIST 435 HISTORY OF MODERN GERMANY 4
Survey of German history since 1870; diplomatic, political, socio-economic and ideological developments in Imperial, Weimar, Nazi and post-World War II Germany, with special emphasis on the German Question resulting from World War II. Prerequisites: HIST 121, 122. Offered alternate years.

HIST 456 MEDIEVAL AND MODERN CHURCH HISTORY 4
A survey of the Christian Church from the Council of Chalcedon to the Enlightenment. Prerequisite: HIST 121 or RELH 455.

HIST 463 THE MIDDLE AGES 4
Survey of the main institutions and ideas in European civilization from the decline of the Roman Empire to the Italian Renaissance, 300-1500. Prerequisites: HIST 121, 122.

HIST 465 RENAISSANCE AND REFORMATION 4
Study of the transformation of Europe from a medieval to a modern society, 1300-1648, with special emphasis on the artistic, intellectual and religious sector.

HIST 467 ENLIGHTENMENT AND REVOLUTION 4
Study of the influence of the Enlightenment on the French Revolution and the Napoleonic Imperium. Prerequisites: HIST 121, 122. Offered alternate years.

HIST 468 THE MODERN TRANSITION, 1815-1919 4
Study of Europe against the backdrop of nineteenth century industrialization. Prerequisites: HIST 121, 122. Offered alternate years.

HIST 469 CONTEMPORARY EUROPE, 1918 TO THE PRESENT 4
Study of Europe from division to proposed unity. Prerequisites: HIST 121, 122. Offered alternate years.

AMERICAN HISTORY (HIST)

HIST 225 HISTORY OF CANADA 4
Survey of Canadian development from the beginnings of the French regime to the present. Offered alternate years.

HIST 284, 285 HISTORY OF LATIN AMERICAN 4, 4
Survey of the colonial period, followed by a more detailed study of the development of the individual Latin American nations and their world relationship.

HIST 424 THE AMERICAN FRONTIER 4
Study of the exploration, settlement and development of the American west; considers economic, social, cultural and political factors. Offered alternate years.

HIST 445 THE CIVIL WAR AND THE RISE OF INDUSTRIAL AMERICA, 1850-1900 4
Study of the sectional crisis, war and its impact on postwar political, economic and social developments; emphasizes industrialism and the development of the American labor movement. Prerequisites: HIST 221, 222.

HIST 446 HISTORY OF THE PACIFIC NORTHWEST 4
Study of the Pacific Northwest from the age of discovery to contemporary times; includes the fur traders, the missionaries, international rivalries, the territorial period and developments since statehood.

HISTORY

HIST 448 TWENTIETH CENTURY AMERICA 4
Study of maturing America from 1900 to the present; emphasizes the problems of prosperity, depression and the role of the United States in world affairs. Prerequisites: HIST 221, 222.

HIST 457 SOCIAL AND INTELLECTUAL HISTORY OF THE UNITED STATES 4
Analysis of the major social and intellectual trends in United States history, including Puritanism, the Enlightenment, Transcendentalism, Social Darwinism and Pragmatism. Prerequisites: HIST 221, 222. Offered alternate years.

GENERAL

GEO 258 WORLD GEOGRAPHY 4
Survey of the major groups of natural regions; emphasizes human geography, but gives adequate attention to economic and physical aspects. Will not apply to a history minor. Offered alternate years.

HIST 394 DIRECTED READING 1-3
Independent reading for students who wish to continue broadening their knowledge of history by extensive reading; admission by departmental approval. Prerequisite: Eight hours of general studies history.

HIST 472 METHODS OF TEACHING SOCIAL STUDIES 3
Methods and techniques of teaching social studies on the secondary school level; requires observation, demonstration and class presentation. Will not apply on a major or minor in history or political sciences.

POLITICAL SCIENCE (PLSC)

PLSC 224 AMERICAN GOVERNMENT 4
Study of the principles, organization and development of American national, state and local government.

PLSC 226 VIOLENCE IN AMERICA 4
Study of violence in the context of the American political structure and value system; includes discussion of industrial, racial, and criminal violence, vigilantism, terrorism, and assassination.

PLSC 324 COMPARATIVE GOVERNMENTS 4
Comparative study of political institutions, ideologies and processes in modern and developing areas; includes intensive analytical and critical study of theories of authority; emphasizes problems of values in the political thought of communist, fascist, Catholic, socialist and democratic theories. Offered alternate years.

PLSC 426 AMERICAN POLITICAL THOUGHT 4
Study of the genesis and development of political thought in the United States. Applies to history as well as political science. Offered alternate years.

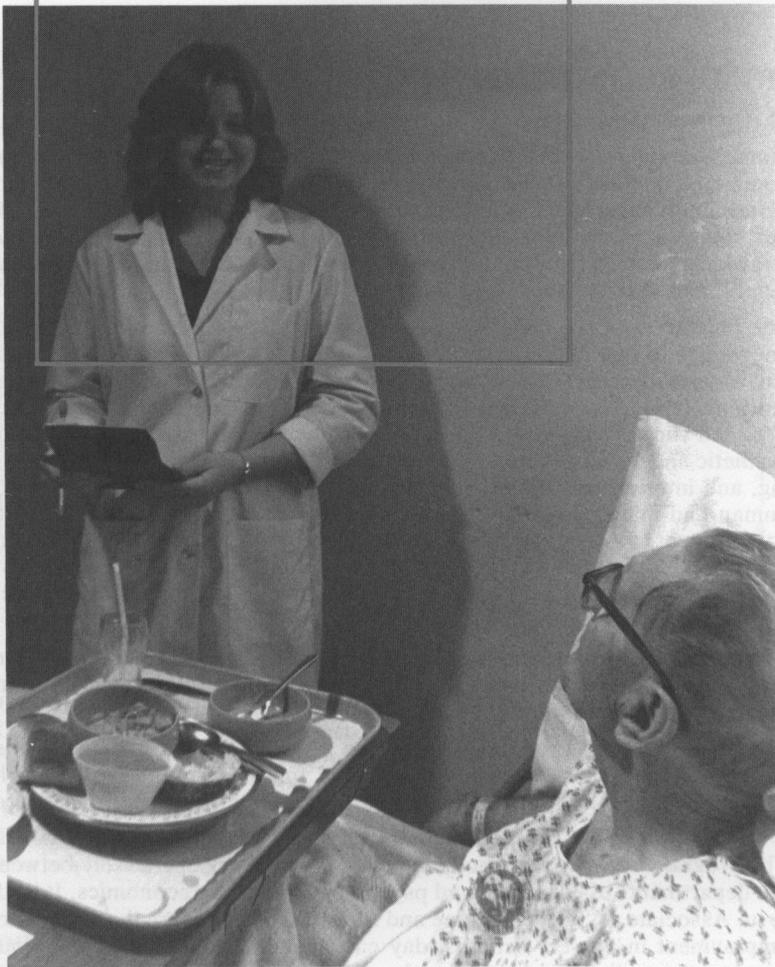
PLSC 427 AMERICAN DIPLOMATIC HISTORY 4
Study of the relation of the United States to world politics; analysis of problems involved in the formulation of foreign policies from colonial times to the present. Applies to history as well as political science. Offered alternate years.

PLSC 434 INTERNATIONAL RELATIONS 4
Analysis of the nature of international society and of the motivating and conditioning factors which explain interaction among states and other international entities. Offered alternate years.

PLSC 451 RESEARCH METHODS 4
Introduction to the principles of research design; data collection through surveys and other methods; scaling, sampling; and computer assisted statistical analysis. Statistics highly recommended. One laboratory per week. Same as MKTG 451 and SOCI 451.

PLSC 454 WESTERN POLITICAL AND SOCIAL THOUGHT 4
A survey of political and social thought from classical Greece to the Enlightenment. May also apply to history. Same as PHIL 454; SOCI 454. Offered alternate years.

PLSC 455 WESTERN POLITICAL AND SOCIAL THEORY 4
Survey of modern social, political, and economic thought. Emphasizes 19th and 20th century theories and models which have contemporary research in the social sciences and have influenced public policy. Same as SOCI 455.



Home Economics

EARLY CHILDHOOD EDUCATION (Associate of Science)

This program is offered cooperatively, between the departments of education and psychology and home economics. See the Education and Psychology section of this bulletin for a complete list of requirements.

HOME ECONOMICS

M. Olmsted, Chairperson; G. Hicinbothom, M. Schwantes.

Home Economics is the study of the human and material forces affecting homes and families and the use of this knowledge for the benefit of mankind. Home Economics as a discipline synthesizes knowledge obtained from the natural sciences, social sciences, and the arts and humanities and applies this knowledge toward the optimum functioning of the Christian individual, the family, and society.

The objectives of the department are to develop concepts and to promote knowledge in five major areas. One area includes human nutritional needs and ways to meet these needs, as well as developing techniques for evaluating nutrients in food. A second area studies scientific principles in the selection, use, and care of textile and household products. A third area includes the aesthetic and social-psychological factors related to the home, family, housing, and interior furnishings. A fourth area is the effective management of human and material resources. And in the fifth area is the family and its commitment to various members, especially in promoting satisfying relationships. Developing an awareness of the interaction and concepts in these five areas leads to criteria which can be used in making and implementing decisions concerning the individual, the family and their needs.

The purpose of the department is to enhance the quality of life with a program designed to develop an understanding of individuals within their environments, as well as to prepare students for professional careers.

The major in home economics leading to a Bachelor of Arts degree is designed for the general college student and for those preparing to teach. Students who wish to teach should also plan to meet certification requirements.

The program in early childhood education is offered cooperatively between the departments of education and psychology and home economics. It leads to an Associate of Science degree and is designed to prepare the student for employment in nursery schools, day care centers, government programs, parent cooperatives and other early education facilities. For a complete listing of requirements, see the Education and Psychology section of this bulletin.

The department offers minors in home economics, interior design, and foods and nutrition. The department also offers the first two years of a pre-dietetics program.

MAJOR IN HOME ECONOMICS (Bachelor of Arts)

A student majoring in home economics must complete 53 quarter hours in the major, the required cognates, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin.

Major Requirements:

CFSC 282	Child Development	3
FDNT 101, 102	Principles of Food Science	8
FDNT 103	Meal Management and Table Service	3
FDNT 220	Human Nutrition	4
HMEC 101	Introduction to Home Economics	2
HMEC 222	Art in Everyday Living	3
HMEC 223	Introductory Interior Design	3
HMEC 242	Clothing Selection and Construction	4
HMEC 243	Fabric Constructions for Interiors	2
HMEC 301	Consumer Education	4
HMEC 346	Household Management	3
HMEC 369	Textiles	4
HMEC 496	Seminar	1
	Electives (must be upper division)	<u>9</u>
		53

Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman.

Cognates:

CHEM 101, 102	Introductory Chemistry	8
SOCI 325	The Social Psychology of Family Life	3

The student desiring teaching certification in home economics must take HMEC 472, Methods of Teaching Home Economics, and meet the certification requirements as listed in the education section of this bulletin.

DIETETICS

M. Schwantes, Academic Adviser

Students pursuing careers in therapeutic or administrative dietetics must meet requirements as specified by the American Dietetics Association (ADA). The first two years or 96 quarter hours are to be completed on the Walla Walla College campus. The remaining two years are to be completed in a Coordinated Undergraduate Program approved by ADA. Consult with the academic adviser for a complete course outline. The degree is not awarded by Walla Walla College.

EARLY CHILDHOOD EDUCATION (Associate of Science)

This program is offered cooperatively between the departments of education and psychology and home economics. See the Education and Psychology section of this bulletin for a complete list of requirements.

HOME ECONOMICS

MINOR IN FOODS AND NUTRITION

A student minoring in foods and nutrition must complete 30 quarter hours:

FDNT 101, 102	Principles of Food Science	8
FDNT 103	Meal Management and Table Service	3
FDNT 220	Human Nutrition	4
FDNT 286	Quantity Food Purchasing, Production and Service	4
FDNT 412	Foods in Cultures of the World	3
FDNT 437	Community Nutrition	3
	Electives (FDNT)	<u>5</u>
	Approval of home economics adviser required.	30

MINOR IN HOME ECONOMICS

A student minoring in home economics must complete 30 quarter hours:

FDNT 101, 102	Principles of Food Science	8
FDNT 220	Human Nutrition	4
HMEC 101	Introduction to Home Economics	2
HMEC 222	Art in Everyday Living	3
HMEC 242	Clothing Selection and Construction	4
HMEC 301	Consumer Education	4
	Electives	<u>5</u>
	Approval of home economics adviser required	30

MINOR IN INTERIOR DESIGN

A student minoring in interior design must complete 30 quarter hours:

HMEC 222	Art in Everyday Living	3
HMEC 223	Introduction to Interior Design	3
HMEC 242	Clothing Selection and Construction	4
HMEC 243	Fabric Constructions for Interiors	2
HMEC 301	Consumer Education	4
HMEC 369	Textiles	4
HMEC 424	Housing and Interiors	3
HMEC 425	Problems in Interiors	3
	Electives	<u>4</u>
	Approval of interior design adviser required.	30

FOODS AND NUTRITION (FDNT)

FDNT 101, 102 PRINCIPLES OF FOOD SCIENCE 4, 4
Basic principles and techniques of food preparation, purchasing and selection, with emphasis on nutrition, economic values and food quality. Sanitary handling and storage in food preparation. Laboratory required.

FDNT 103 MEAL MANAGEMENT AND TABLE SERVICE 3
Managerial aspects of planning, preparing and serving food for family meals and special occasions. Prerequisite: FDNT 101 or 102 or permission of instructor. Laboratory required.

FDNT 220 HUMAN NUTRITION 4

Emphasizes fundamental principles and basic vocabulary of nutritional science and assists the student in the interpretation and application of those principles through practical experiences. The student will be encouraged to study the many factors associated with food and the digestion of food and to evaluate current nutrition controversies.

FDNT 286 QUANTITY FOOD PURCHASING, PRODUCTION AND SERVICE 4

Emphasis in methods to achieve approved standards of quantity food production. Includes techniques of planning, purchasing and storage quality food preparation and service. Practicum in an institutional kitchen. Prerequisites: FDNT 101, 102. Laboratory required.

FDNT 412 FOODS IN CULTURES OF THE WORLD 3

Preparation of regional and national foods emphasizing cultural ethnic and environmental factors; application of scientific principles in specialized food preparation. Prerequisite: Adequate background in food preparation. Offered alternate years. Laboratory required.

FDNT 422 EXPERIMENTAL COOKERY 3

Development of experimental methods, their application of investigations in cookery and the skills involved; acquaintance with the literature in this field; preparation of the student for independent investigations in foods. Prerequisites: FDNT 101, 102; FDNT 103; and CHEM 101, 102 or CHEM 141, 142, 143 or equivalent. Offered alternate years. Laboratory required.

FDNT 437 COMMUNITY NUTRITION 3

Survey of current community nutrition problems and of programs designed to alleviate the problems; food habits of population groups which have a high incidence of malnutrition; implications of fad diets. Field experience included. Prerequisite: FDNT 220 or permission of instructor.

FDNT 441 ADVANCED NUTRITION 3

Study of nutrition involving digestion and metabolic processes and products; selection of an optimum diet for health; review of current nutritional literature and preparation of the student for independent investigations in nutrition research. Prerequisites: FDNT 220; CHEM 101, 102 or CHEM 141, 142, 143. Laboratory required.

FDNT 443 DIET IN DISEASE 4

Study of recent development in the dietary treatment of disease in which nutrition plays a major role; experience in independent use of journal literature in the field; class presentation of research project in the field. Laboratory experience in dietary care of patients in hospital setting. Prerequisite: FDNT 220 or equivalent. Laboratory required.

FDNT 448 INSTITUTIONAL FOOD MANAGEMENT 4

Study of principles of organization and management of dietary department. Includes study of personnel relations, budget planning, and design of a food service facility. Laboratory includes development of menu, layout and schedule for a simulated food service operation and visits to food service facilities. Prerequisite: FDNT 286 or permission of instructor. Laboratory required.

HOME ECONOMICS

HOME ECONOMICS (HMEC)

- HMEC 101 INTRODUCTION TO HOME ECONOMICS** 2
Understanding attitudes, interests, and goals relating to careers in home economics. Basic information for making wise professional choices; meaning and scope of home economics.
- HMEC 201 HOUSEHOLD EQUIPMENT** 3
Introduction to the selection, operation and care of household appliances; includes study of electricity in the home and kitchen planning. Offered alternate years.
- HMEC 222 ART IN EVERYDAY LIVING** 3
Introduction to the use of art elements giving consideration to line, form and color as applied in the fundamental principles of design and the various aspects of the home, clothing and everyday living; problems in selecting and designing.
- HMEC 223 INTRODUCTION TO INTERIOR DESIGN** 3
The study of background treatments (windows, walls and floors) using the elements of design and basic design principles. Budget decorating and finishing touches. Career choices for Interior Designers. Prerequisite: HMEC 222 or permission of instructor.
- HMEC 242 CLOTHING SELECTION AND CONSTRUCTION** 4
Garment construction techniques, fit and style, appropriate dress, self-confidence, projected image. Laboratory required.
- HMEC 243 FABRIC CONSTRUCTIONS FOR INTERIORS** 2
Construction techniques for such items as slipcovers, curtains, draperies, throw pillows, applique and quilts. Laboratory required.
- HMEC 301 CONSUMER EDUCATION** 4
Interaction of consumers, government and market; evaluation of consumer information and protection; money management and consumer skills in the market place; includes savings, insurances, taxes and investments; analysis of consumer buying practices.
- HMEC 302 WEAVING** 3
Study of the principles, techniques and development of handweaving; includes construction of handwoven articles. Laboratory required. Offered alternate years.
- HMEC 346 HOUSEHOLD MANAGEMENT** 3
Principles of organization and management; use of resources; decision making; work simplification; application of management principles to planning, executing and evaluating problems in home management.
- HMEC 369 TEXTILES** 4
Study of basic fibers, weaves and textile fabrics including characteristics, construction, use, selection and care of fabrics used in clothing and home furnishings. Laboratory required. Offered alternate years.
- HMEC 403 ADVANCED WEAVING** 3
Application of basic principles of weaving to original designs through the use of hand spinning, dyeing and weaving. Prerequisite: HMEC 302 or equivalent. Laboratory required. Offered alternate years.
- HMEC 424 HOUSING AND INTERIORS** 3
A study of the history of furniture and how it relates to present styles. Current trends in housing. Housing alternatives. Energy conservation. Laboratory required. Offered alternate years.
- HMEC 425 PROBLEMS IN INTERIORS** 3
Planning and furnishing residential spaces to meet individual family needs. Evaluate the use of space in a dwelling and how to organize it. Draw floor plans and interpret blueprints. Includes experience working with clients. Laboratory required. Offered alternate years.
- HMEC 451 CLOTHING DESIGN** 3
Study of the history and theory of clothing design; development of original clothing designs by flat pattern techniques. Prerequisite: HMEC 242. Laboratory required. Offered alternate years.

HOME ECONOMICS

- HMEC 461 TAILORING** 3
Custom and unstructured tailoring techniques applied to the construction of suits and coats. Fitting. Laboratory required. Offered alternate years.
- HMEC 472 METHODS OF TEACHING HOME ECONOMICS** 3
Study of objectives, methods, materials, student demonstrations, observations, lesson plans and problems involved in teaching home economics. Prerequisites: EDUC 390; EDUC 471. Offered alternate years.
- HMEC 496 SEMINAR** 1
Study of recent literature, research and professional ethics in areas of home economics.

CHILD AND FAMILY SCIENCES (CFSC)

- CFSC 282 CHILD DEVELOPMENT** 3
Study of the child's physical, emotional, intellectual and social growth in a family context.
- SOCI 225 MARRIAGE AND FAMILY LIFE** 2
See the Sociology and Social Work section of this bulletin.
- SOCI 325 SOCIAL PSYCHOLOGY OF FAMILY LIFE** 3
See the Sociology and Social Work section of this bulletin.



Industrial Technology

The Industrial Technology program is designed to prepare graduates for employment in that particular field. Each case, a broad technical background is offered balanced with industry experience. These programs are especially designed to serve the student who wishes to complete his technical training in a Christian environment. The program meets the requirements of the American Society of Mechanical Engineers (ASME) and the National Institute of Standards and Technology (NIST). The program is planned in such a way that continuous in the background program in the technical specialties. The following program structure is designed to provide a total emphasis on the technical specialties. The following program structure provides an opportunity of quality short-term technical training in a Christian environment: auto mechanics, auto body, aviation, carpentry, electronics, welding, and light maintenance. The program is planned in such a way that continuous in a degree program may occur with minimal loss of credit. To qualify for a certificate, the student must maintain a cumulative grade point average of 2.0. The certificate program requires the completion of 60 semester hours.

INDUSTRIAL TECHNOLOGY

C. Blake, Chairman; W. Crow, D. Dawes, A. Fisher, G. Fisher, F. Fox, K. Gruesbeck, L. Laabs, P. Rasmussen, W. Rouse, D. Visger.

The industrial technology department provides quality technological instruction in a Christian environment. Various fields of technology are presented with the express purpose of preparing students as teachers of industrial arts or for careers in industry as industrial technologists.

The four-year industrial technology college graduate is associated with the managerial, engineering, scientific and supervisory activities of the industrial world. A broad preparation is given for manufacturing management in industry which enables the graduate to work with and contribute to the ideas of professional engineers and scientists, as well as supervise and manage the use of materials and machines for producing, distributing and servicing industrial products.

The teacher of industrial arts possesses a broad background in the products and processes of industry. A degree of skill is developed in several areas of industrial technology to equip the teacher with the ability to pass on to students the benefits of America's industrial heritage.

Courses in industrial technology also provide nonmajors with the opportunity of developing occupational skills in a second field or strengthening their background in the applied arts to better fit them for life in today's highly technologically oriented society.

Programs leading to the Bachelor of Science degree are industrial arts education, automotive technology, biomedical electronics technology, electronics technology, graphics technology, industrial technology and plant maintenance technology.

The industrial technology department also offers majors leading to the Associate of Science degree and a number of certificate programs.

Associate of Science degrees are offered in automotive technology, auto body technology, aviation technology, electronics technology, general contracting, graphics technology and plant maintenance technology. Each curriculum is designed to prepare graduates for employment in that particular field. In each case, a broad technical background is offered balancing theory with laboratory experience. These programs are especially designed to serve the student who wishes to complete his technical training in a Christian environment with minimal general studies and time requirements. The programs are planned in such a way that continuance in the baccalaureate program may occur with minimal loss of credit. The Associate of Science degree requires the completion of 96 quarter hours.

The certificate programs are designed for completion in one year with almost total emphasis on the technical specialty. The following programs offer the opportunity of quality short-term technical training in a Christian environment: auto mechanics, auto body, aviation, carpentry, electricity/electronics, plant maintenance, printing, offset copy preparation.

These programs are planned in such a way that continuance in a degree program may occur with minimal loss of credit. To qualify for a certificate, the student must maintain a cumulative grade-point average of 2.0. The certificate program requires the completion of 38 quarter hours.

MAJOR IN INDUSTRIAL ARTS EDUCATION (Bachelor of Science)

A student majoring in industrial arts education must complete 63 quarter hours in the major, certification requirements as listed in the education section of this bulletin for the initial Washington State secondary teaching certificate, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin. If planning on teaching in the state of Oregon, please check with the department adviser for specific certification requirements. It is recommended that a minor be chosen from instructional areas taught on the secondary level.

Major Requirements:

DRFT 121, 122	Technical Drawing	6
DRFT 226	Architectural Drawing	} 3
or		
DRFT 236	Electrical and Electronics Drawing	
ELCT 241, 242	Fundamentals of Electronics	10
INDS 124	Introduction to Technology	1
INDS 221, 222, 223	Wood Products and Processes	6
Minimum of six quarter hours in each of two areas chosen from		
	Auto Body, Automotive, Construction, Graphic Arts,	
	Industrial Crafts, Metal Machining, Welding	12
INDS 324	Industrial Design	3
INDS 364	Industrial Safety	2
INDS 374	Foundations of Industrial Arts	2
INDS 376	Technical Facility Planning	3
INDS 398	Machine and Tool Maintenance	1
INDS 472	Methods of Course Organization	4
INDS 480	Advanced Practicum in Industrial Technology (in supervision)	1
INDS 499	Senior Problem	1
	Electives (4 must be upper division)	8
		<u>63</u>

Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman.

Cognates:

ART 244	Commercial Art	2
HLED 217	First Aid	2
	(must also gain and maintain current certification in car- diopulmonary resuscitation)	

MAJOR IN AUTOMOTIVE TECHNOLOGY (Bachelor of Science)

A student majoring in automotive technology must complete 63 quarter hours in the major, the required cognates, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin.

Major Requirements:

AUTO 134	Internal Combustion Engine Theory	2
AUTO 135	Internal Combustion Engine Laboratory	2
AUTO 145	Power Train Theory	2
AUTO 146	Power Train Laboratory	2
AUTO 156	Fuel and Electrical Systems Theory	2
AUTO 157	Fuel and Electrical Systems Laboratory	2

INDUSTRIAL TECHNOLOGY

AUTO 286	Engine and Rebuilding Laboratory	2
AUTO 314	Engine Diagnosis and Tune-up	2
AUTO 315	Engine Diagnosis and Tune-up Laboratory	2
AUTO 345, 346	Automotive Service	4
AUTO 347, 348	Automotive Service Laboratory	4
AUTO 365	Diesel Engines	3
ELCT 221	Introduction to Electricity/Electronics	3
INDS 124	Introduction to Technology	1
INDS 364	Industrial Safety	2
INDS 376	Technical Facility Planning	3
INDS 386	Oil Hydraulics	3
INDS 480	Advanced Practicum in Industrial Technology (in automotive)	3
INDS 499	Senior Problem	1
	Electives	<u>18</u>

Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman. 63

Cognates:

ACCT 115, 116 and ACCT 206 ACCT 331, 332 or CPTR 131 and MGMT 474	Clerical Accounting Principles of Accounting Managerial Cost Accounting	}	11		
MATH 111 MGMT 272 or MGMT 275 MGMT 476 or MKTG 281	Data Processing Leadership and Supervision Mathematics for the Liberal Arts Principles of Management Management of Small Businesses Human Relations in Management Principles of Marketing			}	6-7
			3-4		

MAJOR IN BIOMEDICAL ELECTRONICS TECHNOLOGY (Bachelor of Science)

A student majoring in biomedical electronics technology must complete 85 quarter hours in the major, the required cognates, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin.

Major Requirements:

ELCT 241, 242	Fundamentals of Electronics	10
ELCT 252, 253	Electronic Devices and Circuits	8
ELCT 297, 298	Electronics Fabrication	2
ELCT 326	Hospital Safety	2
ELCT 331, 332, 333	Medical Electronics	12
ELCT 351, 352	Radio Communications	8
ELCT 361	Linear Integrated Circuits	5
ELCT 362	Digital Integrated Circuits	5
ELCT 381, 382, 383	TV Systems and Circuit Analysis	9
ELCT 466	Computer Circuits and Systems	5
ELCT 490	Directed Hospital Experience	16

INDUSTRIAL TECHNOLOGY

INDS 480	Advanced Practicum in Industrial Technology (in medical electronics)	2
INDS 499	Senior Problem	<u>1</u>
		85

Cognates:

BIOL 201, 202	Anatomy and Physiology	8
CHEM 101, 102	Introductory Chemistry	8
CPTR 124	Introduction to BASIC	2
CPTR 215	Assembly Language Programming I	3
MATH 117	Precalculus	} 5-8
or		
MATH 121, 122	Fundamentals of Mathematics	
PHYS 211, 212, 213	General Physics	9
PHYS 214, 215, 216	General Physics Laboratory	3

MAJOR IN ELECTRONICS TECHNOLOGY (Bachelor of Science)

A student majoring in electronics technology must complete 63 quarter hours in the major, the required cognates, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin. It is recommended that a minor in Business, Communications, Computer Science or Mathematics be chosen.

Major Requirements:

DRFT 236	Electrical and Electronic Drawing	3
ELCT 241, 242	Fundamentals of Electronics	10
ELCT 252, 253	Electronic Devices and Circuits	8
ELCT 297, 298	Electronics Fabrication	2
ELCT 351, 352	Radio Communications	8
ELCT 361	Linear Integrated Circuits	5
ELCT 362	Digital Integrated Circuits	5
ELCT 381, 382, 383	TV Systems and Circuit Analysis	9
ELCT 466	Computer Circuits and Systems	5
INDS 124	Introduction to Technology	1
INDS 480	Advanced Practicum in Industrial Technology (in electronics)	3
INDS 499	Senior Problem	1
	Electives	<u>3</u>

Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman.

Cognates:

CPTR 124	Introduction to BASIC	} 2
or		
CPTR 125	Principles of BASIC	
CPTR 215	Assembly Language Programming I	3
MATH 117	Precalculus	} 5-8
or		
MATH 121, 122	Fundamentals of Mathematics	
MATH 181	Analytic Geometry and Calculus I	4

INDUSTRIAL TECHNOLOGY

MAJOR IN GRAPHICS TECHNOLOGY (Bachelor of Science)

A student majoring in graphics technology must complete 63 quarter hours in the major, the required cognates (choose either the commercial art or business emphasis), the general studies program, and all baccalaureate degree requirements as outlined in this bulletin.

Major Requirements:

GRPH 154	Principles of Photography	2
GRPH 155	Principles of Photography Laboratory	1
GRPH 355	Applied Photography	3
INDS 124	Introduction to Technology	1
INDS 480	Advanced Practicum in Industrial Technology (in graphics)	2
INDS 364	Industrial Safety	2
INDS 376	Technical Facility Planning	3
INDS 499	Senior Problem	1
PRNT 121	Introduction to Graphics Arts	3
PRNT 221, 222, 223	Offset Lithography	9
PRNT 241, 242	Letterpress Printing	6
PRNT 271, 272, 273	Machine Composition	6
PRNT 295	Printing Layout and Design	3
PRNT 326	Printing Estimating	3
PRNT 331	Advanced Halftone Photography	2
PRNT 421, 422	Color Separations	6
	Electives	10
		<u>63</u>

Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman.

Cognates: (choose business emphasis or commercial art)

Business Emphasis:

ACCT 115, 116 and ACCT 206 ACCT 331, 332 or CPTR 131 and MGMT 474 MGMT 272 or MGMT 275 MGMT 476 or MKTG 281	Clerical Accounting Principles of Accounting Managerial Cost Accounting Data Processing Leadership and Supervision Principles of Management Management of Small Businesses Human Relations in Management Principles of Marketing	} } } } } } } }	11 6-7 3-4 3-4
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Commercial Art Emphasis:

ART 161, 162, 163	Design	9
ART 184, 185, 186	Introduction to Drawing	6
ART 244, 245, 246	Introduction to Commercial Art	6
ART 314, 315, 316	Advertising Design	9

MAJOR IN INDUSTRIAL TECHNOLOGY (Bachelor of Science)

A student majoring in industrial technology must complete 63 quarter hours in the major, the required cognates, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin. This program offers considerable latitude in selection of courses or concentrations and is designed to provide the student with a broad background in industry and business.

Core Requirements:

DRFT 121	Technical Drawing	3
INDS 124	Introduction to Technology	1
INDS 221, 222, 223	Wood Products and Processes	6
or		
INDS 241, 242, 243	Fabrication and Machining of Metals	3
INDS 324	Industrial Design	
INDS 364	Industrial Safety	2
INDS 436	Production Processes	3
INDS 499	Senior Problem	1
	Industrial Technology Electives (12 must be upper division)	44
	or	
	Choose one of the following concentrations:	
		63

CONCENTRATION: Aviation

AVIA 124	Introduction to Aviation	2
AVIA 221	Introduction to Commerical Pilot Flight Training	4
AVIA 222	Commercial Pilot Flight Training	4
AVIA 223	Advanced Commercial Pilot Flight Training	5
AVIA 234	Meterology and Commercial Pilot Lectures	5
AVIA 256	Principles of Aircraft Maintenance	3
AVIA 321	Instrument Pilot Lectures	5
AVIA 322	Instrument Pilot Flight Training	3
AVIA 323	Advanced Instrument Pilot Flight Training	3
AVIA 357	Flight Instructor — Airplane Lectures	3
AVIA 358	Flight Instructor — Airplane Flight Training	3
	Electives	4
		44

CONCENTRATION: Construction

DRFT 226	Architectural Drawing	3
INDS 151	Foundations and Framing	6
INDS 152	Building Materials and Mechanical Systems	6
INDS 153	Finish Carpentry	6
INDS 254	House Planning	3

INDUSTRIAL TECHNOLOGY

INDS 345	Finishing Materials and Methods	3
INDS 355	Cabinet Construction	5
INDS 356	Construction Management	3
	Electives (1 must be upper division)	9

Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman. 44

Cognates:

ACCT 115, 116 and ACCT 206 ACCT 331, 332 or CPTR 131 and MGMT 474 MGMT 272 or MGMT 275 MGMT 476 or MKTG 281	Clerical Accounting Principles of Accounting Managerial Cost Accounting Data Processing Leadership and Supervision Principles of Management Management of Small Businesses Human Relations in Management Principles of Marketing	} } } } } } } }	11 6-7 3-4 3-4
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MAJOR IN PLANT MAINTENANCE TECHNOLOGY (Bachelor of Science)
A student majoring in plant maintenance technology must complete 63 quarter hours in the major, the required cognates, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin.

Major Requirements:

AUTO 134	Internal Combustion Engine Theory	2	
AUTO 135	Internal Combustion Engine Laboratory	1	
AUTO 156	Fuel and Electrical Systems Theory	2	
AUTO 157	Fuel and Electrical Systems Laboratory	1	
DRFT 121	Technical Drawing	3	
DRFT 226	Architectural Drawing	3	
ELCT 221	Introduction to Electricity/Electronics	3	
INDS 124	Introduction to Technology	1	
INDS 134	Gas Welding Laboratory	1	
INDS 135	Arc Welding Laboratory	1	
INDS 137	Gas Welding Theory	1	
INDS 138	Arc Welding Theory	1	
INDS 151	Foundations and Framing	3	
INDS 152	Building Materials and Mechanical Systems	3	
INDS 153	Finish Carpentry	3	
INDS 221, 222, 223 or INDS 221 and INDS 355	Wood Products and Processes Wood Products and Processes Cabinet Construction	} } }	6-7
INDS 241, 242, 243	Fabrication and Machining of Metals	6	
INDS 324	Industrial Design	3	
INDS 328	Applied Maintenance	6	

INDUSTRIAL TECHNOLOGY

INDS 376	Technical Facility Planning	3
INDS 386	Oil Hydraulics	3
INDS 499	Senior Problem	1
	Electives (5 must be upper division)	<u>5-6</u>
		63

Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman.

Cognates:

ACCT 115, 116 and ACCT 206 ACCT 331, 332 or CPTR 131 and MGMT 474 MGMT 272 or MGMT 275 MGMT 476 or MKTG 281	Clerical Accounting Principles of Accounting Managerial Cost Accounting Data Processing Leadership and Supervision Principles of Management Management of Small Businesses Human Relations in Management Principles of Marketing	} } } } } } } } }	11 6-7 3-4 3-4
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AUTOMOTIVE TECHNOLOGY (Associate of Science)

A student specializing in automotive technology must complete the following 55 quarter hours, the general studies program, and all associate degree requirements as outlined in this bulletin.

Area Requirements:

AUTO 134	Internal Combustion Engine Theory	2
AUTO 135	Internal Combustion Engine Laboratory	2
AUTO 145	Power Train Theory	2
AUTO 146	Power Train Laboratory	2
AUTO 156	Fuel and Electrical Systems Theory	2
AUTO 157	Fuel and Electrical Systems Laboratory	2
AUTO 286	Engine Rebuilding Laboratory	2
AUTO 314	Engine Diagnosis and Tune-up	2
AUTO 315	Engine Diagnosis and Tune-up Laboratory	2
AUTO 345, 346	Automotive Service	4
AUTO 347, 348	Automotive Service Laboratory	4
AUTO 365	Diesel Engines	3
ELCT 221	Introduction to Electricity/Electronics	3
INDS 124	Introduction to Technology	1
INDS 280	Practicum in Industrial Technology (in automotive)	2
INDS 364	Industrial Safety	2
INDS 386	Oil Hydraulics	3
	Electives	<u>15</u>
		55

Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman.

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Cognates:

ACCT 115, 116	Clerical Accounting	6
MGMT 275	Management of Small Businesses	3

AUTO BODY TECHNOLOGY (Associate of Science)

A student specializing in auto body technology must complete the following 55 quarter hours, the general studies program, and all associate degree requirements as outlined in this bulletin.

Area Requirements:

AUTO 145	Power Train Theory	2
AUTO 146	Power Train Laboratory	1
AUTO 164	Basic Body Repair	4
AUTO 165	Body Repair Laboratory	3
AUTO 175	Body Repair and Refinishing	4
AUTO 176	Body Repair and Refinishing Laboratory	3
AUTO 186	Auto Body Rebuilding	4
AUTO 187	Body Rebuilding Laboratory	3
AUTO 221	Basic Collision Repair	4
AUTO 222	Collision Repair Techniques	4
AUTO 223	Advanced Collision Repair	3
AUTO 324	Body-Shop Operation and Estimating	3
INDS 124	Introduction to Technology	1
INDS 134	Gas Welding Laboratory	1
INDS 135	Arc Welding Laboratory	1
INDS 137	Gas Welding Theory	1
INDS 138	Arc Welding Theory	1
INDS 280	Practicum in Industrial Technology (in auto body)	2
INDS 364	Industrial Safety	2
	Electives	<u>8</u>
		55

Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman.

Cognates:

ACCT 115, 116	Clerical Accounting	6
MGMT 275	Management of Small Businesses	3

AVIATION TECHNOLOGY (Associate of Science)

A student specializing in aviation technology must complete the following 55 quarter hours, the general studies program, and all associate degree requirements as outlined in this bulletin.

Area Requirements:

AVIA 124	Introduction to Aviation	2
AVIA 141	Private Pilot Lectures	5
AVIA 142	Private Pilot Flight Training	3
AVIA 143	Advanced Private Pilot Flight Training	3

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AVIA 221	Introduction to Commercial Pilot Flight Training	4
AVIA 222	Commercial Pilot Flight Training	4
AVIA 223	Advanced Commercial Pilot Flight Training	5
AVIA 234	Meteorology and Commercial Pilot Lectures	5
AVIA 256	Principles of Aircraft Maintenance	3
AVIA 321	Instrument Pilot Lectures	5
AVIA 322	Instrument Pilot Flight Training	3
AVIA 323	Advanced Instrument Pilot Flight Training	3
AVIA 357	Flight Instructor — Airplane Lecture	3
AVIA 358	Flight Instructor — Airplane Flight Training	3
INDS 124	Introduction to Technology	1
INDS 280	Practicum in Industrial Technology (in aviation)	3
		55

GENERAL CONTRACTING (Associate of Science)

A student specializing in construction technology must complete the following 55 quarter hours, the general studies program, and all associate degree requirements as outlined in this bulletin.

Area Requirements:

DRFT 121	Technical Drawing	3
DRFT 226	Architectural Drawing	3
INDS 124	Introduction to Technology	1
INDS 151	Foundations and Framing	6
INDS 152	Building Materials and Mechanical Systems	6
INDS 153	Finish Carpentry	6
INDS 254	House Planning	5
INDS 324	Industrial Design	3
INDS 345	Finish Materials and Methods	3
INDS 355	Cabinet Construction	3
INDS 356	Construction Management	3
INDS 364	Industrial Safety	2
INDS 398	Machine and Tool Maintenance	1
	Electives	<u>10</u>

Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman. 55

Cognates:

ACCT 115, 116	Clerical Accounting	6
MGMT 275	Management of Small Businesses	3

ELECTRONICS TECHNOLOGY (Associate of Science)

A student specializing in electronics technology must complete the following 58 quarter hours, the required cognates, the general studies program, and all associate degree requirements as outlined in this bulletin.

Area Requirements:

DRFT 236	Electrical and Electronic Drawing	3
ELCT 241, 242	Fundamentals of Electronics	10

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ELCT 252, 253	Electronic Devices and Circuits	8
ELCT 297, 298	Electronics Fabrication	2
ELCT 351, 352	Radio Communications	8
ELCT 361	Linear Integrated Circuits	5
ELCT 362	Digital Integrated Circuits	5
ELCT 381, 382, 383	TV Systems and Circuit Analysis	9
ELCT 466	Computer Circuits and Systems	5
INDS 124	Introduction to Technology	1
INDS 280	Practicum in Industrial Technology (in electronics)	2
		<hr/> 58

Cognates:

CPTR 124	Introduction to BASIC	}	2
or			
CPTR 125	Principles of BASIC		
CPTR 215	Assembly Language Programming I		3

GRAPHICS TECHNOLOGY (Associate of Science)

A student specializing in graphics technology must complete the following 55 quarter hours, the general studies program, and all associate degree requirements as outlined in this bulletin.

Area Requirements:

GRPH 154	Principles of Photography	2
GRPH 155	Principles of Photography Laboratory	1
GRPH 355	Applied Photography	3
INDS 124	Introduction to Technology	1
INDS 364	Industrial Safety	2
INDS 376	Technical Facility Planning	3
PRNT 121	Introduction to Graphic Arts	3
PRNT 221, 222, 223	Offset Lithography	12
PRNT 241, 242	Letterpress Printing	6
PRNT 271, 272, 273	Machine Composition	9
PRNT 295	Printing Layout and Design	3
PRNT 331	Advanced Halftone Photography	2
	Electives	<hr/> 8

Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman.

55

PLANT MAINTENANCE TECHNOLOGY (Associate of Science)

A student specializing in maintenance technology must complete the following 55 quarter hours, the general studies program, and all associate degree requirements as outlined in this bulletin.

Area Requirements:

AUTO 134	Internal Combustion Engine Theory	2
AUTO 135	Internal Combustion Engine Laboratory	1
DRFT 121	Technical Drawing	3
DRFT 226	Architectural Drawing	3
ELCT 221	Introduction to Electricity/Electronics	3

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INDS 124	Introduction to Technology	1
INDS 134	Gas Welding Laboratory	1
INDS 135	Arc Welding Laboratory	1
INDS 137	Gas Welding Theory	1
INDS 138	Arc Welding Theory	1
INDS 151	Foundations and Framing	3
INDS 152	Building Materials and Mechanical Systems	3
INDS 153	Finish Carpentry	3
INDS 221, 222, 223 or INDS 221 and INDS 355	Wood Products and Processes } Wood Products and Processes }	6-7
INDS 241, 242, 243	Fabrication and Machining of Metals	
INDS 324	Industrial Design	3
INDS 328	Applied Maintenance	6
INDS 386	Oil Hydraulics	3
	Electives	<u>4-5</u>
		55

Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman.

AUTO MECHANICS (Certificate)

A student taking auto mechanics must complete the following 38 quarter hours and the general studies courses for the certificate program as outlined in this bulletin.

Area Requirements:

AUTO 134	Internal Combustion Engine Theory	2
AUTO 135	Internal Combustion Engine Laboratory	2
AUTO 145	Power Train Theory	2
AUTO 146	Power Train Laboratory	2
AUTO 156	Fuel and Electrical Systems Theory	2
AUTO 157	Fuel and Electrical Systems Laboratory	2
AUTO 286	Engine Rebuilding Laboratory	2
ELCT 221	Introduction to Electricity/Electronics	3
INDS 124	Introduction to Technology	1
INDS 134	Gas Welding Laboratory	1
INDS 135	Arc Welding Laboratory	1
INDS 137	Gas Welding Theory	1
INDS 138	Arc Welding Theory	1
	Electives	<u>16</u>
		38

Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman.

AUTO BODY REPAIR (Certificate)

A student taking auto body repair must complete the following 38 quarter hours and the general studies courses for the certificate program as outlined in this bulletin.

Area Requirements:

AUTO 164	Basic Body Repair	4
AUTO 165	Body Repair Laboratory	3
AUTO 175	Body Repair and Refinishing	4
AUTO 176	Body Repair and Refinishing Laboratory	3

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AUTO 186	Auto Body Rebuilding	4
AUTO 187	Body Rebuilding Laboratory	3
AUTO 221	Basic Collision Repair	4
AUTO 222	Collision Repair Techniques	4
INDS 124	Introduction to Technology	1
INDS 134	Gas Welding Laboratory	1
INDS 135	Arc Welding Laboratory	1
INDS 137	Gas Welding Theory	1
INDS 138	Arc Welding Theory	1
	Electives	4
Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman.		38

AVIATION (Certificate)

A student taking aviation must complete the following 38 quarter hours and the general studies courses for the certificate program as outlined in this bulletin.

Area Requirements:

AVIA 141	Private Pilot Lectures	5
AVIA 142	Private Pilot Flight Training	3
AVIA 143	Advanced Private Pilot Flight Training	3
AVIA 221	Introduction to Commercial Pilot Flight Training	4
AVIA 222	Commercial Pilot Flight Training	4
AVIA 223	Advanced Commercial Pilot Flight Training	5
AVIA 321	Instrument Pilot Lectures	5
AVIA 322	Instrument Pilot Flight Training	3
AVIA 323	Advanced Instrument Pilot Flight Training	3
INDS 280	Practicum in Industrial Technology (in aviation)	3
		38

CARPENTRY (Certificate)

A student taking carpentry must complete the following 38 quarter hours and the general studies courses for the certificate program as outlined in this bulletin.

Area Requirements:

DRFT 226	Architectural Drawing	3
INDS 124	Introduction to Technology	1
INDS 151	Foundations and Framing	6
INDS 152	Building Materials and Mechanical Systems	6
INDS 153	Finish Carpentry	6
INDS 398	Machine and Tool Maintenance	1
	Electives	15
Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman.		38

ELECTRICITY/ELECTRONICS (Certificate)

A student taking electricity/electronics must complete the following 38 quarter hours and the general studies courses for the certificate program as outlined in this bulletin.

Area Requirements:

DRFT 236	Electrical and Electronic Drawing	3
ELCT 241, 242	Fundamentals of Electronics	10
ELCT 252, 253	Electronic Devices and Circuits	8
ELCT 297, 298	Electronics Fabrication	2
INDS 124	Introduction to Technology	1
INDS 280	Practicum in Industrial Technology (in electricity/electronics)	2
INDS 328	Applied Maintenance	3
	Electives	<u>9</u>

Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman. 38

OFFSET COPY PREPARATION (Certificate)

A student taking offset copy preparation must complete the following 38 quarter hours and the general studies courses for the certificate program as outlined in this bulletin.

Area Requirements:

GRPH 154	Principles of Photography	2
GRPH 155	Principles of Photography Laboratory	1
GRPH 355	Applied Photography	3
INDS 124	Introduction to Technology	1
PRNT 121	Introduction to Graphic Arts	3
PRNT 221, 222	Offset Lithography	8
PRNT 241	Letterpress Printing	3
PRNT 271, 272, 273	Machine Composition	9
PRNT 295	Printing Layout and Design	3
	Electives	<u>5</u>

Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman. 38

PLANT MAINTENANCE (Certificate)

A student taking plant maintenance must complete the following 38 quarter hours and the general studies courses for the certificate program as outlined in this bulletin.

Area Requirements:

AUTO 134	Internal Combustion Engine Theory	2
AUTO 135	Internal Combustion Engine Laboratory	1
DRFT 121	Technical Drawing	3
DRFT 226	Architectural Drawing	3
INDS 124	Introduction to Technology	1
INDS 134	Gas Welding Laboratory	1

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INDS 135	Arc Welding Laboratory	1
INDS 137	Gas Welding Theory	1
INDS 138	Arc Welding Theory	1
INDS 151	Foundations and Framing	3
INDS 152	Building Materials and Mechanical Systems	3
INDS 153	Finish Carpentry	3
INDS 221, 222	Wood Products and Processes	4
INDS 241, 242, 243	Fabrication and Machining of Metals	6
INDS 328	Applied Maintenance	3
	Electives	<u>2</u>
		38

Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman.

PRINTING (Certificate)

A student taking printing must complete the following 38 quarter hours and the general studies courses for the certificate program as outlined in this bulletin.

Area Requirements:

INDS 124	Introduction to Technology	1
PRNT 121	Introduction to Graphic Arts	3
PRNT 221, 222, 223	Offset Lithography	12
PRNT 241, 242	Letterpress Printing	6
PRNT 272, 273	Machine Composition	4
PRNT 295	Printing Layout and Design	3
PRNT 331	Advanced Halftone Photography	2
	Electives	<u>7</u>
		38

Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman.

MINOR IN AVIATION

A student minoring in aviation must complete 30 quarter hours:

AVIA 124	Introduction to Aviation	2
AVIA 141	Private Pilot Lectures	5
AVIA 142	Private Pilot Flight Training	3
AVIA 143	Advanced Private Pilot Flight Training	3
	Electives (3 must be upper division)	<u>17</u>
		30

Approval of aviation adviser required.

MINOR IN INDUSTRIAL ARTS EDUCATION

A student minoring in industrial arts education must complete 30 quarter hours:

DRFT 121, 122	Technical Drawing	6
INDS 124	Introduction to Technology	1
INDS 221, 222, 223	Wood Products and Processes	6

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INDS 374	Foundations of Industrial Arts	}	2-3
or			
INDS 428	Handwork Activities		
INDS 472	Methods of Course Organization		4
INDS 480	Advanced Practicum in Industrial Technology		1-3
	Electives		<u>7-10</u>
Approval of industrial arts education adviser required.			<u>30</u>

MINOR IN GRAPHIC ARTS

A student minoring in graphic arts must complete 30 quarter hours:

INDS 124	Introduction to Technology	1	
GRPH 154	Principles of Photography	2	
GRPH 155	Principles of Photography Laboratory	1	
PRNT 121	Introduction to Graphic Arts	3	
PRNT 221, 222, 223	Offset Lithography	9	
PRNT 241	Letterpress Printing	3	
PRNT 331	Advanced Halftone Photography	2	
	Electives (must have PRNT or GRPH prefix. 1 credit must be upper division.)	<u>9</u>	
Approval of graphics technology adviser required.			<u>30</u>

MINOR IN INDUSTRIAL TECHNOLOGY

A student minoring in industrial technology must complete 30 quarter hours:

DRFT 121	Technical Drawing	3	
INDS 124	Introduction to Technology	1	
	Electives (3 must be upper division)	<u>26</u>	
Approval of industrial technology adviser required.			<u>30</u>

AUTOMOTIVE (AUTO)

AUTO 114 INTRODUCTION TO AUTO MECHANICS 3
 Study of the automobile with emphasis on general maintenance and service procedures. Specifically designed for the individual without an automotive background. Does not apply toward an Automotive Technology major. Two lectures and one laboratory per week. A

AUTO 134 INTERNAL COMBUSTION ENGINE THEORY 2
 Study of the internal combustion engine, including theory of operation, analysis of construction, working principles and components as applicable to gasoline and diesel engines. Two lectures per week. A

AUTO 135 INTERNAL COMBUSTION ENGINE LABORATORY 1; 2
 Laboratory study of engine components through disassembly, inspection, measurement, servicing and reassembly of engines. Corequisite: AUTO 134. A

AUTO 145 POWER TRAIN THEORY 2
 Study of the automotive power train system with emphasis on proper procedures in diagnosis, servicing and repair. Two lectures per week. W

AUTO 146 POWER TRAIN LABORATORY 1; 2
 Laboratory study and application of technical information and skills required to diagnose, service, adjust and perform test procedures on hydraulic brakes, air brakes, clutch assemblies, bearings, transmissions, auxiliary units, transfer cases, drive lines, universal joints and final drive assemblies. Corequisite: AUTO 145. W

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- AUTO 156 FUEL AND ELECTRICAL SYSTEMS THEORY** 2
Study of principles of fuel metering and induction/injection for spark-ignited and compression-ignited engines; electrical systems topics include the study of the operating principles, diagnosis, service, adjustment and test procedures for automotive charging, cranking and ignition systems. Two lectures per week. S
- AUTO 157 FUEL AND ELECTRICAL SYSTEM LABORATORY** 1; 2
Laboratory study and application of technical information and skills required to diagnose, service and adjust carburetion and injection fuel systems, automotive charging, cranking and ignition systems. Corequisite: AUTO 156. S
- AUTO 164 BASIC BODY REPAIR** 4
Introduction to auto body repair; includes use of basic hand tools, sheet metal design, collision analysis, sheet metal straightening techniques, roughing, bumping and metal finishing operations, techniques in the use of body solder, plastic and fiberglass; study of the process of heat distortion and metal shrinking. Four lectures per week. A
- AUTO 165 BODY REPAIR LABORATORY** 1; 3
Laboratory study and application of body repair techniques. One laboratory per week or three laboratories per week; designed primarily for auto body majors. Corequisite: AUTO 164. A
- AUTO 175 BODY REPAIR AND REFINISHING** 4
Study of glass replacement and alignment of doors and deck lids, surface preparation, cleaning, sanding, feathering, masking and priming; includes finish types, spraying techniques, spot painting and complete refinishing. Four lectures per week. Prerequisite: AUTO 164. W
- AUTO 176 BODY REPAIR AND REFINISHING LABORATORY** 1; 3
Laboratory study and application of body refinishing techniques. One laboratory per week or three laboratories per week; designed primarily for auto body majors. Prerequisite: AUTO 165. Corequisite: AUTO 175. W
- AUTO 186 AUTO BODY REBUILDING** 4
Study of the use of tension and power equipment for body straightening and alignment; includes door and panel sectioning and replacing, pillar and rocker repairs, straightening and/or replacement of frame damage, chassis wiring and repairs. Four lectures per week. Prerequisite: AUTO 175. S
- AUTO 187 BODY REBUILDING LABORATORY** 1; 3
Laboratory study and application of body rebuilding techniques. One laboratory per week or three laboratories per week; designed primarily for auto body majors. Prerequisite: AUTO 176. Corequisite: AUTO 186. S
- AUTO 221 BASIC COLLISION REPAIR** 4
Experience in basic techniques of collision repair. One lecture and three 3-hour laboratories per week. Prerequisite or corequisite: AUTO 165. A
- AUTO 222 COLLISION REPAIR TECHNIQUES** 4
Experience in techniques of collision repair; includes section jobs, quarter panel and top replacements. One lecture and three 3-hour laboratories per week. Prerequisites or corequisites: AUTO 176; AUTO 221. W
- AUTO 223 ADVANCED COLLISION REPAIR** 3
Further experience in techniques of collision repair; emphasizes specialized frame straightening techniques as applied to the auto rebuilding process. Prerequisites or corequisites: AUTO 187; AUTO 222. S
- AUTO 286 ENGINE REBUILDING LABORATORY** 2
Experience in engine rebuilding involving machining operations such as cylinder reconditioning, valve train servicing, lubrication and cooling system servicing. Two laboratories per week. Prerequisites: AUTO 134; AUTO 135. W
- AUTO 314 ENGINE DIAGNOSIS AND TUNE-UP** 2
Study of logical diagnosis and troubleshooting techniques as applied to engine repair and tune-up. Theory and operation of emission control systems. Emphasizes use of electronic instrumentation as a diagnostic tool. Two lectures per week. Prerequisites: AUTO 134; AUTO 135; AUTO 156; AUTO 157. Corequisite: AUTO 315. A

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AUTO 315 ENGINE DIAGNOSIS AND TUNE-UP LABORATORY 1; 2
Laboratory study and application of diagnostic principles in troubleshooting repairs and tune-up of automotive engines; includes experience with the Sun Road-A-Matic (a computerized dynamometer) and the Sun Model 1115 Performance Analyzer. Corequisite: AUTO 314. A

AUTO 324 BODY-SHOP OPERATION AND ESTIMATING 3
Study of procedure for evaluating damage and writing collision damage estimates; includes methods of shop operation and management and dealing with insurance adjustments. Three lectures per week. Prerequisite: AUTO 186. Recommended: MGMT 275. S

AUTO 345, 346 AUTOMOTIVE SERVICE 2, 2
Study of automotive service operation as related to auto air conditioning, the power train, brake systems, suspension and wheel alignment and general services. Two lectures per week. Prerequisites: AUTO 145; AUTO 146. Corequisites: AUTO 347, 348. WS

AUTO 347, 348 AUTOMOTIVE SERVICE LABORATORY 1; 2, 1; 2
Laboratory study and application of automotive service techniques; includes a broad range of "live" service experiences. Corequisites: AUTO 345, 346. WS

AUTO 365 DIESEL ENGINES 3
Study of diesel engine theory; includes types of engines, fuel injection systems, air induction systems, exhaust systems, cooling systems, starting and controls. Two lectures and one laboratory per week. Prerequisites: AUTO 156; AUTO 157. AUTO 286 recommended. S.

AVIATION (AVIA)

AVIA 124 INTRODUCTION TO AVIATION 2
Study of aviation history and the development into the National Air Transportation System. Seventh-day Adventist uses and needs in the field of aviation with an introduction to the mission flying program of the church. A

AVIA 141 PRIVATE PILOT LECTURES 5
Study of basic concepts of aircraft performance, navigation, principles of flight and meteorology; includes interpretation and application of Federal Aviation Regulations, uses of airman's publications and services. A or W or S

AVIA 142 PRIVATE PILOT FLIGHT TRAINING 3
Study of flight and ground procedures to prepare the student through solo flight to pre-cross country flight maneuvers. A or W or S

AVIA 143 ADVANCED PRIVATE PILOT FLIGHT TRAINING 3
Study of and directed solo practice in advanced private pilot maneuvers, night flying and cross country flight; preparation to meet the requirements of the Private Pilot flight test and to qualify for the private certificate. A or W or S

AVIA 221 INTRODUCTION TO COMMERCIAL PILOT FLIGHT TRAINING 4
Introduction to commercial maneuvers and advanced procedures in flying and navigation. A or W or S

AVIA 222 COMMERCIAL PILOT FLIGHT TRAINING 4
Study of procedures in cross-country flying and night operations. A or W or S

AVIA 223 ADVANCED COMMERCIAL PILOT FLIGHT TRAINING 5
Training to develop a superior pilot by perfecting coordination, judgment and flying ability. Prepares student for the commercial flight test. A or W or S

AVIA 234 METEOROLOGY AND COMMERCIAL PILOT LECTURES 5
Study of the atmosphere, winds, moisture, temperature, air masses and fronts, and weather forecasting with emphasis on aviation weather; includes advanced navigation procedures, commercial pilot maneuvers, airports and charts and advanced aircraft systems; prepares the student to take the FAA Commercial Airplane written examination. W

AVIA 256 PRINCIPLES OF AIRCRAFT MAINTENANCE 3
Study of the routine maintenance and inspections that can be performed by the pilot. W

INDUSTRIAL TECHNOLOGY

- AVIA 321 INSTRUMENT PILOT LECTURES** 5
Study of aerodynamics, performance, weight and balance, meteorology and computer usage especially as they apply to instrument flight; detailed study of IFR charts, regulations and procedures. A
- AVIA 322 INSTRUMENT PILOT FLIGHT TRAINING** 3
Study of the fundamentals of basic instrument flight, navigation and approach procedures. A or W or S
- AVIA 323 ADVANCED INSTRUMENT PILOT FLIGHT TRAINING** 3
Study of advanced instrument maneuvers, cross-country procedures, and composite instrument operations; prepares the student to meet the requirements of the instrument flight test. A or W or S
- AVIA 357 FLIGHT INSTRUCTOR—AIRPLANE LECTURES** 3
Study of the fundamentals of instructing and the analysis and performance of maneuvers; concepts of aircraft performance and the interpretation and application of pertinent FAA regulations; prepares the student to pass the Federal Aviation Administration (FAA) Flight Instructor written examination. W
- AVIA 358 FLIGHT INSTRUCTOR—AIRPLANE FLIGHT TRAINING** 3
Study of the standards for acceptable performance for the Federal Aviation Administration Flight Instructor. A or W or S
- AVIA 457 FLIGHT INSTRUCTOR—INSTRUMENT LECTURES** 2
Study of the fundamentals of instrument instruction; prepares the student to pass the Federal Aviation Administration (FAA) Flight Instructor Instrument written examination. S
- AVIA 458 FLIGHT INSTRUCTOR—INSTRUMENT FLIGHT TRAINING** 3
Study of the standards for acceptable performance for the FAA Flight Instructor Certificate (instrument rating). A or W or S

DRAFTING (DRFT)

- DRFT 121, 122 TECHNICAL DRAWING** 3, 3
Introduction to technical drawing; includes care and use of instruments, technical sketching, geometry, orthographic, auxiliary and sectional views, production drawings, pictorial views and developments and intersections; application to practical problems with emphasis on visualization and analysis. Must be taken in sequence. One lecture and six laboratory hours per week. AW
- DRFT 226 ARCHITECTURAL DRAWING** 3
Study of the fundamentals of designing and drawing house plans including architectural drafting techniques, area planning, floor plans, elevations, sections, schedules and specifications. One lecture and six laboratory hours per week. S
- DRFT 236 ELECTRICAL AND ELECTRONIC DRAWING** 3
Study of the basic concepts and techniques of delineation of electrical and electronic circuits; includes schematics, assembly drawings, production illustrations, printed circuitry, interconnection diagrams, graphs and charts. One lecture and six laboratory hours per week. Offered alternate years. S.

ELECTRONICS (ELCT)

- ELCT 221 INTRODUCTION TO ELECTRICITY/ELECTRONICS** 3
Introduction to electrical fundamentals; includes electric motors and generators, basic wiring, diodes and transistors and basic troubleshooting techniques. Two lectures and one laboratory per week. A
- ELCT 241, 242 FUNDAMENTALS OF ELECTRONICS** 5, 5
Study of the fundamentals of electronics technology designed for both preparatory electronics teachers and technology majors; includes DC and AC circuits, resonance, filters, electronic measurements and solidstate devices. Four lectures and one laboratory per week. AW

- ELCT 252, 253 ELECTRONIC DEVICES AND CIRCUITS** 4, 4
Introduction to solid-state devices, analytical and graphical analysis of diode characteristics and diode circuit applications; includes three-terminal solid-state devices, concept of amplification, switching, biasing and graphical analysis; analysis of A.C. small and large signal conditions, bias stability, use of load lines in amplifier analysis and design; introduction to integrated circuits. Three lectures and one laboratory per week. Prerequisite: ELCT 241. Prerequisite or corequisite: ELCT 242. WS
- ELCT 297, 298 ELECTRONICS FABRICATION** 1,1
Individualized study in the techniques of electronics fabrication including chassis construction, printed circuit board construction and electronic packaging. One laboratory per week. May enroll in ELCT 297 and ELCT 298 concurrently. Prerequisite: ELCT 221 or ELCT 241. A or W or S
- ELCT 326 HOSPITAL SAFETY** 2
Study of codes and regulations pertaining to hospital safety; equipment and techniques involved in leakage current test, conductivity testing in operating rooms, testing of pressure safety devices, radiation safety devices, radiation safety checks and the correct handling of explosive gases. Prerequisites: ELCT 253; ELCT 332. S
- ELCT 331, 332, 333 MEDICAL ELECTRONICS** 4, 4, 4
Study of the use, calibration and maintenance of electromechanical equipment used in the diagnostic and therapeutic phases of medicine and in the clinical laboratory, includes patient care and monitoring equipment, cardiovascular measurements, measurements of physical variables, biotelemetry and computer applications in medicine. Three lectures and one laboratory per week. Prerequisites: ELCT 253; BIOL 202. AWS
- ELCT 351, 352 RADIO COMMUNICATIONS** 4, 4
Study of electronics, radio communications theory and Federal Communications Commission regulations, designed to help the student qualify for FCC licenses through radio-telephone first class with endorsement for radar; includes testing and maintenance of studio and communications equipment. Three lectures and one laboratory per week. Taught alternate years. Prerequisite: ELCT 253 or equivalent. AW
- ELCT 361 LINEAR INTEGRATED CIRCUITS** 5
Applications of linear integrated circuits including I.C. fabrication, differential amplifiers, operational amplifiers, voltage regulators, and special purpose linear I.C. devices. Four lectures and one laboratory per week. Prerequisite: ELCT 253. A
- ELCT 362 DIGITAL INTEGRATED CIRCUITS** 5
Study of basic principles and applications of digital I.C.'s; includes characteristics of logic families, and application of I.C. gates, clocks, counter, registers, displays and memories. Laboratory emphasizes application of I.C. devices commonly used in industry. Prerequisite: ELCT 361. Four lectures and one laboratory per week. W
- ELCT 381, 382, 383 TELEVISION SYSTEMS AND CIRCUIT ANALYSIS** 3, 3, 3
Study of television transmission principles, the theory and operation of monochrome and color television receiver circuits, community antenna television systems and closed-circuit television systems; emphasizes the use of logical systems and circuit analysis techniques in troubleshooting. Must be taken in sequence. Two lectures and one laboratory per week. Prerequisite: ELCT 253. AWS
- ELCT 466 COMPUTER CIRCUITS AND SYSTEMS** 5
Study of theory and application of digital and analog systems; includes computer circuitry, interface devices and physical systems control. Laboratory emphasizes construction and troubleshooting techniques. Four lectures and one laboratory per week. Prerequisite: ELCT 362. S
- ELCT 490 DIRECTED HOSPITAL EXPERIENCE** 16
Full-time work experience with supplementary training in the biomedical electronics department of an approved hospital; taken only after completion of all course work required for the biomedical electronics program. Application must be made during the first two weeks of the quarter prior to the actual field experience. A or W or S

INDUSTRIAL TECHNOLOGY

GRAPHICS (GRPH)

GRPH 154 PRINCIPLES OF PHOTOGRAPHY 2

Study of the basic principles of color and black-and-white photography; includes theory and practice of exposure, development, contact printing and enlarging and study of various types of equipment. A

GRPH 155 PRINCIPLES OF PHOTOGRAPHY LABORATORY 1

Laboratory experience with photo composition, camera operation, printing, enlarging and processing of monochromatic mediums. Limited enrollment. 35mm. camera required. Prerequisite or corequisite: GRPH 154. A or W

GRPH 355 APPLIED PHOTOGRAPHY 3

Study of advanced techniques in photography; includes lighting, photo-chemistry, optics, photo accessories, printing, enlarging and processing of chromatic and monochromatic mediums, in-camera manipulations, darkroom manipulation, finishing presentation techniques. Two lectures and one laboratory per week. Prerequisites: GRPH 154; GRPH 155. S

GRPH 358 PHOTO ASSIGNMENTS 1

Individualized assignments to provide a variety of experience in commercial and publication photography, embodying shooting, processing and finishing black and white prints. One laboratory per week. Prerequisite: GRPH 355 or equivalent. A or W or S

INDUSTRIAL CRAFTS (INCR)

INCR 126 BOOKBINDING 2

Introduction to the art and craft of bookbinding; provides a comprehensive knowledge of the steps in the process of rebinding books and allied crafts. One lecture and one laboratory per week. S

INCR 224 ART METALS 2

Introduction to the use of semiprecious metals to develop skills in metal spinning and craft work in copper, brass, aluminum and pewter with processes applied to projects of practical value and artistic merit. One lecture and one laboratory per week. W

INCR 225 PLASTICS 2

Introduction to a variety of operations in plastics involving technical information and experimentation in fundamental manufacturing processes. One lecture and one laboratory per week. A

INCR 226 LEATHERS 2

Introduction to leather working including tooling, carving, stamping, lacing, modeling, forming and finishing. One lecture and one laboratory per week. W

INCR 227 CERAMICS 2

Introduction to recreational ceramics involving handbuilding, slip casting, cleaning and finishing greenware, and loading and firing kilns. W or S

INCR 264 SILK SCREEN PRINTING 2

Introduction to screen printing including various methods of stencil preparation, types of materials used and preparation of equipment. One lecture and one laboratory per week. A

CONSTRUCTION/GENERAL/METALS/PROFESSIONAL/WOODS (INDS)

INDS 124 INTRODUCTION TO TECHNOLOGY 1

A study of technology as it relates to society and the individual. Includes the study of industrial technology and current technological issues. A

INDS 134 GAS WELDING LABORATORY 1

Laboratory study of gas welding. Recommended corequisite: INDS 137. One laboratory per week. A or W or S

- INDS 135 ARC WELDING LABORATORY** 1
Laboratory study of arc welding. Recommended corequisite: INDS 138. One laboratory per week. A or W or S
- INDS 136 SPECIALIZED WELDING LABORATORY** 1
Laboratory study of specialized welding including metallic inert gas (MIG) and tungsten inert gas (TIG). Prerequisite or corequisite: INDS 139. Prerequisite: INDS 135. One laboratory period per week. A or W or S
- INDS 137 GAS WELDING THEORY** 1
Study of the gas welding theory. A or W or S
- INDS 138 ARC WELDING THEORY** 1
Study of arc welding theory. A or W or S
- INDS 139 SPECIALIZED WELDING THEORY** 1
Study of specialized welding theory including metallic inert gas (MIG) and tungsten inert gas (TIG). A or W or S
- INDS 151 FOUNDATIONS AND FRAMING** 3; 6
Introduction to concrete work and residential foundations; includes theory and practice in floor, walls, roof framing and stair construction; provides experience with, and an understanding of, the tools and equipment used by a carpenter. Two lectures and one laboratory per week; an option designed primarily for those in the associate degree and certificate programs provides for an additional three laboratories per week. A
- INDS 152 BUILDING MATERIALS AND MECHANICAL SYSTEMS** 3; 6
Introduction to the study and use of construction lumber, wood products and substitutes, insulation, hardware and finishing materials; examines the relationship of the mechanical systems — heating, cooling, plumbing and electrical — to the overall construction process. Two lectures and one laboratory per week; an option designed primarily for those in the associate degree and certificate programs provides for an additional three laboratories per week. W
- INDS 153 FINISH CARPENTRY** 3; 6
Introduction to the theory and practice of interior and exterior finishing products and processes; study of various types of doors and windows; experience with installation procedures. Two lectures and one laboratory per week; an option designed primarily for those in the associate degree and certificate programs provides for an additional three laboratories per week. S
- INDS 221, 222, 223 WOOD PRODUCTS AND PROCESSES** 2, 2, 2
Introduction to wood products and processes incorporating use of basic tools and machines as found in the wood industries. Includes planning and construction of simple furniture. One lecture and one laboratory per week. AWS
- INDS 241, 242, 243 FABRICATION AND MACHINING OF METALS** 2, 2, 2
Study of theory and practice in metal operations. **Fall**, basic lathe and drill press operations involving metal cutting and measurement; **winter**, various assembly methods including forging, heat treatment, molding, pouring, filing, bending and offhand grinding; **spring**, associated and succeeding operations such as threading, tapering, testing, reaming, riveting and use of jigs. Projects selected incorporate the operations taught and involve "running" of various pieces of equipment common to a basic machine laboratory. One lecture and one laboratory per week. Must be taken in sequence. AWS
- INDS 254 HOUSE PLANNING** 3; 5
Study of home styles and architectural styles and their application to the choice of site location and plot development; mechanical design factors studied in relation to building codes. Laboratory emphasizes site planning and development as well as basic planning and design of major house construction members such as trusses, beams, post, headers, etc. Two lectures and one laboratory per week; an option designed primarily for those in the associate degree and certificate programs provides for an additional three laboratories per week. Recommended prerequisite or corequisite: DRFT 226. A
- INDS 280 PRACTICUM IN INDUSTRIAL TECHNOLOGY** 1-6
Laboratory work in a technology area or laboratory supervision experience chosen in counsel with the supervising laboratory instructor. Six credits maximum. One 3-hour laboratory per week per credit.

INDUSTRIAL TECHNOLOGY

- INDS 324 INDUSTRIAL DESIGN** 3
Study of design as applied to the various industrial arts, including theory of color and study of major periods and styles of furniture. W
- INDS 328 APPLIED MAINTENANCE** 1-6
Practical, on-the-job experience for students of plant maintenance technology in the following areas: power plant, painting, carpentry-cabinetmaking, plumbing, electrical, refrigeration, air conditioning, locksmithing-door hardware, heavy equipment and motor pool. Selected in consultation with adviser. One laboratory per week per quarter. One or two hours per quarter; maximum, six. A or W or S
- INDS 341, 342, 343 FURNITURE DESIGN AND CONSTRUCTION** 2, 2, 2/3, 3, 3
Study of design and fabrication of period, complex and other furniture; includes methods and techniques of cabinet, door and drawer construction, special machine operations, jigs and fixtures. One lecture and choice of one or two laboratory sessions per week. Two laboratory sessions per week recommended for IT majors. Prerequisite: INDS 223 or permission of the instructor. AWS
- INDS 345 FINISHING MATERIALS AND METHODS** 3
Study of the composition and application of finishing materials, including selection and care of equipment. Two lectures and one laboratory per week. Taught alternate years. S
- INDS 355 CABINET CONSTRUCTION** 3; 5
Study and production of various cabinet and cupboard styles using a number of produced jigs and fixtures; opportunity to produce custom designed cabinets. Two lectures and one laboratory per week; an option designed primarily for those in the associate degree and certificate programs provides for an additional three laboratories per week. Prerequisite: INDS 151 or INDS 221. W
- INDS 356 CONSTRUCTION MANAGEMENT** 3
Study of working drawings, specifications, estimating and bidding, scheduling and the financing of construction projects. Two lectures and one laboratory per week. Prerequisite or corequisite: INDS 153. S
- INDS 364 INDUSTRIAL SAFETY** 2
Introduction to federal, state and local safety codes applying to materials, material handling and equipment commonly encountered by the industrial technologist, includes study of codes from Occupational Safety and Health Act (OSHA), Washington Industrial Safety and Health Act (WISHA), National Fire Protective Association (NFPA) and Department of Transportation (DOT). A
- INDS 374 FOUNDATIONS OF INDUSTRIAL ARTS** 2
Study of the underlying foundations of industrial arts in both public and Seventh-day Adventist secondary schools; emphasis on management, professional growth, legislation and basic organization of industry. A
- INDS 376 TECHNICAL FACILITY PLANNING** 3
Study of technical facility planning involving space considerations, structures, environment, service systems, storage and production flow patterns. S
- INDS 381, 382, 383 MACHINE TOOL OPERATION** 2, 2, 2/3, 3, 3
Study of advanced processes of turning and handwork together with operations involving milling, shaping, planing, grinding, cutter sharpening, gear calculations and gear cutting, assigned exercises. One lecture and choice of one or two laboratory sessions per week. Two laboratory sessions per week recommended for IT majors. Prerequisite: INDS 241, 243 or equivalent. A or W or S
- INDS 386 OIL HYDRAULICS** 3
Study of the principles of pressure and flow; includes operation of basic hydraulic components, how the various components perform, fundamental hydraulic equipment design, and use and maintenance. S
- INDS 398 MACHINE AND TOOL MAINTENANCE** 1-2
Methods of care and maintenance of tools, machines and supplementary equipment. Selection may be made in any field offered. Prerequisite: adequate background in chosen fields. One laboratory per credit per week. One or two hours any quarter; maximum, two. A or W or S
- INDS 428 HANDWORK ACTIVITIES** 3
Study of handwork activities as applied to the elementary grades and recreational activities; emphasizes methods of application, materials and processes. S

INDUSTRIAL TECHNOLOGY

INDS 436 PRODUCTION PROCESSES 3
Study of quantitative decision-making techniques and management functions, especially planning and control, in repetitive manufacturing operations. Setting labor and material standards, methods-time analysis, scheduling, materials handling, inventory and quality control. Prerequisite: INDS 124. S

INDS 472 METHODS OF COURSE ORGANIZATION 4
Methods of systematic course preparation including analysis of course of study outline, relation of lesson units and methods of teaching unique to industrial arts. Required prior to directed teaching. W

INDS 480 ADVANCED PRACTICUM IN INDUSTRIAL TECHNOLOGY 1-6
Laboratory work in a technology area or laboratory supervision experience chosen in counsel with the supervising laboratory instructor. Six credits maximum. One 3-hour laboratory per week per credit. Prerequisite: Lower division work in chosen area.

INDS 490 COOPERATIVE STUDY PROGRAM 1-6
Open to students who have completed courses in industrial technology and wish to develop proficiency beyond the scope of the laboratory experience. The course will consist of a systematic study contract with periodic job-site visits by the departmental supervisor. Admission only by permission of the department chairman. Application must be made during the first two weeks of the quarter immediately preceding the cooperative study program. A or W or S

INDS 499 SENIOR PROBLEM 1
A student-selected, departmental-approved research, experiment, project or a problem to demonstrate ability to perform in the major field of instruction that has been followed, and from which graduation is sought. Satisfactory completion of this course constitutes the department's comprehensive degree requirement for those majors in which it is required. Approximately two quarters are required for completion. The student must arrange for this course with his departmental adviser and submit a senior problem proposal form for staff approval during the first two weeks of the quarter prior to the quarter in which he plans to complete the senior project. A or W or S

PRINTING (PRNT)

PRNT 121 INTRODUCTION TO GRAPHIC ARTS 3
Introduction to the principle methods of printing; provides a background in composition, typographical design and simple presswork. Two lectures and one laboratory per week. A

PRNT 221, 222, 223 OFFSET LITHOGRAPHY 3, 3, 3/4, 4, 4
Introduction to copy preparation, offset photography, plate making and presswork. Two lectures and one laboratory per week. An option designed primarily for those in the associate degree and certificate programs provides four hours per quarter by attending two lectures and two laboratories per week. Prerequisite or corequisite: PRNT 121. AWS

PRNT 241, 242 LETTERPRESS PRINTING 3, 3
Study of hand-fed and automatic presswork, including imposition, make-ready, care and operation of equipment for numbering, perforating, scoring, die cutting, folding and other processes of printing production. Two lectures and one laboratory per week.

PRNT 271, 272, 273 MACHINE COMPOSITION 2, 2, 2/3, 3, 3
Study of the care and operation of computerized phototypesetting machines with an introduction to strike-on and hot-metal compositors; emphasizes the Compuwriter II, Mergenthaler V-I-P and editing terminal, but includes practice on IBM, Linotype and Intertype machines. One lecture and one laboratory per week. An option designed primarily for those in the associate degree and certificate programs; provides three hours by attending one lecture and two laboratories per week. Prerequisite or corequisite: PRNT 121 or equivalent. Also must be able to demonstrate a typing proficiency of at least 35 words per minute. AWS

PRNT 295 PRINTING LAYOUT AND DESIGN 3
Study of the basic principles of design as applied to composition, layout and arrangement in printing. Lectures, demonstrations and assigned individual and group projects. Prerequisite: PRNT 121. W

INDUSTRIAL TECHNOLOGY

PRNT 326 PRINTING ESTIMATING

3

Study of supplies, inventory control, pricing and estimating as applied to a commercial printing plant. Prerequisites: PRNT 223; PRNT 242. Offered alternate years. S

PRNT 331 ADVANCED HALFTONE PHOTOGRAPHY

2

Study of special techniques of making quality halftones; emphasizes such variables as picture type, quality and printing paper; includes techniques of posterization and the making of duotones. One lecture and one laboratory per week. Prerequisite: PRNT 223. S

PRNT 421, 422 COLOR SEPARATIONS

3, 3

Advanced study in lithographic printing with emphasis on fake color and process color separations and color press work. Two lectures and one laboratory per week. Prerequisite: PRNT 223 or equivalent. Offered alternate years. AW





Interdisciplinary Programs

INTERDISCIPLINARY PROGRAMS

BIOPHYSICS

C. Barnett (Physics), C. Amlaner (Biology), Academic Advisers.

The biophysics major is offered cooperatively by the departments of biology and physics. For entrance, 30 semester periods of secondary mathematics chosen from algebra, plane and solid geometry and trigonometry are required.

MAJOR IN BIOPHYSICS (Bachelor of Science)

A student majoring in biophysics must complete 33 quarter hours in biology and 36 quarter hours in physics, the required cognates, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin. Graduate Record Examination in physics and biology is required. One summer term at the Marine Station is required.

Biology Requirements:

BIOL 101, 102, 103	General Biology	12
BIOL 251	Research Methods I	1
BIOL 261	Genetics	4
or		
BIOL 266	Developmental Biology	4
BIOL 392	Cell Physiology	
BIOL 393	Animal Physiology	4-5
or		
BIOL 401	Plant Physiology	
or		
BIOL 468	Comparative Physiology	
BIOL 352, 353, 354	Research Methods II, III, IV	3
BIOL 446	General Ecology	4
BIOL 455	Research Methods V	1
BIOL 495	Colloquium*	0
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*Required each quarter of juniors and seniors while in residence.

Physics Requirements:

PHYS 114	Perspectives in Physics	1
PHYS 115, 116	Introduction to Experimentation	2
PHYS 251, 252, 253	Principles of Physics	9
PHYS 254, 255, 256	Principles of Physics Laboratory	3
PHYS 311	Modern Physics	3
PHYS 313	Thermodynamics	4
PHYS 314	Modern Physics Laboratory	1
PHYS 316	Optics Laboratory	1
PHYS 317, 318, 319	Physics Seminar I	3
PHYS 321, 322	Optics	6
PHYS 417, 418, 419	Physics Seminar II	3
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INTERDISCIPLINARY PROGRAMS

Cognates:

CHEM 141, 142, 143	General Chemistry	12	
CHEM 321, 322, 323	Organic Chemistry	}	
or			
CHEM 351, 352, 353	Physical Chemistry	12	
CPTR 125	Principles of BASIC	}	
or			
CPTR 134	Introduction to Computing	2-3	
CPTR 374	Simulation and Modeling	3	
ENGR 228	Circuit Analysis	}	
and			
ENGR 325	Instrumentation		5-7
or			
BIOL 470	Marine Biophysics		
MATH 181, 281-283	Analytic Geometry and Calculus I-IV	16	
MATH 311	Probability and Statistics	4	

GENERAL STUDIES HONORS PROGRAM

C. Shultz, Chairman; J. Brunt, R. Emmerson, R. Gardner, L. Glaim, R. Rittenhouse, G. Schoepflin, M. Scriven, G. Wiss, G. Winslow.

The general studies honors program offers a group of interdisciplinary courses stressing independent research, writing and discussion. All honors courses, except HONR 351, 352, 353, will satisfy general studies requirements for the baccalaureate degree. The honors program is a separate track of general studies and not a major or a minor in itself. Students successfully completing the honors program are given a six-quarter-hour tuition grant and, if they have an overall grade-point average of 3.25 at the time of graduation, designation as a "General Studies Honor Graduate" upon graduation. Honors courses have a flavor distinctly different from the regular general studies courses because they use primary source material more extensively than textbooks to enhance the development of independent thinking; they follow an interdisciplinary approach to stress the unity of knowledge; and the classes are more personalized and typically are small.

Admission Requirements. The Admissions Committee considers high school grade-point average (generally 3.3 or higher), ACT test scores or equivalent, an essay submitted by the student as part of his application, and, on occasion, personal interviews with applicants and recommendations from teachers. Students already enrolled in college may also apply to the program. The Honors Committee will review all applications and supporting data and notify those students who are accepted.

Program Requirements. The following requirements must be met for continuation in and completion of the honors program: 1) maintain a grade-point average of 3.0 or better in the honors courses; 2) maintain a grade-point average of 3.0* or better in overall course work required for graduation; 3) complete at least 35 quarter hours of honors courses (listed below) including HONR 351, 352, 353.

*The tuition grant will be awarded at the time when the 35 quarter hours of honors courses are completed if a grade-point average of 3.0 has been maintained in both honors courses and overall course work. The designation as a "General Studies Honors Graduate" is contingent upon the student's having a minimum grade-point average of 3.25 in all course work at the time of graduation.

INTERDISCIPLINARY PROGRAMS

HIST 131, 132, 133	*Western Thought I (Honors)	12
ENGL 141, 142, 143	College Writing (Honors)	8
RELB 281, 282, 283	The New Testament and Its Environment (Honors)	6
SOCI 349 (or RELH 349)	Religion in a Social Context (Honors)	4
GEOL 231, 232	Earth Science (Honors)	8
ENGL 311, 312, 313	**Western Thought II (Honors)	12
HONR 351, 352, 353	Honors Colloquium	3

*For meeting general studies requirements equivalent to 8 quarter hours of HIST 121, 122 and 4 quarter hours of ENGL 207.
 **For meeting general studies requirements equivalent to MUHL 124, ART 251 and ENGL 204.

HONORS COURSES

HIST 131, 132, 133 WESTERN THOUGHT I (HONORS)	4, 4, 4
Integration of Western Civilization and World Literature with added emphasis on philosophical concepts and their relationships to events. Corollary reading will emphasize the history and philosophy of science. (8 quarter hours are considered to be equivalent to HIST 121, 122; 4 quarter hours are considered to be equivalent to ENGL 207).	
ENGL 141, 142, 143 COLLEGE WRITING (HONORS)	3, 3, 2
Advanced college writing designed to integrate reading and writing assignments with the requirements of the honors courses.	
RELB 281, 282, 283 THE NEW TESTAMENT AND ITS ENVIRONMENT (HONORS)	2, 2, 2
Study of certain New Testament themes in the light of first-century Jewish and Hellenistic culture and thought. This course is designed for honors students and is open to other students only by special permission of the instructor. RELB 281 is a prerequisite for either RELB 282 or 283.	
SOCI 349 RELIGION IN A SOCIAL CONTEXT (HONORS) [or RELH 349]	4
Study of religion in its social setting including the nature and role of religious symbol systems, the importance of religion in the creation of social values, the function of religion in social change and the institutionalization of religion.	
GEOL 231, 232 EARTH SCIENCE (HONORS)	4, 4
Study of the earth, its composition and structure, and the processes and forces in operation; emphasizes the interdisciplinary nature of earth science by including such topics as earthquake seismology, plate tectonics, the nature of science, its development, methods and philosophical basis. Three class hours per week and one laboratory session or field trip per week. Must be taken in sequence.	
ENGL 311, 312, 313 WESTERN THOUGHT II (HONORS)	4, 4, 4
Study of the relationship between major philosophical, religious, and aesthetic ideas and their influence on western culture from Greek antiquity to the present; includes study of architecture, the visual arts, music, and literature. Equivalent to MUHL 124; ART 251 and ENGL 204. Must be taken in sequence. Prerequisites: HIST 131, 132, 133.	
HONR 351, 352, 353 HONORS COLLOQUIUM	1, 1, 1
Research course designed to stimulate interdisciplinary independent study. Students share the results of reading and research through formal presentation of papers.	

HUMANITIES

T. Emerson, Chairman (Art), R. Czeratzki (Modern Languages), L. Glaim (History), D. Shultz (Music).

The humanities major is an interdisciplinary program designed for those who especially enjoy the themes and values of the humanities — in history, the visual arts, music, philosophy and literature — and who wish to tailor their major to meet their interests. It provides a content area for those interested in teaching at the secondary level and a second major for those wanting to teach in elementary school. The humanities major also is an excellent major for preprofessional students, especially those planning to study business, medicine or law.

MAJOR IN HUMANITIES (Bachelor of Arts)

A student majoring in humanities must complete the core requirements, the required cognates, one concentration which must be chosen in consultation with the humanities adviser and the chairman of the specific area, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin.

Core Requirements:

ART 251	Introduction to Art	4
ENGL 205	American Literature	}
ENGL 206	English Literature	
ENGL 207	World Literature	
ENGL	One upper-division literature course	4
HIST 121, 122	History of Western Civilization	8
HIST 465	Renaissance and Reformation	4
HMNT 496	Seminar in Humanities	3
MUHL 124	Introduction to Music	4
PHIL 205	Introduction to Philosophy	4
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Cognates:

ANTH 255	Cultural Anthropology	}	3-4
or SOCI 454 (PLSC 454; PHIL 454)	Western Political and Social Thought		
BIOL 407	Philosophy of Science	}	4
or ENGR 344	Environment and Man		
PSYC 444	Social Psychology	}	3
or PSYC 446	Psychology of Personality		
RELH 403	World Religions		
or RELT 412	Philosophy of Religion	3-4	

CONCENTRATION: English

ENGL 234	Literary Analysis and Criticism	3
ENGL 235	Literary History and Research	3

INTERDISCIPLINARY PROGRAMS

ENGL 445	Shakespeare	3
ENGL 455	Classical Backgrounds	3
ENGL	Upper-division literature	8

CONCENTRATION: Fine Arts (8 quarter hours must be upper division)

ART 321, 322, 323	History of Art (recommended)	}	20
MUHL 134	Art of Listening (recommended)		
MUHL 321, 322, 323 or	History of Music I		
MUHL 331, 332, 333	History of Music II (Four quarter hours may be taken in applied music and studio art)		

CONCENTRATION: History (12 quarter hours must be upper division)

HIST 221, 222	History of the United States	8
HIST 457	Social and Intellectual History of the United States (recommended)	4
PLSC 454	Western Political and Social Thought (recommended)	4
PLSC 455	Western Political and Social Theory (recommended)	4

CONCENTRATION: Modern Languages

FREN 301, 302, 303	Survey of French Literature	}	15-20
FREN 407	17th and 18th Century French Literature		
FREN 408	19th Century French Literature		
FREN 409 or	20th Century French Literature		
GRMN 311, 312, 313	Survey of German Literature	}	15-20
GRMN 421	18th Century German Literature		
GRMN 422	19th Century German Literature		
GRMN 423 or	20th Century German Literature		
SPAN 324, 325, 326	Survey of Spanish Literature	}	0-6
SPAN 424, 425, 426	Contemporary Spanish Literature		
SPAN 431, 432, 433	Survey of Latin-American Literature		
FREN 307 or	French Cultural and Civilization		
GRMN 314, 315 or	German Civilization	}	0-6
SPAN 331	Spanish-American Culture and Civilization		

CONCENTRATION: Philosophy

PHIL 206	Introduction to Logic	}	16
PHIL 305	Moral Philosophy		
PHIL 306, 307	History of Philosophy		
PHIL 407	Philosophy of Science		
PHIL 412	Philosophy of Religion		
PHIL 440	Problems in Philosophy		
PHIL 454	Western Political and Social Thought		

INTERDISCIPLINARY PROGRAMS

HUMANITIES (HMNT)

HMNT 496 SEMINAR IN HUMANITIES

3

Study of interdisciplinary topics in humanities; includes problems in areas of special interest to class members and group conferences and reports.

MEDICAL TECHNOLOGY

R. Jenks, Academic Adviser

The major in medical technology involves three years of preclinical education on the Walla Walla College campus and 12 months of additional education in an accredited clinical laboratory. Upon completion of the fourth year, the student may receive a Bachelor of Science degree from Walla Walla College.

Applicants to schools of medical technology are selected on the basis of such qualities as scholarship, integrity, dependability and motivation for medical technology. To be competitive, an applicant for the clinical program should have a minimum grade-point average of 2.70. Above-average academic achievement in preclinical chemistry courses is especially significant.

MAJOR IN MEDICAL TECHNOLOGY (Bachelor of Science)

A student majoring in medical technology must complete 144 quarter hours of interdisciplinary courses including the general studies requirements for the baccalaureate degree as outlined in this bulletin (30 quarter hours must be upper division), in addition to a 12-month (48 quarter hours) clinical experience.

BIOL 101, 102, 103	General Biology	12	
BIOL 222	Microbiology	}	
or			
BIOL 465	Bacteriology	5	
BIOL 201, 202	Anatomy and Physiology	}	
or			
*BIOL 392	Cell Physiology		8
and			
*BIOL 393	Animal Physiology		
CHEM 141, 142, 143	General Chemistry	12	
CHEM 264	Analytical Chemistry	4	
CHEM 321, 322, 323	Organic Chemistry	12	
MATH 121, 122	Fundamentals of Mathematics	}	
or			
MATH 181	Analytic Geometry and Calculus I	4-8	
PHYS 211, 212, 213	General Physics	9	
PHYS 214, 215, 216	General Physics Laboratory	3	
PSYC 130	General Psychology	4	
		<u>73-77</u>	

*Prerequisites for these upper division courses are described in the Biology section of this bulletin.

INTERDISCIPLINARY PROGRAMS

MEDICAL TECHNOLOGY AND CLINICAL CHEMISTRY

R. Jenks, Academic Adviser

MAJOR IN MEDICAL TECHNOLOGY and CLINICAL CHEMISTRY
(Bachelor of Science)

A student majoring in clinical chemistry and medical technology must complete 144 quarter hours of interdisciplinary courses (30 quarter hours must be upper division). Students will share the results of reading and research through formal courses as listed below, and the general studies program for the baccalaureate degree as outlined in this bulletin in addition to a 12-month (48 quarter hours) clinical experience.

BIOL 101, 102, 103	General Biology	12	
BIOL 222	Microbiology	}	
or			
BIOL 465	Bacteriology	5	
BIOL 201, 202	Anatomy and Physiology	}	
or			
*BIOL 392	Cell Physiology		8
and			
*BIOL 393	Animal Physiology		
CHEM 141, 142, 143	General Chemistry	12	
CHEM 264, 265, 266	Analytical Chemistry	10	
CHEM 321, 322, 323	Organic Chemistry	12	
CHEM 351, 352, 353	Physical Chemistry	12	
MATH 121, 122	Fundamentals of Mathematics	8	
MATH 181, 281	Analytic Geometry and Calculus I, II	8	
PHYS 211, 212, 213	General Physics	9	
PHYS 214, 215, 216	General Physics Laboratory	<u>3</u>	
		99	

*Prerequisites for these upper division courses are described in the Biology section of this bulletin.

PHILOSOPHY

H. Phillips, Chairman; C. Barnett, R. Emmerson, L. Glaim, G. Schoepflin, C. Scriven, G. Winslow.

Philosophy courses should, in their manner and subject matter, clearly make for an understanding of and appreciation for philosophy as a distinct mode of inquiry.

MINOR IN PHILOSOPHY

A student minoring in philosophy must complete 28 quarter hours.

PHIL 205	Introduction to Philosophy	4
	Electives (4 must be upper division)	<u>24</u>
	Approval of philosophy adviser required.	28

INTERDISCIPLINARY PROGRAMS

PHILOSOPHY (PHIL)

- PHIL 205 INTRODUCTION TO PHILOSOPHY** 4
Nature and place of philosophy in human thought; its traditional as well as its more recent concerns and approaches. (Readings from selected writings — classical and other — and practice in language analysis).
- PHIL 206 INTRODUCTION TO LOGIC** 4
Inquiry into the nature of argument, inference, proof, etc., and practice with formal and symbolic structures.
- PHIL 305 MORAL PHILOSOPHY** 4
A philosophical investigation of major moral concepts such as duty, the good, the right, the just and their application to problems concerning the individual and society. Readings will include the works of moral philosophers, both ancient and modern. Prerequisites: PHIL 205 or 206 or permission of instructor.
- PHIL 306, 307 HISTORY OF PHILOSOPHY** 4, 4
Fall quarter: historical study of major philosophers and philosophical movements from the Pre-Socratics to Modern Philosophy. Winter quarter: modern philosophers since Descartes. Prerequisite: PHIL 205.
- PHIL 407 PHILOSOPHY OF SCIENCE (or BIOL 407)** 4
See the Biology section of this bulletin.
- PHIL 412 PHILOSOPHY OF RELIGION (or RELT 412)** 4
See the Religion section of this bulletin.
- PHIL 440 PROBLEMS IN PHILOSOPHY** 4
A critical study of selected philosophers and their distinctive contributions to philosophical thought. Prerequisite: PHIL 205, 206.
- PHIL 454 WESTERN POLITICAL AND SOCIAL THOUGHT (or PLSC 454; SOCI 454)** 4
See the History section of this bulletin.

TEACHING LEARNING CENTER

M. Glaim, Director; Pauline Koorenyy.

The Teaching Learning Center offers free tutoring for all students enrolled in freshmen and sophomore classes. It also sponsors the math, writing and reading labs. The math lab offers free help to students enrolled in math classes and to students needing to improve their skills before enrolling in math and science courses. The writing lab serves all college students who request help with developing grammar and writing or who need help with research or essay writing. The reading lab offers classes in developmental reading with two elective credits per quarter for up to six hours of credit. (Credits do not apply to 192 hours required for graduation). Students with learning disabilities are given special testing and individual help.

READING (RDNG)

- RDNG 100 DEVELOPMENTAL READING** 2, 2, 2; 6
Individualized instruction in reading, including comprehension, vocabulary, speed and study skills essential for success in college studies. This course may be taken for up to six quarter hours during three quarters with materials being chosen to suit the individual's progress. Credit does not apply toward graduation.



Library Science

LIBRARY SCIENCE

E. Mabley, Chairman; M. Copsey, C. Gaskell, V. Hassell, L. Johnston.

The minor in library science is designed to provide the knowledge basic to the organization and management of learning resource centers in elementary and secondary schools, to provide training preparatory to employment as a library technician, or to provide a preprofessional curriculum as preparation for graduate work in library science.

MINOR IN LIBRARY SCIENCE:

A student minoring in library science must complete 30 quarter hours:

LIBR 111	Introduction to Library Resources	2
LIBR 232	Information Resources	3
LIBR 261	Cataloging and Classification	4
LIBR 385	Selection and Acquisition of Library Materials	3
	Electives	<u>18</u>
		30

In addition to courses from the department, electives may be selected from the following:

EDUC 461	Methods of Audiovisual Education	2
EDUC 462	Instructional Aids-Production	2
ENGL 375	Literature in the Secondary School	3
INCR 126	Bookbinding	2
SPCH 211	Oral Interpretation	3

LIBRARY SCIENCE (LIBR)

LIBR 111 INTRODUCTION TO LIBRARY RESOURCES 2

Introduction to libraries and how to use their resources effectively for research purposes; a survey of procedures for the systematic search for information; provides opportunity for students to emphasize the bibliography of their major or minor.

LIBR 232 INFORMATION RESOURCES 3

Introduction to the evaluation and use of formal resource materials in meeting the information and educational needs of a library clientele; analysis of concepts and principles of bibliographic organization and control. Prerequisite: LIBR 111.

LIBR 261 CATALOGING AND CLASSIFICATION 4

Introduction to principles, techniques and practices of cataloging and classifying materials for use in instructional materials centers. Laboratory required.

LIBR 288 STORYTELLING 2

Study of the place of storytelling in the educational process; selection, preparation and presentation of diversified materials.

LIBR 374 LIBRARY MATERIALS FOR CHILDREN 3

An overview study of library materials for children; designed to develop the ability to choose library materials according to the child's needs, interests and abilities; includes extensive reading/listening/viewing and sharing of children's learning resources from numerous subject areas. Same as ENGL 374.

LIBR 385 SELECTION AND ACQUISITION OF LIBRARY MATERIALS 3

Study of materials selection criteria and policies, overview of the process of building and maintaining library collections, appraisal of current and retrospective selection tools and reviewing media, survey of current publishing world, study of library acquisition procedures, and techniques of handling censorship.

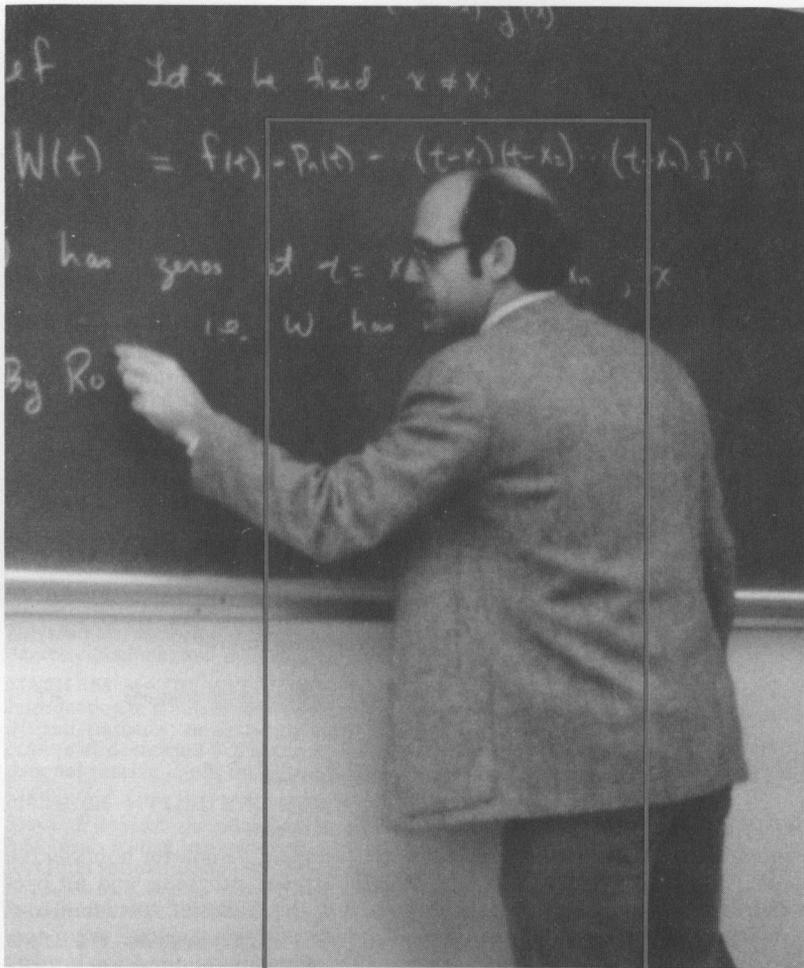
LIBR 456 ADMINISTRATION OF SCHOOL LIBRARIES 3
Study of the general principles of administration; application of techniques to the organization and management of the school library.

LIBR 472 METHODS OF LIBRARY INSTRUCTION 3
Techniques of library orientation designed for teachers who plan to instruct students in the use of the school library; demonstration and class presentation are required.

LIBR 490 DIRECTED LIBRARY EXPERIENCE 4-6; 6
Practical experience in elementary or secondary school libraries under the supervision of qualified librarians. Application must be made during the first two weeks of the quarter prior to the actual library practice. Four to six hours any quarter except summer; maximum, six.

LIBR 496 SEMINAR IN SCHOOL LIBRARY PROBLEMS 3
Study of problems and responsibilities in the selection and use of instruction materials, finances, buildings and equipment, personnel, public relations and legal structure.





Mathematics

MATH 101: ELEMENTARY ALGEBRA. This course covers the basic concepts of algebra, including the properties of real numbers, operations with integers, rational numbers, and the properties of exponents. It also introduces the concept of functions and the Cartesian coordinate system. Prerequisite: MATH 99.

MATH 102: GEOMETRY. This course covers the basic concepts of geometry, including the properties of lines, angles, triangles, and polygons. It also introduces the concept of similarity and congruence. Prerequisite: MATH 101.

MATH 117: PRE-CALCULUS. This course covers the basic concepts of pre-calculus, including the properties of trigonometric functions, the binomial theorem, and the properties of logarithmic and exponential functions. It also introduces the concept of limits and continuity. Prerequisite: MATH 102.

MATH 121, 122: FUNDAMENTALS OF MATHEMATICS. This course covers the basic concepts of mathematics, including the properties of real numbers, operations with integers, rational numbers, and the properties of exponents. It also introduces the concept of functions and the Cartesian coordinate system. Prerequisite: MATH 101.

MATHEMATICS

M. Lang, Chairman; G. Hare, W. Soper, T. Thompson, K. Wiggins.

The department of mathematics offers a program leading to the Bachelor of Arts or Bachelor of Science degrees. The mathematics entrance requirements are two years of high school algebra and a year of Euclidean geometry. It is highly recommended that students have a fourth year of mathematics.

MAJOR IN MATHEMATICS (Bachelor of Arts)

A student majoring in mathematics must complete 45 quarter hours in the major, required cognates, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin. The Graduate Record Examination in mathematics is required.

Major Requirements:

MATH 181, 281-283	Analytic Geometry and Calculus I-IV	16
MATH 289	Linear Algebra and Its Applications	3
MATH 451, 452	Advanced Calculus	6
MATH 461	Modern Algebra	4
	Electives (must include at least one of MATH 442, 453 or 462; 11 must be upper division; a maximum of 4 hours of MATH 117, 121, or 122)	16
		45

Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman.

Cognate:

CPTR 134	Introduction to Computing	3
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MAJOR IN MATHEMATICS (Bachelor of Science)

A student majoring in mathematics must complete 52 quarter hours in the major, the required cognates, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin. A student contemplating graduate work is encouraged to take a foreign language sequence. The Graduate Record Examination in mathematics is required.

Major Requirements:

MATH 181, 281-283	Analytic Geometry and Calculus I-IV	16
MATH 289	Linear Algebra and Its Applications	3
MATH 451, 452	Advanced Calculus	6
MATH 461	Modern Algebra	4
	Electives (must include at least one of MATH 453 or 463; 11 must be upper division)	23
		52

Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman.

Cognates:

CPTR 134	Introduction to Computing	3
BIOL 101, 102, 103	General Biology	}
or		
CHEM 141, 142, 143	General Chemistry	
or		
CPTR 135	Algorithmic Programming	
CPTR 215	Assembly Language Programming I	11-12
CPTR 224	Scientific Computer Applications	
PHYS 251, 252, 253	Principles of Physics	9
PHYS 254, 255, 256	Principles of Physics Laboratory	3

MINOR IN MATHEMATICS

A student minoring in mathematics must complete 28 quarter hours:
 Electives (4 must be upper division) 28

Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman.

MATHEMATICS (MATH)

MATH 100 INTERMEDIATE ALGEBRA 4
 Review of intermediate algebra including topics such as sets, numbers, exponents, polynomials, factoring rational algebraic expressions, graphs, and first and second degree equations, and inequalities. Credit does not apply for graduation.

MATH 105 MATHEMATICS WITH APPLICATIONS 4
 Introduction to mathematical concepts interwoven with computer activities, probability and statistics; designed to meet the general studies requirement for the baccalaureate degree but will not apply toward a major or minor in mathematics. Students may not receive credit for both MATH 105 and MATH 111.

MATH 106 APPLIED STATISTICS 4
 Study of applied statistics including distributions, sampling, confidence intervals, hypothesis testing, nonparametric statistics, and analysis of variance; relevant examples from various disciplines; designed to meet the general studies requirement for the baccalaureate degree but will not apply toward a major or minor in mathematics. Prerequisite: MATH 105 or permission of instructor.

MATH 111 MATHEMATICS FOR THE LIBERAL ARTS 4
 Study of mathematics for nonscience students in which applications play a dominant role; includes exponents, radicals, systems of equations and inequalities, linear programming, and a brief introduction to differential calculus; designed to meet the general studies requirement for the baccalaureate degree but will not apply toward a major or minor in mathematics. Students may not receive credit for both MATH 105 and MATH 111.

MATH 115 ELEMENTARY MATHEMATICS 4
 Study of mathematics including number theory, geometry, numeration, number systems, graphs, algebra, probability, measurements, and computer programming. Will not apply toward a major or minor in mathematics.

MATH 117 PRECALCULUS 5
 Introduction to college algebra and trigonometry including topics such as equations, inequalities, functions and their graphs, logarithmic, exponential and trigonometric functions and complex numbers. Prerequisite: two years of algebra or a year of algebra and a year of Euclidean geometry. Placement examination required. Credit will not be allowed for both MATH 117 and MATH 121, 122.

MATH 121, 122 FUNDAMENTALS OF MATHEMATICS 4, 4
 Study of college algebra and trigonometry including integers, rational, real and complex numbers, equations and inequalities, polynomials, functions, relations and their graphs, exponential and logarithmic functions, trigonometry, the binomial theorem, matrices and determinants, progressions and mathematical induction. Prerequisite: two years of algebra or a year of algebra and a year of Euclidean geometry. Placement examination required. Credit will not be allowed for both MATH 117 and MATH 121, 122.

MATHEMATICS

- MATH 181, 281, 282, 283 ANALYTIC GEOMETRY AND CALCULUS I, II, III, IV** 4, 4, 4, 4
Study of calculus integrating topics of analytic geometry as needed. Prerequisite: MATH 117 or MATH 122 or a satisfactory score on a departmental qualifying examination.
- MATH 289 LINEAR ALGEBRA AND ITS APPLICATIONS** 3
Study of vector spaces, linear transformations, matrices and determinants; emphasizes applications. Prerequisite: MATH 117 or MATH 122.
- MATH 292 NUMERICAL METHODS** 3
Computer applications of numerical analysis. Topics include solutions of systems of equations and nonlinear equations, interpolation, numerical differentiation and integration, optimization, and approximations. Prerequisite: MATH 181 or MATH 289.
- MATH 311 PROBABILITY AND STATISTICS** 4
Study of probability, discrete and continuous probability density functions, moments, sampling, correlation, regression, confidence intervals, and hypothesis testing. Prerequisites: MATH 283 and either CPTR 125 or CPTR 134.
- MATH 312 ORDINARY DIFFERENTIAL EQUATIONS** 4
Study and application of first order differential equations, linear differential equations of order n , power series methods, the Laplace transform and linear systems. Prerequisite: MATH 283.
- MATH 321 GEOMETRY** 4
Study of geometries, concentrating on Euclidean, non-Euclidean, finite, and projective geometries; examination of axiomatic foundations and qualitative study of the geometries; considers briefly Mohr-Mascheroni constructions and impossible constructions. Permission of the instructor required. Offered alternate years.
- MATH 341 NUMERICAL ANALYSIS** 4
Study of numerical methods with computer applications; topics include numerical solutions of nonlinear equations, systems of equations, ordinary differential equations, interpolation, and numerical integration. Prerequisites: CPTR 134; MATH 289. Corequisite: MATH 312.
- MATH 351 OPERATIONS RESEARCH** 4
Introduction to deterministic models in operations research; includes linear programming, network analysis, dynamic programming, and game theory. Prerequisites: MATH 283; MATH 289; CPTR 134 or permission of instructor. Offered alternate years.
- MATH 423 INTRODUCTION TO THE THEORY OF COMPLEX VARIABLES** 4
Study of the functions of a complex variable, the geometry of elementary functions, integration, power series, calculus of residues, and conformal mapping. Prerequisite: MATH 283. Offered alternate years.
- MATH 442 ADVANCED NUMERICAL ANALYSIS** 4
Study of error analysis, boundary value problems, partial differential equations, and curve fitting; additional topics chosen from approximation theory, smoothing techniques, and multiple linear regression. Prerequisites: MATH 341; MATH 311; or permission of the instructor. Offered alternate years.
- MATH 451, 452, 453 ADVANCED CALCULUS** 3, 3, 3
Study of functions of one and several variables including continuity, differentiation, integration, infinite series, uniform convergence, and selected topics. Prerequisite: MATH 283. Offered alternate years.
- MATH 461, 462, 463 MODERN ALGEBRA** 4, 4, 4
Study of groups, rings, fields, vector spaces, linear transformations, and selected topics. Prerequisite: MATH 289. Offered alternate years.
- MATH 472 METHODS OF TEACHING MATHEMATICS** 3
Methods, materials and techniques of teaching mathematics on the secondary school level; requires observation, demonstration and class presentation. Will not apply on a major or minor in mathematics.

MODERN LANGUAGES

R. Czeratzki, Chairman; R. Chaffart, S. Henderson.

The objectives of the department are to develop competence in the ability to understand, speak, read and write a foreign language and to provide through the knowledge of foreign languages a deepened understanding and appreciation of the literature and culture of other people.

Walla Walla College is a member of the Adventist Colleges Abroad consortium and foreign language majors and minors who have not had residence in a country in which their language is spoken are urged to spend their sophomore or junior year in this way. Academic credit will be granted for these studies so that a student will be able to complete a full college year abroad. Prospective students must have successfully completed one year of college French, German or Spanish or the equivalent. It is recommended that students desiring to participate do so during their sophomore year. Applicants should consult with their major professors, the modern language department, and the **Director of Records** prior to enrollment.

Majors and minors are offered in French, German and Spanish.

A student planning to teach should confer with his assigned academic adviser and with the department of education and psychology in regard to certification and teaching credentials.

MAJOR IN FRENCH, GERMAN or SPANISH (Bachelor of Arts)

A student majoring in French, German or Spanish must complete 45 quarter hours in the major, the required cognates, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin. The Graduate Record Examination in modern languages is required.

Major Requirements:

FREN 202, 203	Intermediate French	}	8
or			
GRMN 212, 213	Intermediate German		
or			
SPAN 222, 223	Intermediate Spanish		
	Electives (21 must be upper division)		<u>37</u>
			45

Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman.

Students in the Adventist Colleges Abroad Program must take a minimum of six credit hours of 400-level literature courses at Walla Walla College.

Cognates:

ENGL 384	Advanced English Grammars	}	3
or			
ENGL 485	Linguistics		
or			
MDLG 472	Methods of Teaching Modern Languages		

MINOR IN FRENCH, GERMAN or SPANISH

A student minoring in French, German or Spanish must complete 28 quarter hours beyond FREN 101; GRMN 111; or SPAN 121; 8 quarter hours must be upper division. Approval of the language adviser required.

FRENCH (FREN)

- FREN 101 INTRODUCTION TO FRENCH** 4
Introduction to the study of French with elementary practice in the skills of understanding, speaking, reading and writing; includes grammatical terminology and the sound system of French, basic grammar and vocabulary at the elementary level. Language laboratory required.
- FREN 102, 103 ELEMENTARY FRENCH** 4, 4
Elementary study of French, based on readings in French literature and civilization; emphasizes grammatical structures and vocabulary building. Language laboratory required. Prerequisite: FREN 101 or equivalent.
- FREN 202, 203 INTERMEDIATE FRENCH** 4, 4
Intermediate study of French, based on readings in French literature and civilization, combined with a review of grammar and the development of speaking and writing skills. Prerequisite: FREN 103 or equivalent.
- FREN 301, 302, 303 SURVEY OF FRENCH LITERATURE** 3, 3, 3
Survey of French masterworks from La Chanson de Roland to the present. Introduction to literary analysis; lectures, reports, required library reading. Prerequisite: FREN 203 or equivalent.
- FREN 304, 305, 306 ADVANCED FRENCH** 3, 3, 3
Intensive training in oral and written French; includes review of grammar and extensive prose reading and exercises in composition and conversation. Laboratory required. Conducted in French. Must be taken in sequence. Prerequisite: FREN 203 or equivalent.
- FREN 307 FRENCH CIVILIZATION** 4
A historical overview of French culture as seen in its art, architecture, science, literature and politics; culminating in a study of French life in the 20th century. Prerequisite: FREN 203 or permission of instructor.
- FREN 404 FRENCH DIRECTED READING** 1-3; 6
Assigned reading and reports in French. Prerequisites: FREN 304, 305, 306. One to three hours per quarter; maximum, six.
- FREN 407 17TH AND 18TH CENTURY FRENCH LITERATURE** 4
Study of French classical writers such as Racine, Moliere and Corneille and of philosophers such as Voltaire, Montesquieu and Rousseau.
- FREN 408 19TH CENTURY FRENCH LITERATURE** 4
Study of French literature from the end of the Revolution to World War I; includes Romanticism, Realism, Naturalism and the Parnasse.
- FREN 409 20TH CENTURY FRENCH LITERATURE** 4
Study of French literature from World War I to the present.

GERMAN (GRMN)

- GRMN 111 INTRODUCTION TO GERMAN** 4
Introduction to descriptive grammatical terminology, the German sound system, basic grammar and everyday vocabulary; provides elementary practice in the skills of understanding, speaking, reading and writing. Language laboratory required.
- GRMN 112, 113 ELEMENTARY GERMAN** 4, 4
Elementary study of German, including listening, speaking, reading and writing skills; emphasizes grammatical structures and vocabulary building. Language laboratory required. Prerequisite: GRMN 111 or equivalent.
- GRMN 212, 213 INTERMEDIATE GERMAN** 4, 4
Intermediate study of German, based on readings in German literature and civilization, combined with a review of grammar and the development of speaking and writing skills. Prerequisite: GRMN 113 or equivalent.
- GRMN 311, 312, 313 SURVEY OF GERMAN LITERATURE** 3, 3, 3
Survey of German literature from the eighth century to the present, supplemented by readings from representative masterpieces of the language.

MODERN LANGUAGES

- GRMN 314, 315 GERMAN CIVILIZATION** 2, 2
Study of the development of the cultural, social and political life in German-speaking lands as reflected in architecture, art, history, literature, music and philosophy. Lectures, films, reports.
- GRMN 317, 318, 319 ADVANCED GERMAN** 3, 3, 3
Intensive practice in oral and written German; includes reading, analysis and discussion of selected prose. Prerequisite: GRMN 213 or equivalent.
- GRMN 323 SCIENTIFIC GERMAN** 2
Introduction to the reading of technical German in various scientific fields.
- GRMN 411 GERMAN DIRECTED READING** 1-3; 6
Individual supervision of readings selected for each student separately; includes written and oral reports and quarter examination. Approval of instructor required. Prerequisites: GRMN 311, 312, 313. One to three hours per quarter; maximum, six.
- GRMN 421 18TH CENTURY GERMAN LITERATURE** 4
Study of German literature, emphasizing Lessing and the Enlightenment, the period of "Storm and Stress" and the rise of Weimar Classicism (Goethe, Schiller).
- GRMN 422 19TH CENTURY GERMAN LITERATURE** 4
Study of poetic theory and its application to Romantic lyric and prose; includes the transition from Romanticism to Realism and the reading of representative works.
- GRMN 423 20TH CENTURY GERMAN LITERATURE** 4
Introduction to major authors and literary movements from 1880 to the present; includes Naturalism, Expressionism, Symbolism, and recent trends in postwar East- and West-German literature.

SPANISH (SPAN)

- SPAN 121 INTRODUCTION TO SPANISH** 4
Introduction to Spanish, providing the foundation for oral, written and reading communication; includes basic Spanish grammar, as well as phonetics and phonology. Language laboratory required.
- SPAN 122, 123 ELEMENTARY SPANISH** 4, 4
Elementary study of Spanish, developing oral, writing and reading skills. Language laboratory required. Prerequisite: SPAN 121 or equivalent.
- SPAN 222, 223 INTERMEDIATE SPANISH** 4, 4
Intermediate study of Spanish emphasizing oral, writing, reading skills, and mastering the grammar; designed to prepare students to use Spanish as a research and cultural tool. Prerequisite: SPAN 123 or equivalent.
- SPAN 324, 325, 326 SURVEY OF SPANISH LITERATURE** 3, 3, 3
Study of the development of Spanish literature from the 12th century to the present; includes a survey of the various genres of Spanish literature; supplemented by reading certain works in their entirety. Conducted in Spanish. Offered alternate years. Prerequisite: SPAN 223 or equivalent.
- SPAN 330 IBERIAN CULTURE AND CIVILIZATION** 4
Study of the development of the cultural, social and political life of the Iberian peoples, from Greek and Roman times to the present, as reflected in art, architecture, history, literature, music and philosophy. Conducted in Spanish. Offered alternate years.
- SPAN 331 SPANISH-AMERICAN CULTURE AND CIVILIZATION** 4
Study of the development of the cultural, social and political life of Spanish America from the pre-Columbian period to the present, as reflected in art, architecture, history, literature, music and philosophy. Offered alternate years.
- SPAN 341, 342, 343 ADVANCED SPANISH GRAMMAR** 3, 3, 3
Intensive training in oral and written Spanish; includes review of grammar and extensive prose reading, exercises in composition and conversation. Conducted in Spanish. Prerequisite: SPAN 223 or equivalent.
- SPAN 414 SPANISH DIRECTED READING** 1-3; 6
Assigned readings and reports in Spanish. Prerequisites: SPAN 341, 342, 343. One to three hours per quarter; maximum, six.

MODERN LANGUAGES

SPAN 424, 425, 426 CONTEMPORARY SPANISH LITERATURE 2, 2, 2
Study and analysis of Spanish literature from about 1898 to the latest writers who have achieved critical acclaim; emphasizes development of literary critical ability and evaluation of modern Spanish literature from historical and social points of view.

SPAN 431, 432, 433 SURVEY OF LATIN-AMERICAN LITERATURE 3, 3, 3
Study of the development of Latin American literature from pre-Columbian Indian literature to the present; includes various genres of Latin American literature, supplemented by reading certain works in their entirety. Conducted in Spanish. Offered alternate years.

GENERAL (MDLG)

MDLG 472 METHODS OF TEACHING MODERN LANGUAGES 3
Principles and practice of teaching modern languages; introduction to the newer methods of both classroom and language laboratory, selection of material and equipment; requires observation, demonstration and class presentation. Will not apply on a major or minor in modern languages.



MUSIC

D. Stella Chamberlain, Director
D. Springs

Instruction and exposure are provided for the expansion of the student's musical abilities in the field of performance.



Music

MUSIC

D. Shultz, Chairman; J. Brooks, L. Leno, L. Richter, K. Rudolf, M. Scriven, G. Spring.

Instruction and experiences in music are provided for the purpose of preparing students for careers in music; guiding in the development of performance skills; increasing aesthetic sensitivities; and enhancing the cultural setting of both campus and community.

This department offers the Bachelor of Arts and Bachelor of Music degrees. These provide opportunity for the development of a conceptual understanding of historical and theoretical perspectives in music and their interrelationships as they form a cognitive affective basis for listening, composing and performing.

The Bachelor of Music degree is a professional program with a choice of two majors: Music Education or Music Performance. The Bachelor of Arts degree also offers a choice of two majors: Applied Music or Music Theory. The Bachelor of Arts is not intended to prepare students for a career in music but serve as a preliminary to graduate study in some fields. An audition with the music faculty is required before enrollment in an applied field.

All students pursuing music degree programs will participate in a departmental music organization during each quarter in residence. Students whose performance area is voice will sing in a choir. Those whose performance area is instrumental will play in either the band or orchestra. Keyboard majors may elect up to six quarter hours in approved small ensemble activities toward the fulfillment of this requirement.

The department lists a number of requirements for its majors which must be met without credit. These include minimum piano proficiency, concert and recital attendance, and performance classes. Detailed information regarding these requirements is included in *A Guidebook for Students and Teachers*, available at the music office.

Transfer students majoring in music must take a minimum of six quarter hours in applied music at Walla Walla College. All majors must continue study in their primary applied area until completion of the Senior Recital.

MUSIC EDUCATION (Bachelor of Music)

A student majoring in music education must complete 192 quarter hours including general studies as outlined below, core and certification requirements as listed below. The student will also choose a concentration in either elementary or secondary school music or both. This curriculum provides for denominational and state teaching certification. The Graduate Record Examination in music is required.

General Studies Requirements:

ENGL 121, 122, 123	College Writing	8
HLED	*Health	2
HIST 121, 122	History of Western Civilization	8
PEAC	Physical Activity Courses	2

MUSIC

PSYC 130	General Psychology	4
	Mathematics and Natural Science (as required by general studies)	12
RELB, RELH, RELT	*Religion and Theology	<u>18</u>
	*Denominational Certification requires specific classes. See Education and Psychology section of this bulletin.	54

Core Requirements:

MUCT 121, 122, 123	Theory I	12
MUCT 221, 222, 223	Theory II	12
MUCT 424	Form and Analysis	3
MUCT 425	Orchestration	3
MUCT 426	Counterpoint	3
MUHL 134, 135, 136	The Art of Listening	3
MUHL 321, 322, 323	History of Music I	6
MUHL 331, 332, 333	History of Music II	6
MUPF 361	Basic Conducting	2
MUPF	Organizations	<u>11</u>
		61

Certification Requirements:

Music Education

Phase I

EDUC 110	Principles and Concepts of Education	2
EDUC 210	Foundations of Education	3
EDUC 266/267	Tutoring—Elementary/Secondary	1
PSYC 130	General Psychology	4
PSYC 220	Educational Psychology	4
	Competencies as required	
	Application for acceptance into the teacher education program	

Phase II

EDUC 390	Educational Evaluation	3
EDUC 471	General Secondary Methods	2
EDUC 478/479	Microteaching—Elementary/Secondary	3
EDUC 480/481	Directed Teaching—Elementary/Secondary	14
PSYC 215	Psychology of Childhood & Adolescence	4
PSYC 360	Small Group Procedures	3
or		
SPCH 207	Small Group Communication	

Choose one of the following concentrations:

Elementary School Music

MUED 344	Elementary School Music Literature	2
MUED 472	Elementary Music Methods	3
MUPF 487	Joint (or Solo) Recital	

Secondary School Music

MUED 473	Secondary Music Methods	3
MUPF 487	Joint (or Solo) Recital ¹	

MUSIC

Choose one of the following three emphases:

Instrumental

MUPF	Major Performance ²	20
MUED	Instrumental Techniques and Methods classes	8
MUPF	Voice	1
MUPF	Conducting ³	6

Choral

MUED 251, 252, 253	Singer's Diction	3
MUED 354	Vocal Techniques and Methods	3
MUPF	Major Performance ²	20
MUPF	Keyboard	6
MUPF	Conducting ³	6

Keyboard

MUED 324	Organ Pedagogy and Literature	3
MUED 334	Piano Pedagogy and Literature	3
MUPF	Major Performance ²	20
MUPF	Minor Performance	6
	(Students whose major area is organ will take piano and/or harpsichord; those whose major area is piano will take organ.)	
MUPF 351, 352, 353	Advanced Keyboard Skills	3
MUPF	Voice	1

The following emphases are available to the more advanced student. Special departmental approval is required.

Choral/Instrumental

MUED 251, 252, 253	Singer's Diction	3
MUED	Instrumental Techniques and Methods classes	8
MUED 354	Vocal Techniques and Methods	3
MUPF	Major Performance ⁴	20
	Instrument/Voice 14/6	
	or	
	Voice/Instrument 14/6	
MUPF 362	Instrumental Conducting	} 2
or		
MUPF 364	Instrumental Conducting Techniques and Materials	
MUPF 363	Choral Conducting	} 2
or		
MUPF 365	Choral Conducting Techniques and Materials	

Keyboard/Choral

MUED 251, 252, 253	Singer's Diction	3
MUED 324	Organ Pedagogy and Literature	3
MUED 334	Piano Pedagogy and Literature	3

MUSIC

MUED 354	Vocal Techniques and Methods	3
MUPF	Major Performance ⁵	21
	Organ/Piano/Voice 9/6/6	
	or	
	Piano/Organ/Voice 9/6/6	
MUPF 363	Choral Conducting	} 2
or		
MUPF 365	Choral Conducting Techniques and Materials	

Keyboard/Instrumental

MUED	Instrumental Techniques and Methods classes	8
MUPF	Major Performance ⁵	20
	Organ/Piano/Instrument 10/5/5	
	or	
	Piano/Organ/Instrument 10/5/5	
MUPF 362	Instrumental Conducting	} 2
or		
MUPF 364	Instrumental Conducting Techniques and Materials	
MUED 324	Organ Pedagogy and Literature	3
MUED 334	Piano Pedagogy and Literature	3

¹A conducting or research project as approved by the music faculty may be substituted for the senior recital.

²The student will choose these hours in one applied field, eight of which must be upper division. Students who reach a high level of proficiency may, with music faculty approval and guidance, complete this requirement by electing courses which will strengthen their preparedness in other areas within the music field. In no case will the student take less than 15 quarter hours in one applied field.

³Four of these hours must be in area of emphasis.

⁴Six hours in first and three hours in second performance emphasis area must be upper division.

⁵Six hours in keyboard and three hours in instrument/voice must be upper division. Acceptance in this program requires advanced standing in one of the listed performing areas.

MUSIC PERFORMANCE (Bachelor of Music)

A student majoring in music performance must complete 192 quarter hours including general studies as listed below and major requirements as listed below: (This curriculum does not result in denominational or state teaching certification.) The Graduate Record Examination in music is required.

General Studies Requirements:

ENGL 121, 122, 123	College Writing	8
FREN or GRMN	Foreign Language*	8-12
*Introductory course in French and German or 12 quarter hours in either language.		
HIST 121, 122	History of Western Civilization	8
	Humanities (nonmusic)	4
	Mathematics and General Science	12
	(as required by general studies)	
PEAC	Physical Activity Courses	2
RELH, RELH, RELT	Religion and Theology	16
		<hr/> 58-62

MUSIC

Major Requirements:

MUCT 121, 122, 123	Theory I	12
MUCT 221, 222, 223	Theory II	12
MUCT 335	Composition	3
MUCT 424	Form and Analysis	3
MUCT 425	Orchestration	3
MUCT 426	Counterpoint	3
MUHL 134, 135, 136	The Art of Listening	3
MUHL 321, 322, 323	History of Music I	6
MUHL 331, 332, 333	History of Music II	6
MUPF 361	Basic Conducting	2
MUPF	Conducting (other)	2
MUPF	Organizations	12
MUPF	*Applied Major Performance	48
MUPF 487	Recital (junior and senior year)	

115

*Twenty hours in the major performance area must be upper division. Keyboard majors will complete MUPF 351, 352, 353. Piano majors will complete MUED 334. Organ majors will complete MUED 324. Voice majors will complete MUED 251, 252, 253; MUED 354. Instrumental majors will complete the techniques and materials class related to their performance area.

APPLIED MUSIC (Bachelor of Arts)

A student majoring in applied music must complete 66 quarter hours in the major and the general studies program for the baccalaureate degree as outlined in this bulletin. The Graduate Record Examination in music is required.

Major Requirements:

MUCT 121, 122, 123	Theory I	12	
MUCT 221, 222, 223	Theory II	12	
MUCT 424	Form and Analysis	3	
MUCT 425	Orchestration	3	
MUED 251, 252, 253	Singer's Diction (voice majors)	}	
MUPF 351, 352, 353	Advanced Keyboard Skills (keyboard majors)		}
or			
MUPF	*Music Electives (instrumental majors)	3	
MUHL 134, 135, 136	The Art of Listening	3	
MUHL 321, 322, 323	History of Music I	6	
MUHL 331, 332, 333	History of Music II	6	
MUPF	Applied Music (8 must be upper division in major performance area)	18	
		66	

*To be chosen in consultation with the department chairman.

MUSIC THEORY (Bachelor of Arts)

A student majoring in music theory must complete 66 quarter hours in the major, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin. The music theory major will present a senior project which must be approved by the music faculty. The Graduate Record Examination in music is required.

Major Requirements:

MUCT 121, 122, 123	Theory I	12
MUCT 221, 222, 223	Theory II	12
MUCT 335	Composition	3
MUCT 424	Form and Analysis	3
MUCT 425	Orchestration	3
MUCT 426	Counterpoint	3
MUHL 134, 135, 136	The Art of Listening	3
MUHL 321, 322, 323	History of Music I	6
MUHL 331, 332, 333	History of Music II	6
MUPF	Applied Music	10
MUPF	Organizations	5
		<u>66</u>

MINOR IN MUSIC

A student minoring in music must complete 30 quarter hours:

MUCT 121, 122, 123	Theory I	12
MUHL 124	Introduction to Music	} 3-4
or		
MUHL 134, 135, 136	The Art of Listening	} 8
MUPF	Applied Music (2 must be upper division)	
	Electives (3 must be upper division; 3 may be music organization credit; a solo recital is required.)	6-7
		<u>30</u>

MINOR IN THE TEACHING OF ELEMENTARY MUSIC

A student minoring in the teaching of music must complete 30 quarter hours:

MUCT 121, 122, 123	Theory I	12
MUED 472	Elementary Music Methods	3
MUHL 124	Introduction to Music	} 3-4
or		
MUHL 134, 135, 136	The Art of Listening	} 2
MUPF 361	Basic Conducting	
MUPF	Applied Music (2 must be upper division; a joint or solo recital is required.)	9-10
		<u>30</u>

COMPOSITION AND THEORY (MUCT)

MUCT 101 FUNDAMENTALS OF MUSIC 2
Introduction to the notation of music, emphasizing the development of reading skills.
Does not apply toward a major or minor.

MUCT 121, 122, 123 THEORY I 4, 4, 4
Comprehensive review of the elements of notation, rhythm, scales, key signatures and terms; includes intensive study of traditional harmonic concepts through secondary dominants. Aural skills (sightsinging and ear training) are integrated throughout.
Prerequisite: passing of entrance examination.

MUSIC

- MUCT 221, 222, 223 THEORY II** 4, 4, 4
Study of music theory emphasizing melodic and harmonic developments of the late nineteenth and twentieth centuries. Aural skills (sightsinging and ear training) are integrated throughout. Prerequisites: MUCT 121, 122, 123.
- MUCT 234 INTRODUCTION TO ELECTRONIC MUSIC** 2
Introduction to electronic music, including lectures, demonstrations and practical experience in the use of tape recorders and synthesizers for the production of electronic music. On demand only.
- MUCT 335 COMPOSITION** 1-2; 6
Study of the art of composing in the smaller forms; emphasizes twentieth century techniques. Prerequisites: MUCT 221, 222, 223 and/or the permission of the instructor.
- MUCT 424 FORM AND ANALYSIS** 3
Detailed study of musical structure; emphasizes homophonic forms. Prerequisites: MUCT 221, 222, 223 or permission of instructor.
- MUCT 425 ORCHESTRATION** 3
Practical consideration of the techniques, capabilities and effective uses of orchestral instruments in various combinations; includes scoring for small and large combinations of instruments. Prerequisite: MUCT 424.
- MUCT 426 COUNTERPOINT** 3
Study of the more intricate forms of contrapuntal writing such as motet, canon and fugue. Prerequisites: MUCT 221, 222, 223 or permission of instructor.
- MUCT 434 ADVANCED COMPOSITION** 1-3; 3
Advanced composition in the larger forms. Prerequisite: MUCT 335 and/or permission of instructor.

MUSIC EDUCATION (MUED)

- MUED 251, 252, 253 SINGER'S DICTION** 1, 1, 1
Study of Italian, German and French phonetics. Required of all voice majors. May be waived by demonstrated proficiency.
- MUED 261, 262 BRASS TECHNIQUES AND METHODS** 1, 1
Class instruction in the performance and teaching of brass instruments. Prerequisite: fundamental ability on at least one brass instrument and permission of the instructor. Offered alternate years.
- MUED 271, 272 WOODWIND TECHNIQUES AND METHODS** 1, 1
Class instruction in the performance and teaching of woodwind instruments. Prerequisite: fundamental ability on at least one woodwind instrument and permission of the instructor. Offered alternate years.
- MUED 281, 282 STRING TECHNIQUES AND METHODS** 1, 1
Class instruction in the performance and teaching of string instruments. Prerequisite: fundamental ability on at least one string instrument and permission of the instructor. Offered alternate years.
- MUED 291, 292 PERCUSSION TECHNIQUES AND METHODS** 1, 1
Class instruction in the performance and teaching of percussion instruments. Offered alternate years.
- MUED 324 ORGAN PEDAGOGY AND LITERATURE** 3
Study in the teaching of organ including a survey of materials, repertoire and techniques. Offered alternate years.
- MUED 334 PIANO PEDAGOGY AND LITERATURE** 3
Study of the teaching of piano including a survey of materials, repertoire and techniques. Offered alternate years. By permission only.
- MUED 344 ELEMENTARY SCHOOL MUSIC LITERATURE** 2
Study of the literature for classroom presentation and children's voices in grades one to eight.

MUSIC

MUED 354 VOCAL TECHNIQUES AND METHODS 3
 Study of vocal production and instruction including a survey of materials. Offered alternate years.

MUED 364 MINISTRY OF MUSIC 4
 Study of music and its relationship to the pastoral and evangelical ministry of the church; representative service music and hymnody. On demand only.

MUED 472 ELEMENTARY MUSIC METHODS 3
 Study of objectives, procedures and materials in music education for kindergarten through grade six. Open to nonmusic majors who have prior musical experience. By permission of the instructor only.

MUED 473 SECONDARY MUSIC METHODS 3
 Study of objectives, procedures and materials in music education for grades seven through twelve. By permission of the instructor only.

MUSIC HISTORY AND LITERATURE (MUHL)

MUHL 124 INTRODUCTION TO MUSIC 4
 Introduction to music; includes perception of its elements, recognition of its forms and an awareness of historical perspective. May not apply toward a music major.

MUHL 134, 135, 136 THE ART OF LISTENING 1, 1, 1
 Designed to develop critical listening skills for the study of various elements of music as they are used in selected works in the standard repertoire. Required laboratory.

MUHL 321, 322, 323 HISTORY OF MUSIC I 2, 2, 2
 Study of music history from antiquity through the baroque period with special attention to musical styles as evidenced through the development of musical forms, instrumentation and performance practice. By permission only.

MUHL 331, 332, 333 HISTORY OF MUSIC II 2, 2, 2
 Study of music history from the classical period through music of the twentieth century. By permission only.

MUSIC PERFORMANCE (MUPF)

Membership in the performance groups listed below is by audition or invitation. These may be repeated for additional credit.

MUPF 215 CHORAL UNION 1
 A large choir which performs major choral works and sings for church services.

MUPF 245 I CANTORI 1
 A select choral group which specializes in music of the Renaissance and other works suitable for chamber groups.

MUPF 255 CONCERT BAND 1
 A symphonic band. Local performances only.

MUPF 256 BAND (WIND ENSEMBLE) 1
 A select touring concert band. Participation in Concert Band, MUPF 255, required.

MUPF 265 BRASS CHOIR 1
 A select group of brass and percussion players emphasizing literature of 8-15 parts with and without percussion.

MUPF 266 ORCHESTRA 1
 An organization which performs representative orchestral literature from the Baroque era to the present. Graded S or NC.

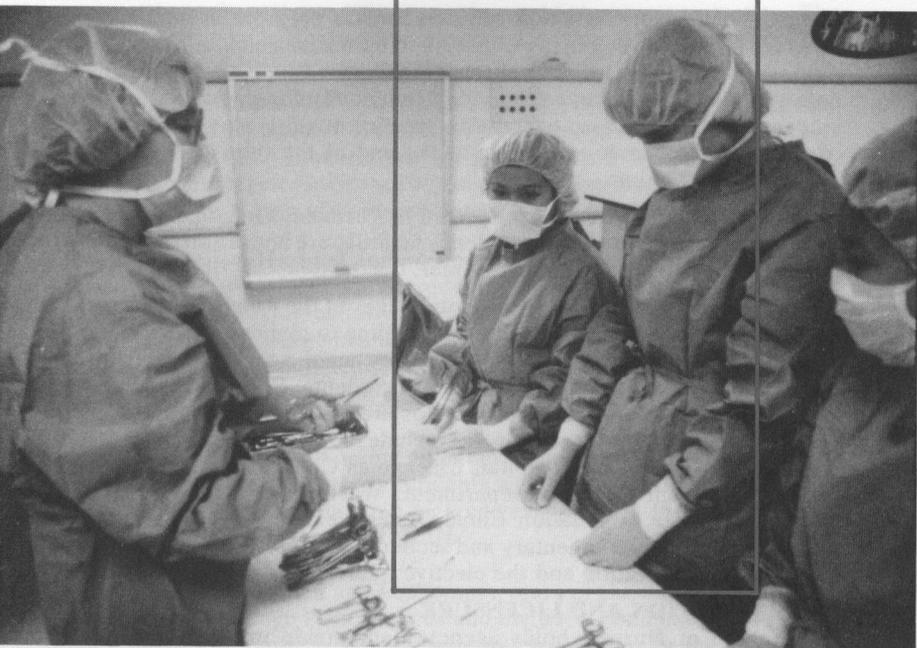
MUSIC

- MUPF 275 WALLA WALLA SYMPHONY ORCHESTRA** 1
A community symphonic orchestra open to members of the college orchestra. Graded S or NC.
- MUPF 285 ENSEMBLE** 1
Vocal or instrumental duos, trios, quartets or larger groups under the direction of a music department staff member.
- MUPF 351, 352, 353 ADVANCED KEYBOARD SKILLS** 1, 1, 1
Development of certain practical skills which keyboard persons may be called upon to exhibit in professional life such as transposition, score reading, reading from a figured bass and simple improvisation. Required of keyboard majors. Prerequisite: Passing of piano proficiency examination.
- MUPF 361 BASIC CONDUCTING** 2
Development of the skill and the art of conducting musical ensembles of all kinds.
- MUPF 362 INSTRUMENTAL CONDUCTING** 2
Application of conducting techniques through practical experience with instrumental ensembles. Orchestral conducting is emphasized. Prerequisite: MUPF 361 and permission of instructor.
- MUPF 363 CHORAL CONDUCTING** 2
Instruction and experience with conducting live performances of representative works in choral literature. Prerequisite: MUPF 361 and permission of instructor.
- MUPF 364 INSTRUMENTAL CONDUCTING TECHNIQUES AND MATERIALS** 2
Study of advanced techniques, rehearsal procedures, repertoire, program building and administration. Prerequisite: MUPF 361 or permission of instructor.
- MUPF 365 CHORAL CONDUCTING TECHNIQUES AND MATERIALS** 2
Study of advanced techniques, rehearsal procedures, repertoire, program building and administration. Prerequisite: MUPF 361 or permission of instructor.
- MUPF 366 CONDUCTING PRACTICUM** 1, 2
Conducting activities and projects as approved by staff member in consultation with music faculty. Can be repeated for additional credit. Prerequisites: MUPF 361 and permission of instructor.
- MUPF 487 SENIOR RECITAL** 0
Preparation of materials for recital in consultation with music staff member. Graded S or NC.

MUSIC PERFORMANCE — Applied Music

One to four hours of applied music may be earned each quarter. Nine 30-minute lessons per quarter and daily practice amounting to five clock hours a week will yield one quarter hour of credit. May be repeated for additional credit.

- MUPF 117 CLASS INSTRUCTION** 1
Class instruction in general or special areas of interest.
- MUPF 127 APPLIED MUSIC** 1-2
Introductory study in instrument or voice; does not satisfy credit requirements for major or minor performance studies.
- MUPF 227 APPLIED MUSIC** 1-4
Introductory study in instrument or voice; satisfies credit requirement for major and minor performance studies. Prerequisite: Approval by music faculty through examination.
- MUPF 327 APPLIED MUSIC** 1-2
Advanced study in instrument or voice; does not satisfy credit requirements for major performance studies. Prerequisite: Four quarter hours of MUPF 127 or permission of instructor.
- MUPF 427 APPLIED MUSIC** 1-4
Advanced study in instrument or voice; satisfies credit requirements for major and minor performance studies. Prerequisites: MUPF 227 and approval of music faculty through examination.



Nursing

NURSING

_____, Dean; R. Abrams, W. Anderson, C. Brown, R. Buck, M. Burgher, L. Church, E. Downing, J. Hunter, A. Lofftus, B. Maddox, M. McAninch, V. Meyer, R. Mitchell (on leave), S. Rawson, J. Riter, R. Schneider, F. Troutman, A. Underhill, L. Whitchurch, D. Wright.

The School of Nursing offers a baccalaureate program in nursing plus a program for registered nurses who wish to earn a baccalaureate degree. The purpose of the program is to prepare professional nurses to participate in delivery of health care and to provide a foundation for graduate study. Basic students (students not yet licensed to practice nursing) may have the option of an associate degree in nursing at the end of the third year of the baccalaureate curriculum.

Extended campus facilities are located in Portland, Oregon. Teachers' offices, classrooms, library and residence facilities are housed on the campus of the Portland Adventist Medical Center.

In order to achieve the educational objectives of the program, students gain observation and laboratory practice according to planned experiences. The School of Nursing has agreements with many health agencies and institutions which provide facilities for instruction of students. In the Walla Walla area this includes the Walla Walla General Hospital and the Veteran's Administration Hospital. Portland area agencies include the Portland Adventist Medical Center, Woodland Park Hospital, Clackamas County Health Department, Multnomah County Health Department, Washington County Health Department, Kaiser Foundation Clinic, several extended care facilities and public and parochial elementary and secondary schools. Other agencies may be used for observation and the elective quarter.

ACCREDITATION AND LICENSURE

The School of Nursing holds agency membership in the Department of Baccalaureate and Higher Degree Programs of the National League for Nursing and is accredited by the Board of Review of that body. It is approved by the Washington State Board of Professional Nursing and is registered with the Board of Regents of the Department of Education of the General Conference of Seventh-day Adventists.

Students are eligible for admission to the examination for licensure as registered nurses by successfully completing the four-year baccalaureate curriculum or successfully completing the first three years of the baccalaureate curriculum and taking an associate degree option.

ADMISSION

The nursing program is open to freshman students by a diploma of graduation from an accredited high school or academy; transfer students from other accredited colleges or universities; and transfer R.N. students.

Applicants in all categories listed above must send their applications for admission to the Director of Admissions, Walla Walla College, College Place, WA 99324.

Transfer Registered Nurse Students. Graduates from approved diploma and associate degree programs may be admitted. The same high school prerequisites, nursing cognates, and general studies requirements for the bac-

calaureate degree listed for the basic students are required for transfer R.N. students. A letter of reference is required from the director of the nursing program from which the R.N. graduated and must be on file before admission is completed. Graduates from both diploma and associate degree programs must take NRS 310, 311, 312 prior to beginning Level IV nursing courses. Validation examinations are allowed as listed below. Credit for nursing courses with numbers above 400 may not be established by examination. The program for transfer R.N. students may be taken on a full-time or part-time basis (4 credits of nursing per quarter).

Associate Degree Graduates. Transfer associate degree graduates must take examinations on the content of Level III Nursing and may receive up to 42 quarter credits. These Examinations are recorded as S (Satisfactory) or NC (No Credit). Deficiencies indicated by the examination must be completed by directed study or taking of the course itself.

Diploma Graduates. Hospital nursing course credits do not transfer. Credits shown by transcript from an accredited college will transfer. Diploma graduates may take examinations to establish college credit for the 42 credits of Level III Nursing. These examinations are recorded as S (Satisfactory) or NC (No Credit). Any deficiencies indicated by the validating examination must be completed by directed study or by taking the course.

PROGRAM INFORMATION

The dean of the School of Nursing maintains offices in College Place, Washington, and in Portland, Oregon. Students who need special information or assistance with program planning may correspond with the dean at 10345 Southeast Market, Portland, OR 97216.

Curriculum. The freshman and sophomore years of the nursing curriculum are taken on the College Place campus and include a combination of general studies, nursing prerequisites and nursing courses. Beginning the junior year, the next three to six quarters are spent on the Portland campus and the course emphasis is primarily nursing.

Student entrance to, and continuation in, clinical nursing courses is routinely evaluated by a School of Nursing Student Progress Committee. Students must maintain a cumulative grade-point average of 2.00 (C) or better to remain in the nursing program. Preference for continuation is given to students whose grade-point average is 2.25 or above. Students must pass both the theoretical and clinical portions of a course to pass the course. Those students who take a W or receive a grade lower than a C in a nursing course will be permitted to repeat the course. If a second W or grade lower than a C is received in any nursing course, the student must present a formal petition to the nursing faculty for consideration to continue in the nursing program. Normally, two W's or two nursing courses with grades lower than a C will be cause for discontinuation from the nursing major. Students may be removed from clinical practice and potentially from the nursing major if judged to be unsafe when their performance is compared with expectations of students at a similar level.

NURSING

All students, basic and R.N.'s, must gain and maintain current certification in cardiopulmonary resuscitation. All basic students must have gained certification in first aid prior to beginning upper division nursing courses.

All seniors must satisfactorily complete a comprehensive examination prior to graduation.

Students are not permitted to be concurrently enrolled at Walla Walla College and another college or university. Exception must be approved by the Vice President for Academic Affairs and the Academic Standards Committee.

Transportation. The student is responsible for his own transportation to agencies and institutions used for educational experience. Because public transportation is not always available, the student needs access to a car during the sophomore and junior years. The use of an automobile is mandatory during the senior quarter in which the student has community health nursing. Students are responsible for maintaining a current, valid driver's license and at least the minimum state required automobile insurance. Transportation costs will vary from quarter to quarter.

MAJOR IN NURSING (Bachelor of Science)

A student must complete 91 quarter hours in the major (Nursing Levels II, III and IV), the required cognates and the general studies for the baccalaureate degree as outlined in this bulletin.

Major Requirements:

The following nursing courses are offered each quarter of the regular academic year with the exception of NRS 303-305 and NRS 306-308 which are offered alternating quarters and NRS 310, 311, 312 (totaling 12 quarter hours) which are offered autumn quarter only.

NRS 201	Introduction to Nursing and Assessment	4
NRS 202	Introduction to the Nursing Process and Mental Health	4
NRS 203	Introduction to Pharmacology, Community Health and Maternity Nursing	5
NRS 301-308	Pathophysiological and Psychosocial Nursing	42
NRS 401, 402, 403	Nursing Management	12
NRS 404, 405, 406	Community Health	12
NRS 408, 409, 410	Elective	12
*NRS 310, 311, 312	Bridge Course	12

*For transfer R.N. students only.

Cognates: A grade C or better is required.

BIOL 201, 202	Anatomy and Physiology	8
BIOL 222	Microbiology	5
CHEM 101, 102	Introductory Chemistry	8
FDNT 220	Human Nutrition	4
MATH 105	Mathematics With Applications	} 4
or		
MATH 106	Applied Statistics	

NURSING

PSYC 130	General Psychology	4
SOCI 204	General Sociology	4
SOCI 224	Human Development and the Family	4

Students may be certified as nursing assistants upon the satisfactory completion of NRS G 202.

ASSOCIATE OF SCIENCE IN NURSING

The student must complete the first three years of the baccalaureate curriculum (a total of 144 hours) to have the option to gain an associate of science in nursing degree. This includes 55 quarter hours in the major (Nursing Levels II and III) and all required cognates and general studies outlined below.

General Studies Requirements:

ENGL 121, 122, 123	College Writing	8
HIST	History	8
	Humanities	12
MATH 105	Mathematics With Applications	4
PEAC	Physical Activity	2
RELB	Religion	8
	Electives	10

Major Requirements:

The following nursing courses are offered each quarter of the regular academic year, with the exception of NRS G 303-305 and NRS G 306-308 which are offered alternating quarters.

NRS G 201	Introduction to Nursing and Assessment	4
NRS G 202	Introduction to the Nursing Process and Mental Health	4
NRS G 203	Introduction to Pharmacology, Community Health and Maternity Nursing	5
NRS G 301-308	Pathophysiological and Psychosocial Nursing	42

Cognates: A grade of C or better is required.

BIOL 201, 202	Anatomy and Physiology	8
BIOL 222	Microbiology	5
CHEM 101, 102	Introductory Chemistry	8
FDNT 220	Human Nutrition	4
MATH 105	Mathematics With Applications	} 4
or		
MATH 106	Applied Statistics	4
PSYC 130	General Psychology	4
SOCI 204	General Sociology	4
SOCI 224	Human Development and the Family	4

Students may be certified as nursing assistants upon the satisfactory completion of NRS G 202.

NURSING

NURSING (NRSNG)

Level II Nursing (NRSNG 201-203) courses include a study of human basic needs. Balanced interrelationships of these needs are emphasized as the student looks at whole persons throughout the life span. The nursing process (assessment, planning, implementation and evaluation) is practiced for enhancement of the health status of individuals, families and communities. Students begin their roles as nurses in a variety of professional nursing settings.

NRSNG 201 INTRODUCTION TO NURSING AND ASSESSMENT 4
Orientation to history, philosophy, professional opportunities, ethics, and communication techniques; introduction to manual skills, and physical and psychosocial assessment. Prerequisites: BIOL 201, 202; CHEM 101, 102; PSYC 130; SOCI 204. Corequisites: BIOL 222; FDNT 220; SOCI 224.

NRSNG 202 INTRODUCTION TO THE NURSING PROCESS AND MENTAL HEALTH 4
Introduction to nursing care planning; emphasis on maintenance of fluid and electrolyte balance; introduction to therapeutic relationships and mental health care in community settings. Prerequisite: NRSNG 201.

NRSNG 203 INTRODUCTION TO PHARMACOLOGY, COMMUNITY HEALTH AND MATERNITY NURSING 5
Introduction to therapeutic drugs, and their administration. Introduction to the roles of the nurse in assessing and intervening in the community; introduction to maternity care with emphasis in biological and psychosocial changes in pregnancy. Prerequisites: MATH 105 or 106; NRSNG 201. NRSNG 202 may be taken concurrently.

Level III Nursing (NRSNG 301-308) provides opportunity for guided practice in planning, giving and evaluating nursing care of the ill person in a variety of settings, including hospital and community. Study of the interacting psychosocial, biological, spiritual and cultural factors which adversely affect the health of the individual from conception to death. Learning experiences are organized to include care of expanding and contracting families. The interaction of family members and behavior manifest in times of physical and emotional crisis provide a basis for planning interventions by the health team approach. Emphasis is placed on identifying and developing the nurse's role. Prerequisites: NRSNG 201, 202, 203.

NRSNG 301, 302 PATHOPHYSIOLOGICAL AND PSYCHOSOCIAL NURSING 6, 6
Study of the nursing process as applied to individuals of all ages, who are experiencing the inflammatory process, interference and/or alteration of function in immunology, proliferation and maturation of cells, and endocrine processes.

NRSNG 303, 304, 305 PATHOPHYSIOLOGICAL AND PSYCHOSOCIAL NURSING 6, 6, 3
Study of the nursing process as applied to behavioral instability, neurological alterations and interruption of the normal nutritional processes in individuals of all ages.

NRSNG 306, 307, 308 PATHOPHYSIOLOGICAL AND PSYCHOSOCIAL NURSING 6, 3, 6
Study of the nursing process in caring for individuals of all ages with imbalances of body fluid and electrolytes, and alteration of respiratory functions and interference of cardiovascular efficiency including cardiac functions.

NRSNG 310, 311, 312 BRIDGE COURSE FOR TRANSFER REGISTERED NURSE STUDENTS 4, 4, 4
A course designed to assist the transfer registered nurse student in the transition of learning from an associate degree or diploma program to the baccalaureate approach to nursing. This course contains both theory and laboratory experience in concepts essential in the preparation for Level IV Nursing. Prerequisites: Licensure as a registered nurse, completion of validation examinations and any deficiencies indicated by these examinations. Foreign students must have passed the commission of Foreign Nursing School Qualifying Exam and possess a license or an intern permit to practice nursing in order to begin nursing courses.

Level IV Nursing (NRS G 401-409) emphasizes professional management and adaptation. This level involves the synchronization of nursing behaviors to assist the patient/client to adapt and manage his health care needs. This is accomplished by creating a collaborative climate of stability and continuity to reach an optimum level of wellness through application of the nursing roles. Prerequisites: NRS G 301-308.

NRS G 401, 402, 403 NURSING MANAGEMENT

4, 4, 4

Study of the principles of management in the health care system and their relationship to the science of administration and the art of leadership; discusses the roles of a leader as well as the emerging patterns of leadership in nursing. Opportunity is given for the application of these management principles using various nursing modalities, within an assortment of health care settings.

NRS G 404, 405, 406 COMMUNITY HEALTH

4, 4, 4

Application of knowledge of health principles, methods and nursing skills for meeting the needs of individuals, family units and groups in the community. Includes a historical background and general organization and structure of community health. Certain communicable diseases are selected for study to assist the student in understanding the cause, prevention and control of disease. Emphasizes how communities meet their health needs including the promotion of wellness. Experiences are obtained in a variety of health care settings. Access to an automobile is required as is evidence of a current driver's license and the minimum state required automobile insurance.

NRS G 407, 408, 409 ELECTIVE

4, 4, 4

Study of an area of special interest in nursing. Review and study of applied statistics for use in reading and critiquing research, and for managing a research project. The student formulates learning and research objectives to direct a clinical practicum. A clinically-related research project is executed on an independent basis and reported. Personal malpractice insurance is required. A 3.0 GPA and Elective Committee approval is required for off-campus experience.





Office Administration

OFFICE ADMINISTRATION

L. Loewen, Chairman; V. Mabley, S. Schroeder.

The baccalaureate degree programs aim to train the student for an executive secretarial career and for the teaching profession. Administrative preparation on the collegiate level is integrated with a broad cultural education. The department also seeks to equip students with knowledge and skills necessary for stenographers and general office workers.

A student interested in the teaching of secretarial skills should complete the business education major in addition to the certification requirements as outlined in the Education and Psychology section of this bulletin. A student planning to do graduate work should complete GBUS 263 or PSYC 350.

The department offers an Associate of Science degree with areas of specialization in office secretary, medical secretary, legal secretary, data entry and secretarial accounting. The program is designed to be completed in two years. It aims to prepare the student for the responsibilities of a secretarial career as compared with the more limited training of the stenographer, which depends upon the basic skills of typewriting and shorthand. While these skills are emphasized, the advanced students in this two-year program are given the opportunity for specialization in the business and professional areas of the secretarial field. If, after successful completion of this two-year program, students wish to continue for the Bachelor of Science degree with a major in office administration or business education, they may do so without loss of credit.

MAJOR IN OFFICE ADMINISTRATION (Bachelor of Science)

A student majoring in office administration must complete 52 quarter hours in the major, the required cognates, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin.

Major Requirements:

OFAD 221, 222	Advanced Typewriting	4
OFAD 223	Professional Typewriting	2
OFAD 224	Electronic Keyboarding	1
OFAD 225	Word Processor Keyboarding	1
OFAD 230	Diskette Data Entry	1
OFAD 234	Machine Transcription	2
OFAD 236	Business Machines	2
OFAD 241, 242	Advanced Shorthand and Transcription	6
OFAD 251, 252	Secretarial Procedures	8
OFAD 325	Word Processing	3
OFAD 362	Business Communications	4
OFAD 370	Applied Office Administration	1
OFAD 459	The Administrative Secretary	4
OFAD 466	The Contemporary Secretary in Business	3
OFAD 496	Office Administration Seminar	1
	Electives (must be upper division)	9

Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman.

52

Cognates:

ACCT 115, 116 and ACCT 206 or ACCT 201, 202, 203 or ACCT 205, 206	Clerical Accounting Principles of Accounting Principles of Accounting Principles of Accounting	}	10-11	
CPTR 131	Data Processing			4
ECON 211	Principles of Economics			4
GBUS 361	Business Law			4
MGMT 272	Principles of Management	4		

Students preparing for medical secretarial work should complete the following:

BIOL 201, 202	Anatomy and Physiology	8
BIOL 222	Microbiology	5
OFAD 456	Medical Office Procedures	4
OFAD 457	Medical Terminology	5

MAJOR IN BUSINESS EDUCATION (Bachelor of Science)

A student majoring in business education must complete 57 quarter hours in the major, the required cognates, the education certification requirements, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin.

Major Requirements:

OFAD 221, 222	Advanced Typewriting	4
OFAD 223	Professional Typewriting	2
OFAD 224	Electronic Keyboarding	1
OFAD 225	Word Processor Keyboarding	1
OFAD 230	Diskette Data Entry	1
OFAD 234	Machine Transcription	2
OFAD 236	Business Machines	2
OFAD 241, 242	Advanced Shorthand and Transcription	6
OFAD 251, 252	Secretarial Procedures	8
OFAD 325	Word Processing	3
OFAD 362	Business Communications	4
OFAD 459	The Administrative Secretary	4
OFAD 472	Methods of Teaching Business Education Subjects	4
	Electives (must be upper division; eight may be taken from the Business Department.)	15

Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman.

 57
Cognates:

ACCT 115, 116 and ACCT 206 or ACCT 201, 202, 203 or ACCT 205, 206	Clerical Accounting Principles of Accounting Principles of Accounting Principles of Accounting	}	10-11
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OFFICE ADMINISTRATION

CPTR 131	Data Processing	4
ECON 211, 212	Principles of Economics	8
GBUS 361, 362	Business Law	8

DATA ENTRY (Associate of Science)

The Data Entry program is administered jointly by Computer Science and Office Administration. A student completing the Data Entry program must complete the area requirements, the required cognates, the general studies program, and all associate degree requirements as outlined in this bulletin.

Area Requirements:

CPTR 131	Data Processing	4
CPTR 204	Interactive Data Entry & Editing	1
CPTR 227	Computer Operations	2
CPTR 280	Practicum in Data Entry	4
OFAD 161	Mathematics of Business	2
OFAD 221, 222	Advanced Typewriting	4
OFAD 223	Professional Typewriting	2
OFAD 224	Electronic Keyboarding	1
OFAD 225	Word Processor Keyboarding	1
OFAD 230	Diskette Data Entry	1
OFAD 236	Business Machines	2
OFAD 264	Traditions and Practices of Business	3
OFAD 325	Word Processing	3
	Electives	13
		<hr/> 43

Electives must be chosen in consultation with and approved by the academic adviser and will usually have one of the following prefixes ACCT, CPTR, FINA, GBUS, MGMT or OFAD.

Cognates:

ACCT 115, 116	Clerical Accounting	}	6-10
or			
ACCT 201, 202, 203	Principles of Accounting		
or			
ACCT 205, 206	Principles of Accounting		
MATH 105	Mathematics With Applications		4
MGMT 272	Principles of Management		4
PSYC 130	General Psychology		4

TWO-YEAR SECRETARIAL PROGRAM (Associate of Science)

A student specializing in this program must complete 32 quarter hours in the core, one area of concentration, the required cognates for that area, the general studies program, and all associate degree requirements as outlined in this bulletin.

Core Requirements:

OFAD 161	Mathematics of Business	2
OFAD 221, 222	Advanced Typewriting	4
OFAD 224	Electronic Keyboarding	1
OFAD 225	Word Processor Keyboarding	1
OFAD 230	Diskette Data Entry	1
OFAD 234	Machine Transcription	2
OFAD 236	Business Machines	2
OFAD 251	Secretarial Procedures	4
OFAD 264	Traditions and Practices of Business	3

OFFICE ADMINISTRATION

OFAD 362	Business Communications	4
OFAD 370	Applied Office Administration	1
OFAD 459	The Administrative Secretary	4
OFAD 466	The Contemporary Secretary in Business	3
		<u>32</u>

Area Requirements: Legal Secretary

GBUS 361, 362	Business Law	8
OFAD 223	Professional Typewriting (Legal)	2
OFAD 241, 242	Advanced Shorthand and Transcription	6
OFAD 454	The Legal Secretary	4
	Electives	7
		<u>27</u>

Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman.

Cognates: Legal Secretary

ACCT 115, 116	Clerical Accounting	6
CPTR 131	Data Processing	4
FINA 101	Personal Finance	2

Area Requirements: Medical Secretary

OFAD 223	Professional Typewriting (Medical)	2
OFAD 241, 242	Advanced Shorthand and Transcription	6
OFAD 456	Medical Office Procedures	4
OFAD 457	Medical Terminology	5
	Electives	3
		<u>20</u>

Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman.

Cognates: Medical Secretary

ACCT 115, 116	Clerical Accounting	6
BIOL 201, 202	Anatomy and Physiology	8
CPTR 131	Data Processing	4
FINA 101	Personal Finance	2

Area Requirements: Office Secretary

OFAD 223	Professional Typewriting (Executive)	2
OFAD 241, 242	Advanced Shorthand and Transcription	6
OFAD 252	Secretarial Procedures	4
	Electives	7
		<u>19</u>

Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman.

Cognates: Office Secretary

ACCT 115, 116	Clerical Accounting	6
CPTR 131	Data Processing	4
FINA 101	Personal Finance	2

Area Requirements: Secretarial Accounting

ACCT 115, 116 and ACCT 206	Clerical Accounting Principles of Accounting	} 11
ACCT 222	Accounting Projects	
OFAD 223	Professional Typewriting (Statistical)	2
OFAD 252	Secretarial Procedures	4
	Electives	4
		<u>23</u>

Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman.

OFFICE ADMINISTRATION

Cognates: Secretarial Accounting

CPTR 131	Data Processing	4
FINA 101	Personal Finance	2

MINOR IN OFFICE ADMINISTRATION

A student minoring in office administration must complete 30 quarter hours:

OFAD 221, 222	Advanced Typewriting	4
OFAD 223	Professional Typewriting	2
OFAD 224	Electronic Keyboarding	1
OFAD 225	Word Processor Keyboarding	1
OFAD 230	Diskette Data Entry	1
OFAD 234	Machine Transcription	2
OFAD 236	Business Machines	2
OFAD 251, 252	Secretarial Procedures	8
OFAD 362	Business Communications	4
	Electives	5
		<u>30</u>

Approval of office administration adviser required.

OFFICE ADMINISTRATION (OFAD)

OFAD 111, 112, 113 BASIC KEYBOARDING 2, 2, 2
Introduction to touch typewriting with emphasis on basic theory, speed, accuracy. Not open to challenge examination. Does not apply toward a major or minor for the Bachelor of Science degree or as an elective for the Associate of Science degree.

OFAD 141, 142, 143 SHORTHAND THEORY 3, 3, 3
Principles of Gregg shorthand, emphasizing correct writing and transcribing of shorthand notes. One hour laboratory per week.

OFAD 161 MATHEMATICS OF BUSINESS 2
Study of payroll mathematics, interest, negotiable instruments, markup, discounts, depreciation, sinking funds, insurance and installment buying.

OFAD 208 CONCEPTS IN OFFICE MACHINES 1-2
Laboratory experience for nonmajors in keyboarding, electronic calculators, and dictation equipment.

OFAD 221, 222 ADVANCED TYPEWRITING 2, 2
Advanced typewriting emphasizing increase of speed, accuracy and skill in the production of business papers; course work is arranged to provide for individual skill levels.

OFAD 223 PROFESSIONAL TYPEWRITING 2
Emphasizing professional office projects in medical, legal, technical and executive areas. Prerequisites: OFAD 221, 222.

OFAD 224 ELECTRONIC KEYBOARDING 1
Gives students basic knowledge and skill in electronic keyboarding. Supervised experience on the IBM Mag Card and the Electronic 75 Typewriter. Permission of instructor required.

OFAD 225 WORD PROCESSOR KEYBOARDING 1
Student develops proficiency in operating an electronic keyboard with display screen for basic word processing applications. The IBM Displaywriter is used.

OFAD 230 DISKETTE DATA ENTRY 1
Instruction and practice in the use of off-line data entry and storage devices, especially those using diskette storage. Permission of instructor required.

OFAD 234 MACHINE TRANSCRIPTION 2
Laboratory practice in transcribing letters and reports from machine dictation; emphasizes progressively higher transcription rates with mailability of copy on increasingly difficult and technical materials.

- OFAD 236 BUSINESS MACHINES** 2
Laboratory practice designed to develop acquaintance and proficiency with the most frequently used office machines; provides the basic skills used in fundamental calculations; laboratory experience in the use of office duplicating equipment.
- OFAD 241, 242 ADVANCED SHORTHAND AND TRANSCRIPTION** 3, 3
Review of the principles of Gregg shorthand; emphasizes speed in taking and transcribing business dictation.
- OFAD 251, 252 SECRETARIAL PROCEDURES** 4, 4
Study of the procedures common to most stenographic jobs, including business English, records management, receptionist duties and office ethics.
- OFAD 264 TRADITIONS AND PRACTICES OF BUSINESS** 3
Study of business law topics that have been recommended by the United States Office of Education for secretaries, stenographers and related office workers; emphasizes contracts and negotiable instruments. Designed for associate degree students.
- OFAD 280 PRACTICUM IN OFFICE ADMINISTRATION** 1-8
Laboratory work in a specialized area chosen in counsel with the laboratory instructor. Thirty laboratory hours per credit.
- OFAD 325 WORD PROCESSING** 3
Theory of word processing including advanced training on the IBM Displaywriter. Prerequisite: OFAD 225.
- OFAD 354 THE DENOMINATIONAL SECRETARY** 2
Study of denominational vocabulary, reporting techniques and the work of the denominational secretary; emphasizes an understanding of the Seventh-day Adventist denominational organization and activities.
- OFAD 362 BUSINESS COMMUNICATIONS** 4
Study of the principles basic to effective communication with emphasis on the business writer as a communication strategist; stresses writing.
- OFAD 370 APPLIED OFFICE ADMINISTRATION** 1-3
Supervised work experience in an office for actual on-the-job training. A minimum of 30 hours of satisfactory work for each credit hour.
- OFAD 454 THE LEGAL SECRETARY** 4
Study of legal terminology, preparation of legal documents, court procedures and management of the legal office.
- OFAD 456 MEDICAL OFFICE PROCEDURES** 4
Study of the specialized duties of a medical office; emphasizes the preparation of medical office records.
- OFAD 457 MEDICAL TERMINOLOGY** 3, 5; 5
Study of the development of the basic medical vocabulary; includes practice in the transcription of medical reports from voicerecording machines. One laboratory per week. Prerequisites: BIOL 201, 202 or equivalent substitution with consent of department chairman. Medical secretary majors must take 5 hours.
- OFAD 459 THE ADMINISTRATIVE SECRETARY** 4
Study of the organization and planning of work, setting priorities, making decisions, analyzing problems and providing solutions.
- OFAD 466 THE CONTEMPORARY SECRETARY IN BUSINESS** 3
Study of the present and future problems facing the professional secretary; emphasizes psychological principles that influence the behavior of people in the social and business worlds.
- OFAD 472 METHODS OF TEACHING BUSINESS EDUCATION SUBJECTS** 4
Survey of the objectives, methods and techniques of teaching business education subjects in the secondary school; requires observation, demonstration and class presentations.
- OFAD 496 OFFICE ADMINISTRATION SEMINAR** 1-3
Discussion, research, special problems, analysis of new trends in the field and study of the major areas in office administration. For majors only. One to three hours per quarter; maximum, three.

OEAD 126 BUSINESS MACHINES
 Laboratory practice designed in developing equipment and productivity will be first
 frequently used office machines provide the large class in fundamental design
 user laboratory experience in the use of office duplicating equipment.

OEAD 127 ADVANCED SHORTHAND AND TRANSLITERATION
 Review of the principles of shorthand and transliteration used in the study of
 the history of shorthand and transliteration.

OEAD 128 SECRETARIAL FORM DESIGN
 Study in the procedure common to most secretarial forms, including business
 laboratory management, recording, and distribution.

OEAD 129 TRADITION AND PRACTICE IN THE UNITED STATES
 Study of business law topics that have been established by the United States
 legislation for secretaries, stenographers, and other workers; the history
 concepts and applicable instruments. (Designed for stenographer students.)

OEAD 130 PRACTICE IN OTHER AMERICAN STATES
 Laboratory work in specialized areas is arranged with the laboratory practice
 study laboratory hours per credit.

OEAD 131 WORD PROCESSING
 Faculty of word processing including advanced training of the film display
 technique. OEAD 132.

OEAD 132 THE DENOMINATIONAL SECRETARY
 Study of denominational secretaries, their functions and the work of the
 denominational secretary, emphasis on the organization of the secretary. A
 denominational organization and activities. (Designed for students of
 denominational secretaries.)

OEAD 133 THE DENOMINATIONAL SECRETARY
 Study of the organization and activities of the denominational secretary
 as a communication through the work of the secretary.

OEAD 134 THE DENOMINATIONAL SECRETARY
 Study of the organization and activities of the denominational secretary
 as a communication through the work of the secretary.

OEAD 135 THE DENOMINATIONAL SECRETARY
 Study of the organization and activities of the denominational secretary
 as a communication through the work of the secretary.

OEAD 136 THE DENOMINATIONAL SECRETARY
 Study of the organization and activities of the denominational secretary
 as a communication through the work of the secretary.

OEAD 137 THE DENOMINATIONAL SECRETARY
 Study of the organization and activities of the denominational secretary
 as a communication through the work of the secretary.

OEAD 138 THE DENOMINATIONAL SECRETARY
 Study of the organization and activities of the denominational secretary
 as a communication through the work of the secretary.

OEAD 139 THE DENOMINATIONAL SECRETARY
 Study of the organization and activities of the denominational secretary
 as a communication through the work of the secretary.

OEAD 140 THE DENOMINATIONAL SECRETARY
 Study of the organization and activities of the denominational secretary
 as a communication through the work of the secretary.

OEAD 141 THE DENOMINATIONAL SECRETARY
 Study of the organization and activities of the denominational secretary
 as a communication through the work of the secretary.

OEAD 142 THE DENOMINATIONAL SECRETARY
 Study of the organization and activities of the denominational secretary
 as a communication through the work of the secretary.

OEAD 143 THE DENOMINATIONAL SECRETARY
 Study of the organization and activities of the denominational secretary
 as a communication through the work of the secretary.

OEAD 144 THE DENOMINATIONAL SECRETARY
 Study of the organization and activities of the denominational secretary
 as a communication through the work of the secretary.



Physics

PHYS 316
 PHYS 317, 318, 319
 PHYS 321, 322
 PHYS 363, 364
 or
 PHYS 401, 402
 or
 PHYS 411, 412, 413
 PHYS 417, 418, 419
 *Students who have completed PHYS 317, 318, 319 may elect to take PHYS 316, 317, 318, 319, 321, 322, 363, 364, 401, 402, 411, 412, 413, 417, 418, 419, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000

PHYSICS

G. Johnson, Chairman; T. Anderson, C. Barnett, G. Schoepflin.

The department offers a Bachelor of Arts degree and a Bachelor of Science degree with a major in physics, and jointly with the department of biology, a Bachelor of Science degree with a major in biophysics. The physics major who is preparing for secondary teaching will normally choose the Bachelor of Arts degree, including the certification requirements as outlined in the education and psychology section of this bulletin. The Bachelor of Science degree is designed to prepare the student for graduate study and a career in applied or basic research and college teaching. The interdisciplinary major in biophysics should best fill the needs of the student who plans a career in medicine, or who plans on research and advanced study into the physics of living systems. For entrance, 30 semester periods of secondary mathematics chosen from algebra, plane and solid geometry and trigonometry are required.

MAJOR IN PHYSICS (Bachelor of Arts)

A student majoring in physics must complete 46 quarter hours in the major, the required cognates, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin. The Graduate Record Examination in physics is required.

Major Requirements:

PHYS 114	Perspectives in Physics	1	
PHYS 115, 116	Introduction to Experimentation	2	
PHYS 251, 252, 253	*Principles of Physics	9	
PHYS 254, 255, 256	Principles of Physics Laboratory	3	
PHYS 311	Modern Physics	3	
PHYS 312	Physical Electronics	3	
PHYS 313	Thermodynamics	4	
PHYS 314	Modern Physics Laboratory	1	
PHYS 315	Physical Electronics Laboratory	1	
PHYS 316	Optics Laboratory	1	
PHYS 317, 318, 319	Physics Seminar I	3	
PHYS 321, 322	Optics	6	
PHYS 362, 363	Theoretical Mechanics	}	
or			
PHYS 401, 402	Electricity and Magnetism		6-9
or			
PHYS 411, 412, 413	Atomic and Nuclear Physics	}	
PHYS 417, 418, 419	Physics Seminar II		3
		46-49	

*Students who have completed PHYS 211, 212, 213 may meet the PHYS 251, 252, 253 requirement by passing a departmental examination.

Cognates:

CHEM 141, 142, 143	General Chemistry	12
CPTR 125	Principles of BASIC	}
or		
CPTR 134	Introduction to Computing	

MATH 181, 281-283	Analytic Geometry and Calculus I-IV	16
MATH 311	Probability and Statistics	4

MAJOR IN PHYSICS (Bachelor of Science)

A student majoring in physics must complete 66 quarter hours in the major, the required cognates, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin. The Graduate Record Examination in physics is required.

Major Requirements:

PHYS 114	Perspectives in Physics	1
PHYS 115, 116	Introduction to Experimentation	2
PHYS 251, 252, 253	*Principles of Physics	9
PHYS 254, 255, 256	Principles of Physics Laboratory	3
PHYS 311	Modern Physics	3
PHYS 312	Physical Electronics	3
PHYS 313	Thermodynamics	4
PHYS 314	Modern Physics Laboratory	1
PHYS 315	Physical Electronics Laboratory	1
PHYS 316	Optics Laboratory	1
PHYS 317, 318, 319	Physics Seminar I	3
PHYS 321, 322	Optics	6
PHYS 362, 363	Theoretical Mechanics	6
PHYS 401, 402	Electricity and Magnetism	8
PHYS 411, 412, 413	Atomic and Nuclear Physics	9
PHYS 414, 415, 416	Experimental Physics	3
PHYS 417, 418, 419	Physics Seminar II	3
		<hr style="width: 100%; border: 0.5px solid black;"/>
		66

*Students who have completed PHYS 211, 212, 213 may meet the PHYS 251, 252, 253 requirement by passing a departmental examination.

Cognates:

CHEM 141, 142, 143	General Chemistry	12
CPTR 125	Principles of BASIC	} 2-3
or		
CPTR 134	Introduction to Computing	} 4
ENGR 228	Circuit Analysis	
ENGR 325	Instrumentation	} 3
or		
ENGR 354	Digital Logic Circuits	
MATH 181, 281-283	Analytic Geometry and Calculus I-IV	16
MATH 289	Linear Algebra and Its Applications	} 3
	or equivalent	
MATH 311	Probability and Statistics	4
MATH 312	Ordinary Differential Equations	4
MATH 341	Numerical Analysis	} 4
or		
MATH 423	Introduction Theory of Complex Variables	

PHYSICS

MAJOR IN BIOPHYSICS (Bachelor of Science)

A student majoring in biophysics must complete 33 quarter hours in biology and 36 quarter hours in physics, the required cognates, the general studies program and all baccalaureate degree requirements as outlined in this bulletin. Graduate Record Examinations in physics and biology are required. One summer term at the Marine Station is required. Specific course requirements are outlined in the Interdisciplinary section of this bulletin.

MINOR IN PHYSICS

A student minoring in physics must complete 27 quarter hours:

Electives (3 must be upper division)

27

Approval of physics adviser required.

PHYSICS (PHYS)

ASTR 141, 142 GENERAL ASTRONOMY

4, 4

Introduction to modern astronomy with emphasis on the place of astronomy in man's cultural and scientific thought and experience; includes study of planets, moons, comets, meteors, the solar system as a unit; the sun, stars, galaxies and the sidereal universe. Laboratory or night observation once a week. AW

GEOL 231, 232 EARTH SCIENCE (HONORS)

4, 4

See the honors program listed under the Interdisciplinary section of this bulletin.

PHYS 114 PERSPECTIVES IN PHYSICS

1

Study of the historical and philosophical development of contemporary ideas in the physical sciences. Examples of various historical experiments will be performed and discussed. Some time will be devoted to exploring careers in physics and related fields.

A

PHYS 115, 116 INTRODUCTION TO EXPERIMENTATION

1, 1

Introduction to the principles and practice of hypothesis testing including physical measurement, experiment design and data analysis; emphasizes the use of the computer for data acquisition, graphical presentation and analysis of data and simple simulation. Prerequisite: CPTR 125 or CPTR 131 or CPTR 134, or equivalent. WS

PHYS 201, 202 INTRODUCTION TO PHYSICS

3, 3

Introduction to physics emphasizing concepts and models applied to physical phenomena and with less emphasis than the other introductory courses on detailed mathematical description and problem solving; stresses an investigative approach through the associated laboratory course as well as through group investigative demonstrations in class and some homework with a discovery character. Includes mechanics, properties of solids, liquids and gases, heat, electricity, sound, electric and magnetic fields, light, relativity, atoms and nuclei. While not required, four quarter hours of college mathematics are strongly recommended. Corequisites: PHYS 204, 205. AW

PHYS 204, 205 INTRODUCTION TO PHYSICS LABORATORY

1, 1

Laboratory work integrated with PHYS 201, 202. AW

PHYS 211, 212, 213 GENERAL PHYSICS

3, 3, 3

Introduction to mechanics, heat, sound, light, electricity, atomic and nuclear physics, elementary particles quantum mechanics and special relativity, designed primarily for the nonphysics major to acquaint him with the ideas and methods of physics for possible application to problems in other areas of human endeavor. Prerequisites: MATH 121, 122 or equivalent. Must be taken in sequence. Corequisites: PHYS 214, 215, 216. AWS

PHYS 214, 215, 216 GENERAL PHYSICS LABORATORY

1, 1, 1

Laboratory work integrated with PHYS 211, 212, 213. AWS

- PHYS 251, 252, 253 PRINCIPLES OF PHYSICS** 3, 3, 3
Introduction to mechanics, relativity, thermodynamics, electromagnetism, wave motion, and optics designed to provide the science and engineering major with an intuitive and a mathematical understanding of fundamental physical concepts. Must be taken in sequence. Prerequisites: MATH 181, MATH 281. Corequisites: PHYS 254, 255, 256; MATH 282, 283. AWS
- PHYS 254, 255, 256 PRINCIPLES OF PHYSICS LABORATORY** 1, 1, 1
Experimental exploration and study of the fundamental concepts of physics. AWS
PHYS 251, 252, 253 or equivalent and MATH 181, MATH 281, 282, 283 are prerequisites for all courses numbered PHYS 300 or above except PHYS 352; PHYS 353; PHYS 472.
- PHYS 311 MODERN PHYSICS** 3
Study of the basic principles of relativity, quantum theory, atomic and nuclear structure. Corequisites: PHYS 314; MATH 311. A
- PHYS 312 PHYSICAL ELECTRONICS** 3
Study of the physical principles of solid state electronic devices. Prerequisite: PHYS 311. PHYS 313 is recommended. Corequisite: PHYS 315. S
- PHYS 313 THERMODYNAMICS** 4
Introduction to the physical theories of equilibrium thermostatics and irreversible thermodynamics based on elementary statistical mechanics. Prerequisites: PHYS 311; MATH 311. W
- PHYS 314 MODERN PHYSICS LABORATORY** 1
Experimental study of the characteristics of alpha, beta and gamma radiation, interaction of radiation with matter, neutron activation. Corequisite: PHYS 311. A
- PHYS 315 PHYSICAL ELECTRONICS LABORATORY** 1
Experiments in crystal and semiconductor physics, properties of ionized gases, measurement of fundamental physical constants. Corequisite: PHYS 312. S
- PHYS 316 OPTICS LABORATORY** 1
Experimental study of geometrical and physical optics. W
- PHYS 317, 318, 319 PHYSICS SEMINAR I** 1, 1, 1
Discussion of contemporary and classical topics in physics, with emphasis placed on underlying principles and the interrelation of physical concepts. A term project is required. AWS
- PHYS 321, 322 OPTICS** 3, 3
Study of classical theory of radiation and optics based on Maxwell's equations; includes reflection, refraction, dispersion, diffraction, interference, coherence, polarization, scattering, polychromatic waves. Corequisite: PHYS 316. AW
- PHYS 352, 353 RADIOISOTOPE TECHNIQUES** 2, 2
Laboratory work accompanied by lectures appropriate to the techniques studied in the laboratory; includes radiation detection, instrumentation, radiological safety, interaction of radiation with matter, ionization chambers, proportional counters. Geiger counters, scintillation counters, spectrometers, monitoring and survey instruments, activation analysis, selected biological and chemical studies. Prerequisites: PHYS 211, 212, 213 or CHEM 141, 142, 143. WS
- PHYS 362, 363 THEORETICAL MECHANICS** 3, 3
Study of statics and dynamics of particles, fluids and rigid bodies, harmonic and orbital motion, Lagrangian and Hamiltonian mechanics. WS
- PHYS 401, 402 ELECTRICITY AND MAGNETISM** 4, 4
Study of electric and magnetic field theory, polarization, magnetization, solutions to the equations of Laplace and Poisson, Maxwell's equations, applications to plane waves, and dipole radiation. AW
- PHYS 411, 412, 413 ATOMIC AND NUCLEAR PHYSICS** 3, 3, 3
Study of the experimental and theoretical foundations of modern atomic and nuclear physics: includes special relativity, elementary quantum mechanics, atomic structure and spectra, nuclear structure, nuclear reactions, fundamental particles. Prerequisites: PHYS 311; PHYS 321. AWS

PHYSICS

PHYS 414, 415, 416 EXPERIMENTAL PHYSICS

1, 1, 1

Experimental investigations in classical and modern physics. AWS

PHYS 417, 418, 419 PHYSICS SEMINAR II

1, 1, 1

Discussion of contemporary and classical topics in physics, with emphasis placed on underlying principles and interrelation of physical concepts. A term project is required. AWS

PHYS 472 METHODS OF TEACHING PHYSICAL SCIENCE

3

Materials, techniques and methods of teaching the physical sciences on the secondary level. Requires observation, demonstration and class presentations. Special attention is given to newer methods of teaching science to the secondary student.



Preprofessional Programs

PREPROFESSIONAL PROGRAMS

The College offers courses which are prerequisite for admission to professional or technical schools. Students wishing to secure admission to such schools should familiarize themselves with the admission requirements of the school of their choice. Most preprofessional curriculums require two units of high school mathematics (algebra and geometry). Preprofessional courses of study are offered for the professions hereinafter listed.

All programs should be planned in consultation with and approved by the assigned academic adviser.

ARCHITECTURE

F. Bennett, Academic Adviser

Professional schools of architecture usually require a minimum of two or three years of preprofessional study prior to admission. Final acceptance for professional studies is determined competitively and the level of expected preprofessional achievement varies considerably among schools.

The following typical two-year program will satisfy the basic entrance requirements of many professional schools of architecture. However, admission requirements vary between programs and students should reconcile their preprofessional study plans with the requirements of the particular institutions to which they intend to apply.

ART 161, 162, 163	Design	9
ART 184, 185	Introduction to Drawing	4
ART 251	Introduction to Art	4
ART 321, 322, 323	History of Art	6
CPTR 134	Introduction to Computing	3
ENGL 121, 122, 123	College Writing	8
ENGR 121, 122, 123	Introduction to Engineering	6
HIST 121, 122	History of Western Civilization	8
MATH 121, 122	Fundamentals of Mathematics	8
MATH 181	Analytic Geometry and Calculus I	4
MATH 281	*Analytic Geometry and Calculus II	4
PEAC	Electives	3
PHYS 211, 212, 213	General Physics	9
PHYS 214, 215, 216	General Physics Laboratory	3
PSYC 130	*General Psychology	4
RELB, RELH, RELT	Electives	8
SPCH 101	Fundamentals of Speech Communication	4

*Suggested courses: other courses in this same field may also be appropriate.

CHIROPRACTIC

R. Rittenhouse, Academic Adviser

Two years of college preparation are generally required, including one year of biology and at least one year of chemistry. The student should obtain a bulletin from each chiropractic college to which he wishes to apply for information on entrance requirements. State requirements also vary, and such information is available from the chiropractic college. Of the dozen approved schools in the United States, Western States Chiropractic College in Portland, Oregon, is the only one in the Northwest. The admission requirements of Western States Chiropractic College presently include one year of organic chemistry and one year of physics.

DENTISTRY

J. Galusha, Academic Adviser

The minimum requirement for admission to the study of dentistry is 96 quarter hours. However, most dental schools expect candidates for admission to have completed a bachelor's degree in an area of the student's choice. The following courses are basic requirements:

BIOL 101, 102, 103	General Biology (or Zoology)	12
CHEM 141, 142, 143	General Chemistry	12
CHEM 321, 322, 323	Organic Chemistry	12
ENGL 121, 122, 123	College Writing	8
MATH 121, 122	Fundamentals of Mathematics (or equivalent)	8
MGMT 272	Principles of Management	4
PHYS 211, 212, 213	General Physics	9
PHYS 214, 215, 216	General Physics Laboratory	3
	Religion	one course per year
Loma Linda University also recommends the following:		
ACCT 201, 202, 203	Principles of Accounting	10
FDNT 220	Human Nutrition	4
INDS 241, 242, 243	Fabrication and Machining of Metals	6
	Calculus	
	Two psychology courses	

DENTAL ASSISTANT

A. Grable, Academic Adviser

The minimum requirements for admission to the study of dental assistantship vary considerably. For an Associate of Science degree from Loma Linda University a minimum of 36 hours with a 2.5 grade-point average should include the following courses:

ACCT 115, 116	*Clerical Accounting	6
BIOL 201, 202	Anatomy and Physiology	8

PREPROFESSIONAL PROGRAMS

CHEM 101, 102	*Introductory Chemistry	8
ENGL 121, 122, 123	College Writing	8
OFAD 111, 112, 113	*Basic Keyboarding	6
PSYC 130	General Psychology	4
SOCI 204	General Sociology	4
SPCH 101	Fundamentals of Speech Communication	4
	Religion	4-6

*Or secondary school credit with a grade of C or better. These areas should be taken on the secondary level to be able to complete the program in one year.

DENTAL HYGIENE

A. Grable, Academic Adviser

Students planning for careers in dental hygiene must complete 48 or 96 quarter hours with a cumulative grade-point average of 3.0 or above before seeking admission to the various dental hygiene programs.

Loma Linda University

Experience has indicated that a minimum average of 3.10 is needed to compete for admission to the program at Loma Linda University. The following courses are required in preparation for advanced studies there:

BIOL 102	General Biology	4
BIOL 201, 202	Anatomy and Physiology	8
BIOL 222	Microbiology	5
CHEM 101, 102	Introductory Chemistry	8
ENGL 121, 122, 123	College Writing	8
PSYC 130	General Psychology	4
SPCH 101	Fundamentals of Speech Communication	4
SOCI 204	General Sociology	4
	History or Economics	8
	Literature, Fine Arts, Philosophy and/ or Foreign Language (choose at least two)	12
	Religion	8
	Electives	23

The Bachelor of Science degree is awarded by Loma Linda University.

DIETETICS

M. Olmsted, Academic Adviser

Students pursuing careers in therapeutic or administrative dietetics must meet requirements as specified by the American Dietetics Association (ADA). The first two years or 96 quarter hours are to be completed on the Walla Walla College campus. The remaining two years are to be completed in a Coordinated Undergraduate Program approved by ADA. Consult with the academic adviser for a complete course outline. The degree is *not* awarded by Walla Walla College.

LAW

W. Messer, Academic Adviser

There is no specific curriculum for prelaw students. Courses designed to develop skills in oral and written communication and the ability to reason and think analytically are strongly recommended.

Most law schools require a bachelor's degree and a satisfactory grade-point average and score on the Law School Admission Test (LSAT) for admission. Law schools vary in the levels of achievement required for admission. Students planning to study law are encouraged to consult with the prelaw adviser.

MEDICINE

R. Rittenhouse, Academic Adviser

The basic entrance requirements are not exactly the same for all medical schools. Most medical schools require completion of a bachelor's degree with a grade-point average of 3.5 or above, computed separately for science and nonscience courses. The following courses are normally required by Loma Linda University.

BIOL 101, 102, 103	General Biology	12
CHEM 141, 142, 143	General Chemistry	12
CHEM 321, 322, 323	Organic Chemistry	12
MATH 121, 122	Fundamentals of Mathematics	} 4-8
or		
MATH 117	Precalculus	
or		} 12
MATH 181	Analytical Geometry and Calculus I	
PHYS 211, 212, 213	General Physics	} 16
PHYS 214, 215, 216	General Physics Laboratory	
or		
PHYS 251, 252, 253	Principles of Physics	
PHYS 254, 255, 256	Principles of Physics Laboratory	
	Religion	16

Also recommended are:

BIOL 266	Developmental Biology	4
CHEM 431	Biochemistry	4
MATH 181	Analytical Geometry and Calculus I	4

If applying to a medical school other than Loma Linda University, the student should refer to the bulletin of that institution for specific entrance requirements.

MEDICAL TECHNOLOGY

R. Jenks, Academic Adviser

Students wishing to become medical technologists may complete the first three years at the College and transfer to approved hospitals for the fourth

PREPROFESSIONAL PROGRAMS

year. Upon completion of the fourth year, the student will receive a Bachelor of Science degree.

Specific course requirements are listed in the Interdisciplinary section of this bulletin.

NURSING

_____, W. Anderson, Academic Advisers

For details about courses, etc., in nursing, please see the Nursing section of this bulletin. Candidates who plan to enter other schools should write to the director of the nursing school of their choice and ask for specific requirements.

OCCUPATIONAL THERAPY

H. Lacey, Academic Adviser

Students who are preparing for the Bachelor of Science degree in occupational therapy should plan to complete 96 quarter hours before entering the professional training. The curriculum requirements of Loma Linda University include:

BIOL 201, 202	Anatomy and Physiology	8
BIOL 222	Microbiology	5
ENGL 121, 122, 123	College Writing	8
PSYC 130	General Psychology	4
SOCI 424	Human Development and the Family	4
SPCH 101	Fundamentals of Speech Communication	4
	Anthropology or Sociology	8
	Select an additional behavioral science course.	
	Chemistry, Mathematics, Physics or Physical Science	12
	Select at least one science sequence. Science must include laboratory.	
	Ceramics, INCR 227 or ART 284	
	Woodworking, INDS 221, 222, 223	
	General Crafts	
	Select one additional class from Industrial Technology listings.	
	Humanities	
	Select one additional course from: fine arts, foreign language, literature, philosophy. (History of Civiliza- tion may be counted either in humanities or social sci- ences.)	
	Religion	
	Electives	23
	To meet the minimum of 96 quarter hours. Courses in applied art and behavior science are recommended.	

In addition to the above Loma Linda University requires: 1. A documented minimum of 80 hours of volunteer or employee work experience in an occupational therapy department before acceptance. 2. The completion of the Allied Health Professions Admission Test (AHPAT) before admission.

OPTOMETRY

T. Anderson, Academic Adviser

Two years of college preparation are the minimum requirements for admission to most optometry schools, and this is generally followed by four years of training for the Doctor of Optometry degree. In some cases the Bachelor of Science degree may also be awarded by the optometry school.

The preprofessional curriculum should include as a minimum the following courses:

BIOL 101, 102, 103	General Biology	12
CHEM 141, 142, 143	General Chemistry	12
ENGL 121, 122, 123	College Writing	8
MATH 121, 122	*Fundamentals of Mathematics	8
MATH 181	Analytic Geometry and Calculus I	4
PHYS 211, 212, 213	General Physics	9
PHYS 214, 215, 216	General Physics Laboratory	3
PSYC 130	General Psychology	4

*Fundamentals of Mathematics should be taken the first year.

It is important that the student obtain a catalog from each college of optometry he may wish to enter, since these schools differ widely in their recommendations of other courses for the preoptometry program. Other commonly required courses include:

CHEM 321, 322, 323	Organic Chemistry	12
PSYC 495	Analysis of Psychological Experiments	2

The student may also wish to request the booklet *Information for Applicants to Schools and Colleges of Optometry*, available from the American Optometric Association, 243 N. Lindbergh Blvd., St. Louis, MO 63141.

Competition for admission to some optometry schools is enough that the student would do well to complete a third year of college (and advanced courses in chemistry and biology) unless he achieves a very strong academic record.

OSTEOPATHY

R. Rittenhouse, Academic Adviser

Schools of osteopathic medicine usually require a degree from an accredited college. The course requirements are essentially the same as for medical schools. (See the medical requirements listed previously in this section of the bulletin.)

PREPROFESSIONAL PROGRAMS

PHARMACY

R. Wade, Academic Adviser

At least two years of general college work are required. Students should consult with the college of pharmacy of their choice about course requirements. The following courses should be included:

BIOL 101, 102, 103	General Biology (or Zoology)	12
BIOL 222	Microbiology	5
CHEM 141, 142, 143	General Chemistry	12
CHEM 321, 322, 323	Organic Chemistry	12
ENGL 121, 122, 123	College Writing	8
MATH 181, 281	Analytical Geometry and Calculus I, II	8
PHYS 211, 212, 213	General Physics	9
PHYS 214, 215, 216	General Physics Laboratory	3

All pharmaceutical colleges require three years in residency beyond the two years of prepharmacy; some require four years.

PHYSICAL THERAPY

H. Lacey, Academic Adviser.

To be eligible for admission into one of the many bachelor of science degree-granting physical therapy institutions, pre-professional students must have completed 96 quarter hours in general studies, natural sciences and social studies. Minimum subject requirements and hours are as follows:

BIOL 101, 102, 103	General Biology	}	8-12
or			
BIOL 201, 202	Anatomy and Physiology		
BIOL 222	Microbiology		5
CHEM 101, 102	Introductory Chemistry		8
PHYS 201, 202	Introduction to Physics		6
PHYS 204, 205	Introduction to Physics Laboratory		2
PSYC 130	General Psychology		4
SOCI 224	Human Development and the Family		4
	Social Science Course		4
ENGL 121, 122, 123	College Writing		8
	Humanities		12
	Select from at least two fields: fine arts (3 quarter hours of applied music or arts may be included), language, literature, philosophy, or speech (highly recommended).		
	Religion		12
	Electives		
	To meet the minimum of 96 quarter hours.		

In addition to the above Loma Linda University requires: 1. A documented minimum of 80 hours of volunteer or employee work experience in a physical therapy department before acceptance. 2. The completion of the Allied Health Professions Admission Test (AHPAT) before admission.

PUBLIC HEALTH

R. Perrin, Academic Adviser

Loma Linda University offers a Master of Public Health (M.P.H.) as a professional degree that can be completed in three to six quarters. Major areas of study include biostatistics, environmental health, epidemiology, health administration, health education, mental health, maternal-child health, nutrition, gerontology, physical fitness, preventive care and tropical health.

The Master of Science in Public Health (M.S.P.H.) degree is offered in health education, health evangelism, biostatistics and parasitology and can usually be completed in four quarters.

Research and thesis programs leading to the Master of Science (M.S.) degree are offered through the graduate school by the department of biostatistics and nutrition.

Specific information about prerequisites and programs leading to the above-mentioned degrees is available in the School of Health bulletin, Loma Linda University.

RADIOLOGICAL TECHNOLOGY

H. Lacey, Academic Adviser

Students are eligible to apply to the Medical Radiography program at Loma Linda University if the applicant has a high school/academy diploma or equivalent, with a minimum of 18 units of secondary school work, including the following:

English, 3 units

Mathematics, 2 units (must include 1 unit of Algebra)

Natural Sciences, 2 units (must include 1 unit of physics with laboratory and 1 unit of general biology)

Applicants presenting the following college credits, together with credits replacing high school deficiencies, may complete the basic professional program in 21 months instead of the standard 24 months:

ENGL 121, 122	College Writing	6
BIOL 201, 202	Anatomy and Physiology	8
PSYC 130	General Psychology	4
or		
SOCI 204	General Sociology	4
	Religion	
	Social Science	4
	Electives	4

To meet the minimum of 48 quarter hours and local college requirements.

The Allied Health Professions Admission Test is required of students entering Loma Linda University.

PREPROFESSIONAL PROGRAMS

RESPIRATORY THERAPY

H. Lacey, Academic Adviser

The minimum requirement for admission to the study of respiratory therapy is 48 quarter hours. The following courses are to be included for the Associate of Science degree from Loma Linda University:

BIOL 101, 102, 103	General Biology	}	8-12
or			
BIOL 201, 202	Anatomy and Physiology	}	5
BIOL 222	Microbiology		
CHEM 101, 102	Introductory Chemistry		8
MATH 100	Intermediate Algebra		4
PHYS 201, 202	Introduction to Physics		6
PHYS 204, 205	Introduction to Physics Laboratory		2
PSYC 130	General Psychology	}	4
or			
SOCI 204	General Sociology		8
ENGL 121, 122, 123	College Writing		6
	Religion		
	Electives		

To meet the minimum of 48 quarter hours. (Speech is highly recommended.)

The Allied Health Professions Admission Test is required of students entering Loma Linda University.

VETERINARY SCIENCE

D. Rigby, Academic Adviser

The requirements below apply to the Washington-Oregon-Idaho Regional Program in veterinary medical education. Since the basic requirements for entrance into other veterinary schools may be different, the student should confer with the school of his choice.

Requirements:

BIOL 101, 102, 103	General Biology	12
CHEM 141, 142, 143	General Chemistry	12
CHEM 321, 322, 323	Organic Chemistry	12
CHEM 431	Biochemistry	4
ENGL 121, 122, 123	College Writing	8
MATH 121, 122	Fundamentals of Mathematics	8
PHYS 211, 212, 213	General Physics	9
PHYS 214, 215, 216	General Physics Laboratory	3
SPCH 101	Fundamentals of Speech Communication	4
	Humanities and Social Studies	15-20
AS307X	Nutrition, Animal	3
	(Correspondence course at Washington State University)	

Recommended Courses:

See preveterinary adviser for additional courses recommended by Washington State University Curriculum Committee.

Total hours required (additional electives).

113

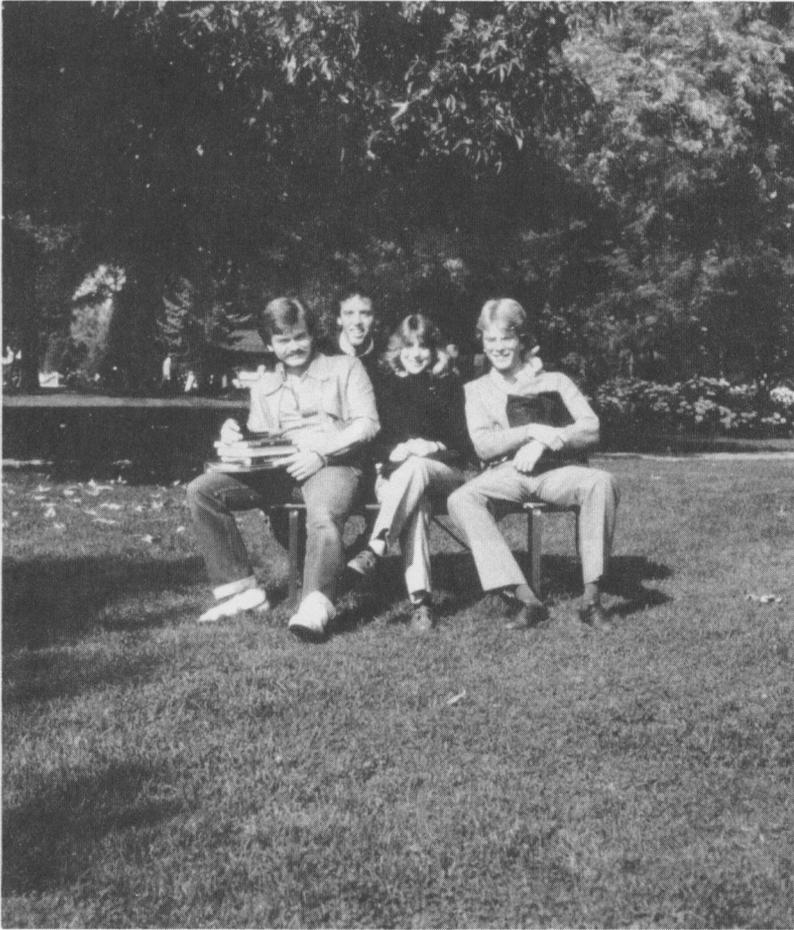
Nonacademic Requirements:

Veterinary Aptitude Test

Veterinary Medical Exposure

300 hours

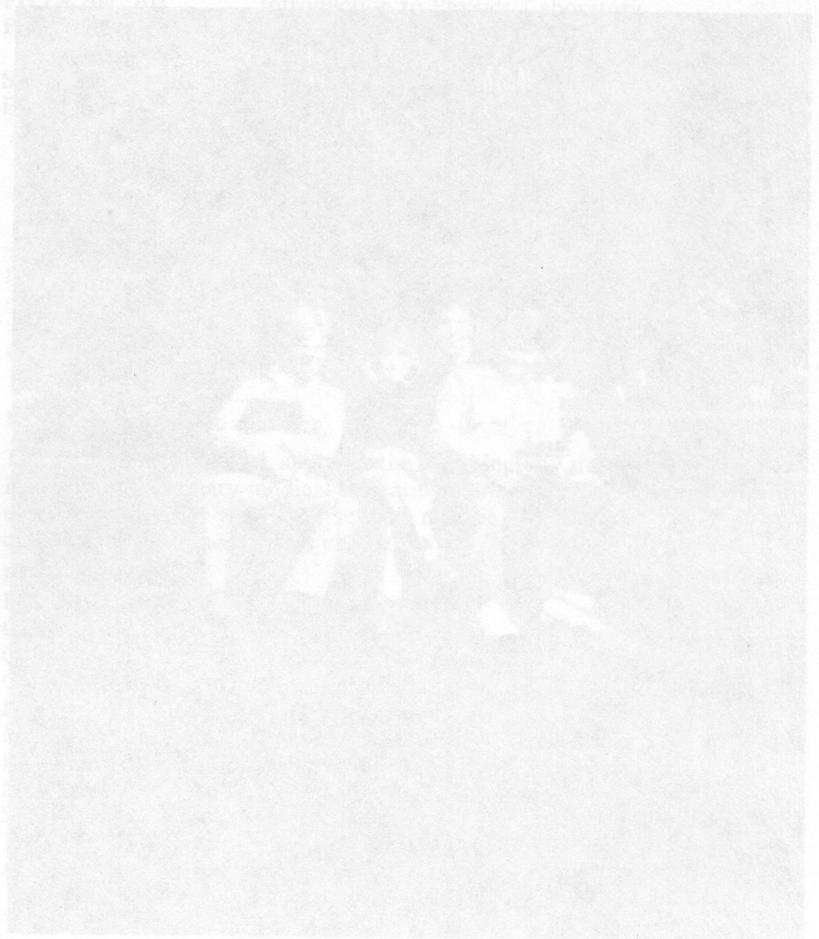
Applicants must record a minimum of 300 hours of contact with a graduate veterinarian by November 1 of the year of application. One hundred fifty hours of animal experience may be substituted as a portion of the 300-hour minimum requirement.



RESPIRATORY THERAPY

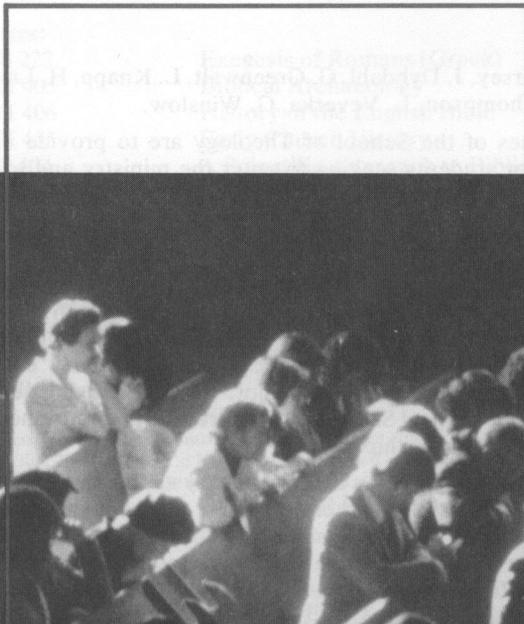
Recommended Courses:
 The preceptor, adviser for additional courses recommended by Washington State University Curriculum Committee, 3410 14th Avenue, Pullman, WA 99164. Total hours required (additional electives): 117.
 Applicants must record a minimum of 800 hours of contact with a supervisor during the year of application. One hundred fifty hours of animal experience may be substituted as a portion of the 800-hour minimum requirement.

Recommended Requirements:
 Veterinary Assistant Test
 Veterinary Medical Exposure
 Applicants must record a minimum of 800 hours of contact with a supervisor during the year of application. One hundred fifty hours of animal experience may be substituted as a portion of the 800-hour minimum requirement.



RELIGION

The principal purpose of the school's religion program is to provide a religious education for all students. The program is designed to help students understand the basic tenets of the major world religions and to develop a personal faith.



Religion

MAJOR IN BIBLICAL LANGUAGES (Bachelor of Arts) - A student majoring in Biblical languages will develop a deep understanding of the Bible and its cultural context. The major requires a minimum of 12 credits in biblical languages, including Hebrew and Greek. The program is designed to prepare students for careers in ministry, education, and research.

Major Requirements:

- RELI 121, 122, 123
- RELI 221, 222, 223
- RELI 441
- RELI 442, 443

The first two courses are required for all students. The remaining courses are selected from the following list:

- RELI 121: Introduction to the Bible
- RELI 122: Old Testament History
- RELI 123: New Testament History
- RELI 221: Hebrew Language I
- RELI 222: Hebrew Language II
- RELI 223: Greek Language I
- RELI 224: Greek Language II
- RELI 441: Bible and Culture
- RELI 442: Bible and Ethics
- RELI 443: Bible and Art

RELIGION

J. Brunt, Dean; E. Bursery, J. Dybdahl, G. Greenwalt, L. Knapp, H. Lamber-ton, C. Scriven, A. Thompson, L. Veverka, G. Winslow.

The principal purposes of the School of Theology are to provide under-graduate education for students seeking to enter the ministry and to offer courses in religion as desired by students in various other curricula of the college.

Candidates for the ministry are selected on the basis of scholarship, spiritual qualities, cultural refinement, social sympathies and skills. Ministerial stu-dents are admitted to candidacy for a Bachelor of Arts degree with a major in theology upon the approval of the theology faculty at the beginning of the junior year. Those approved will then work to meet seminary entrance requirements by completing a theology major. Two additional years of graduate study at the Theological Seminary of Andrews University should be anticipated for ministerial internship.

Those who expect a recommendation to the seminary and/or those who plan to be pastors, evangelists, Bible workers, or Bible teachers should take a theology major. The religion major is available to those who are not planning on the ministry, and for those anticipating additional graduate training in such fields as medicine, dentistry and law.

All majors must successfully complete a senior comprehensive examination. Theology and Biblical Language majors must also pass a Greek proficiency examination typically given near the end of each winter quarter. Those planning to attend the seminary should complete the undergraduate subjects required for entrance and maintain a minimum grade-point average of 2.5. Students who plan to teach religion in academies must aim for teacher certification as outlined in the Education section of this bulletin. Students should consult the dean of the School of Theology about courses required as early as possible in their college career.

The Biblical languages major is intended for those students who wish to gain facility in use of the basic tools for Biblical study, especially those anticipat-ing graduate work in this and related areas.

MAJOR IN BIBLICAL LANGUAGES (Bachelor of Arts)

A student majoring in Biblical languages must complete 45 quarter hours in the major, the required cognates, the general studies program, and all bac-calalaureate degree requirements as outlined in this bulletin.

Major Requirements:

RELL 121, 122, 123	Greek I	12
RELL 221, 222, 223	Greek II	6-9*
RELL 441	Introduction to Hebrew	4
RELL 442, 443	Elementary Hebrew	7
	Electives (12 must be upper division)	13-16
	Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman.	45

*Dependent on Greek proficiency examination score.

RELIGION

Cognates:

ENGL 224	Research Writing in Religion	3
HIST 456	Medieval and Modern Church History	4
RELL 121, 122, 123	Greek I	12
RELL 221, 222, 223	Greek II	9
RELL 441	Introduction to Hebrew	4
SPCH 101	Fundamentals of Speech Communication	4
SPCH 381, 382, 383	Biblical Preaching	6
	One philosophy course	

MINOR IN BIBLICAL LANGUAGES

A student minoring in Biblical languages must complete 30 quarter hours:
Electives (6 must be upper division) 30
Approval of Biblical languages adviser required. Recommended electives outside the minor are RELB 223; RELH 405, 406, 455; RELT 404.

MINOR IN RELIGION

A student minoring in religion must complete 30 quarter hours:
Electives (9 must be upper division) 30
Approval of religion adviser required.

BIBLICAL STUDIES (RELB)

- RELB 101, 102, 103 BIBLE SURVEY** 2, 2, 2
Introduction to the tools necessary for an understanding of the Bible. Portions of both the Old and New Testaments are studied in order that the student may gain insight into the major divisions of the Scripture story.
- RELB 104 THE MINISTRY OF JESUS** 4
Survey of Christ's life in its historical setting as a basis for determining Christian action.
- RELB 105 THE SERMON ON THE MOUNT** 2
Study of the Sermon on the Mount as it relates to the needs of the Christian.
- RELB 106 THE PARABLES OF JESUS** 2
Exegetical study of Jesus' parables; considers literary structure, historical context, and relevance for today.
- RELB 111 MESSAGES OF THE OLD TESTAMENT** 4
Survey of basic themes of the Old Testament.
- RELB 141, 142, 143 BIBLICAL EXEGESIS** 3, 3, 3
Introduction to the study of the God-man, the nature of His kingdom and the teachings of Christ concerning Himself, His law and the way of salvation. The concepts of Matthew and John are studied so that the theology of Christ is seen against the background of His earthly life. Open only to departmental majors. Must be taken in sequence.
- RELB 216 MESSAGES OF PAUL** 4
Survey of the basic themes of Paul's letters.
- RELB 223 EXEGESIS OF ROMANS (GREEK)** 3
Exegetical study of the letter of Paul to the Romans based on the Greek text. Prerequisites: RELL 221, 222, 223 and/or the successful completion of the Greek proficiency examination.
- RELB 281, 282, 283 THE NEW TESTAMENT AND ITS ENVIRONMENT (HONORS)** 2, 2, 2
See the honors program listed under the Interdisciplinary section of this bulletin.

- RELB 301 OLD TESTAMENT HISTORY** 3
Study of the historical framework in which the religion of Israel developed; considers dominant events and trends in God's saving relationship to His covenant people.
- RELB 302 PENTATEUCH** 3
Exegetical examination of significant passages in the first section of the Hebrew Canon; considers the historical setting, authorship, time, circumstance of writing and other literary questions.
- RELB 303 WRITINGS** 3
Introduction to the third section of the Hebrew Canon; considers authorship, the time and circumstance of writing and other literary questions.
- RELB 304, 305, 306 HEBREW PROPHETS** 3, 3, 3
Study of the second part of the second section of the Hebrew Canon; considers the historical setting of the prophecies and includes a careful exegetical study of the text.
- RELB 312 DANIEL** 3
Advanced study of the historical setting and significance of the book of Daniel; studies the prophetic features of the book in the light of both secular and church history to provide the student with a clearer insight into contemporary religious conditions.
- RELB 313 REVELATION** 3
An exegetical study of the book of Revelation within its historical context, with special attention to its significance for Christian Eschatology.
- RELB 434, 435, 436 GOSPELS** 3, 3, 3
Exegetical examination of each gospel within its historical context to determine the particular message of each and the literary devices employed to convey this message and its relevance for today.
- RELB 464, 465, 466 NEW TESTAMENT EPISTLES** 3, 3, 3
Exegetical study of the writings of Paul and the general epistles of the New Testament within their historical contexts. Students who have taken RELB 216 should not register for this course without special permission. Theology students should not register for RELB 466 (Romans).

GENERAL (RELG)

- RELG 224 RESEARCH WRITING IN RELIGION (or ENGL 224)** 3
See the English section of this bulletin for description.
- RELG 496 SEMINAR IN RELIGION** 2, 6
Intensive individual study, written reports and group discussion on assigned Biblical, missiological, historical, professional, contemporary theological and ethical issues. Open only to departmental majors. The winter seminar is required for theology majors. Prerequisite: ENGL 224.

RELIGIOUS HISTORY (RELH)

- RELH 349 RELIGION IN A SOCIAL CONTEXT (HONORS) [or SOCI 349].** 4
See the honors program listed under the Interdisciplinary section of this bulletin.
- RELH 402 MODERN DENOMINATIONS** 3
Study of the cardinal teachings of a number of the prominent denominations of the world; includes comparisons of the teachings relating to God, salvation, sin and the future.
- RELH 403 WORLD RELIGIONS** 3
Introduction to the greater religions of mankind, such as Hinduism, Buddhism, Confucianism, Shintoism, Islam and Christianity; considers the historical setting out of which these religions arose, their founders, their basic teachings and rituals, their conceptions of God and man, as well as their influence on cultural development.
- RELH 405 BIBLICAL ARCHAEOLOGY** 2
Introduction to the science of archaeology with particular attention to those discoveries which bear on the interpretation of the Biblical text.

RELIGION

- RELH 406 HISTORY OF THE ENGLISH BIBLE** 2
Survey of the history of the Bible from the earliest manuscripts through the science of textual criticism to a comparison of the numerous English versions currently available.
- RELH 455 EARLY CHURCH HISTORY** 3
Study of the rise of Christianity with emphasis on the development of theological concepts. Prerequisite: ENGL 224 or permission of instructor.
- HIST 456 MEDIEVAL AND MODERN CHURCH HISTORY** 4
See the History section of this bulletin for description.
- RELH 457 HISTORY OF ADVENTISM** 2
Study of the rise and development of the Seventh-day Adventist denomination.
- SOCI 449 SOCIOLOGY OF RELIGION** 2
See the Sociology and Social Work section of this bulletin.

BIBLICAL LANGUAGES (RELL)

- RELL 121, 122, 123 GREEK I** 4, 4, 4
Introduction to the elements of New Testament Greek with experience in translation; emphasizes the development of the ability to read the original language, and at the same time to create an interest in the New Testament. The First Epistle of John is translated as well as selected chapters in the Gospel of John. Prerequisite: A score of 50% on the ACT composite score and 50% on ACT English scores or successful completion of ENGL 121, 122, 123.
- RELL 221, 222, 223 GREEK II** 3, 3, 3
Continued reading in the Greek New Testament with emphasis upon principles of interpretative translation. The book of Revelation and selections from the Gospels are used in developing a facility in translation.
- RELL 341, 342, 343 DOCTRINAL EPISTLES OF PAUL** 2, 2, 2
Exegetical study of the great doctrinal epistles of Paul; studies selections from the letters to the Thessalonians, Corinthians, Romans and Galatians as examples of the apostle's theological writings.
- RELL 344, 345, 346 LATER EPISTLES OF PAUL** 2, 2, 2
Exegetical study of examples of Paul's later letters, especially the so-called prison epistles; studies the epistles of Paul to the Ephesians, Philippians and Colossians as well as Hebrews.
- RELL 441 INTRODUCTION TO HEBREW** 4
Introduction to the basic elements of Biblical Hebrew; designed to enable the student to use the language as a tool in Biblical studies and to provide a basis for further study in Hebrew.
- RELL 442, 443 ELEMENTARY HEBREW** 4, 3
Study of Hebrew grammar and syntax advancing to reading and exegesis of selected Hebrew Bible passages. REL 441 is prerequisite to REL 442, or REL 443.
- RELL 451, 452, 453 HEBREW READING** 1, 1, 1
Builds on REL 442, 443 with directed reading in the various sections of the Hebrew Bible.

MISSIONS (RELM)

- RELM 233 INTRODUCTION TO CROSS-CULTURAL MINISTRY** 3
Study of the major issues involved in communicating Christianity in other cultures with the aim of preparing the student for actual field work. This prerequisite for student missionaries is also open to other interested students.

PROFESSIONAL (RELP)

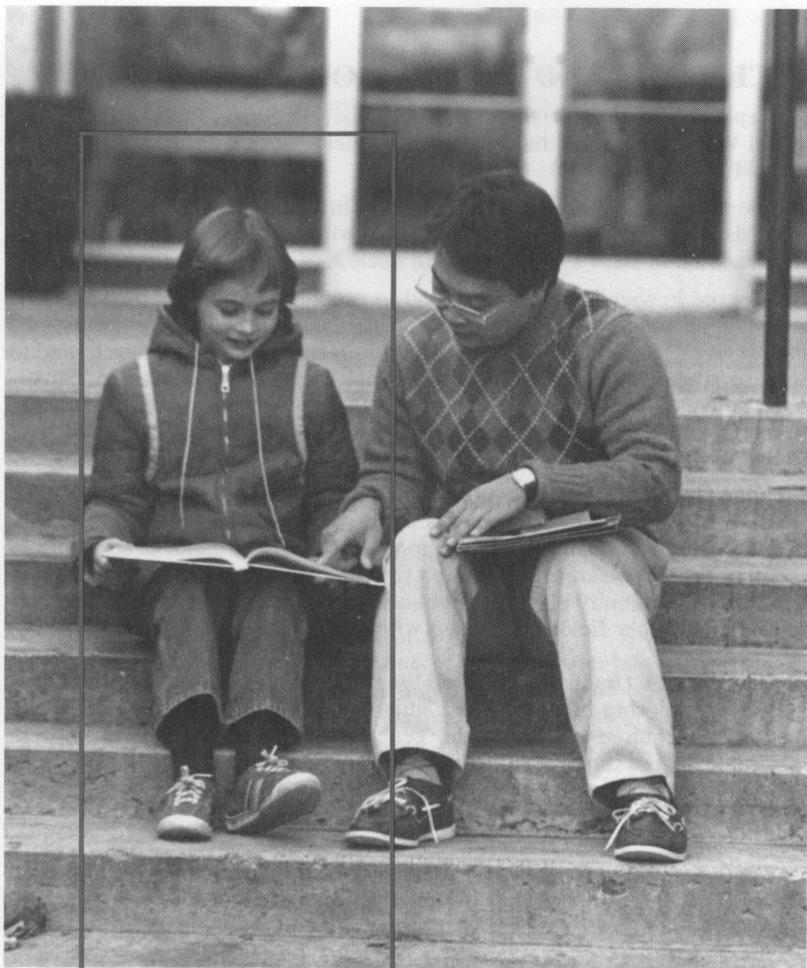
- RELP 150 MINISTERIAL ORIENTATION** 0
A ministerial orientation seminar offered the autumn quarter by the theology staff and visiting lecturers which includes the many facets of the ministerial profession. Required of all freshman and transfer theology majors. Graded S or NC.
- RELP 241, 242, 243 PERSONAL MINISTRY** 2, 1, 1
Study of the skills of personal ministry; including individual or small group evangelism and pastoral visitation; combines theory and practice to aid in successfully applying the art as well as teaching it to others. Open only to theology majors. Prerequisite: RELB 141, 142, 143.
- RELP 370 HOSPITAL MINISTERIAL TRAINING** 2 or 4
This course is offered as a seminar at the Portland Adventist Medical Center or the Walla Walla General Hospital. Besides a balanced program of clinical experience, films, discussion, lectures by physicians, chaplains and other resource personnel are utilized. Registration by permission only; class limited to five students. (Two quarter hours, Walla Walla General Hospital; four quarter hours, Portland Adventist Medical Center.)
- RELP 381 CHURCH ADMINISTRATION** 3
Study of church organization, election and duties of church officers, church boards, business meetings and finances, with opportunity for observation and participation in these phases of church activity. Careful study is given to principles of Christian worship and the special services of the church.
- RELP 447 PASTORAL EVANGELISM** 3
Survey of evangelistic methods used by Seventh-day Adventist pastors; emphasizes health evangelism, Sabbath School outreach, cottage meetings, small-scale public evangelism, and other soul-winning programs commonly used in the local church. Students are encouraged to develop unique evangelistic approaches.
- RELP 472 METHODS OF TEACHING BIBLE IN THE SECONDARY SCHOOL** 3
Examination of current religion teaching practices in the secondary school with emphasis on objectives, content, organization, and materials and resources available; requires observations in the schools along with microteaching, giving opportunity to demonstrate competency. Prerequisites: EDUC 390; EDUC 471.
- RELP 481 PASTORAL COUNSELING** 3
Study of basic principles of counseling from the perspective of the pastor.
- RELP 482 INTRODUCTION TO PASTORAL CARE** 3
Study of the nature and function of pastoral care from a theological perspective; makes practical applications of theological insights to the vocation of the pastor.
- RELP 483 ADVANCED PASTORAL CARE** 3
Study of the role of the pastor in relationship to his ministry to families; includes study of the pastor as premarital counselor, as marriage and family counselor, and as marriage and family life enrichment leader. Prerequisite: RELP 482 or permission of the instructor.
- RELP 490 FIELD EVANGELISM** 1-3, 3
Experience in evangelistic techniques is obtained by giving Bible studies and/or holding meetings. One to three hours any quarter; maximum, three.
- SPCH 381, 382, 383 BIBLICAL PREACHING** 2, 2, 2
Preparation and delivery of Biblical sermons for worship, evangelism and special worship occasions. Laboratories and Sabbath speaking appointments included. Prerequisite: SPCH 101.

THEOLOGY (RELT)

- RELT 112 THEOLOGY OF CHRISTIAN WITNESSING** 3
Study of the theology and methodology of the individual Christian witness in a contemporary world.

RELIGION

- RELT 201 THE CHRISTIAN WAY OF SALVATION** 4
Systematic study of the Christian way of life including such topics as conversion, righteousness by faith, Christian growth and witnessing.
- RELT 202 BASIC CHRISTIAN BELIEFS** 4
Study of the Christian teachings about God and human beings; explores topics such as the trustworthiness of the Bible, creation and the controversy between good and evil and gives special attention to distinctive Seventh-day Adventist beliefs.
- RELT 204 CONTEMPORARY ISSUES IN ADVENTIST THOUGHT** 4
Study of current ideas and issues in Adventist theology designed for those who have an adequate background in Adventist doctrine.
- RELT 246 CHRISTIAN ETHICS** 4
Study of moral decision-making from the perspective of Christian theology; examines moral implications of Christian faith for contemporary issues.
- RELT 312 BIOETHICS** 4
Study of contemporary moral issues in biology and medicine in the light of Christian ethics; discusses topics such as abortion, euthanasia, eugenics, human experimentation and the distribution of scarce lifesaving resources.
- RELT 314 ESCHATOLOGY** 3
Study of the final events of this earth's history as outlined in the great lines of Bible prophecy and the writings of Ellen G. White; emphasizes the important issues in the great controversy between good and evil and the final establishment of God's everlasting kingdom upon the earth.
- RELT 317 INSPIRATION AND REVELATION** 4
Study of the concept of inspiration as revealed in the Bible writers as compared to the concept of inspiration in modern times as revealed in the person and writings of Ellen G. White.
- RELT 330 DISCIPLESHIP AND MISSION** 4
Study of the relationship of the individual to the church; considers the development of study skills with analysis of a member's responsibility to the church community. Emphasis is given to methods of Bible study, the use of tools for Bible study, organization of the church, the role of the layman in the administration of the church, and the mission of the church. Designed primarily for the nonministerial student. Prerequisite: 6 hours of religion or theology general studies credit.
- RELT 404 A SCIENTIFIC APPROACH TO BIBLICAL INTERPRETATION** 2
Study of the doctrines of inspiration and revelation in preparation for a survey of the history of the canon and the critical disciplines employed by scholars to arrive at a better understanding of the text.
- RELT 408 DOCTRINE OF THE SANCTUARY** 3
Study of the Hebrew tabernacle and its services with special emphasis on its significance for Christian faith in the twentieth century.
- RELT 412 PHILOSOPHY OF RELIGION (or PHIL 412)** 4
Study of religious thought and practice from a philosophical perspective; considers the arguments for the existence of God, the relationship of faith and reason, the use of religious language, and the problem of evil.
- RELT 417, 418 CHRISTIAN DYNAMICS** 3, 3
Analytical study and practical application of the dynamics of Christian behavior; designed to guide the student in understanding and experiencing the moving physical, mental, spiritual and social forces that produce constructive thought, healthy motivation and positive action in the religious life.
- RELT 456, 457 SYSTEMATIC THEOLOGY I, II** 3, 3
Systematic study of the major teachings of the Christian religion and the Seventh-day Adventist church in particular, with emphasis on the Bible as the authority for truth; requires students to organize their concepts of the Bible doctrines and to give adequate scriptural support for their positions. Designed for theology majors, though non-majors may register with permission of instructor.



Sociology and Social Work

SOCIOLOGY AND SOCIAL WORK

W. Hepker, Chairman; B. Buckles, R. Gardner, D. Snarr, J. Stagg, (D. Snarr, Social Work Program Director; J. Stagg, Field Work Coordinator; R. Hankins, M. Hernandez Peck, Consultants).

The department of sociology and social work offers a Bachelor of Social Work degree and a Bachelor of Arts degree with a major in sociology. Minors are available in both social work and sociology.

The degree in social work is designed to prepare the student for beginning professional social work practice; to prepare students for other professions and services, particularly within the Seventh-day Adventist Church; and to prepare students for graduate professional social work education. Supervised field experience in selected social work agencies or related services is an integral part of the program. The program is accredited by the Council on Social Work Education.

Sociology broadens the student's perspective of the overall organization and function of society. A sociologist is concerned with the scientific study of social phenomena arising out of group relationships. A major in sociology is useful as preprofessional preparation for advanced research and teaching in sociology, community planning, public administration, law and medical professions and other fields concerned with social relationships.

SOCIAL WORK (Bachelor of Social Work)

A student majoring in social work must complete 75 quarter hours in the major, the required cognates, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin.

Major Requirements:

SOWK 264	Introduction to Social Work	3
SOWK 266	Social Welfare as a Social Institution	3
SOWK 350	Field Placement Orientation	1
SOWK 371	Social Work Practice with Individuals	4
SOWK 372	Social Work Practice with Small Groups	4
SOWK 373	Social Work Practice with Marriage/Family	3
SOWK 375	Social Work in Community Services	3
SOWK 465	Policy, Planning and Administration	3
SOWK 490	Field Work	14
SOWK 491	The Life Model of Social Work Practice	3
SOWK 495	Colloquium (required of all Social Work juniors and seniors while in residence)	0
SOCI 204	General Sociology	4
SOCI 236	Racial and Ethnic Relations	3
SOCI 345	Sociology of Communities	3
SOCI 424	Human Development and the Family	4
SOCI 451	Research Methods	4
SOCI 452, 453	Research Practicum I, II	2

SOCIOLOGY AND SOCIAL WORK

Electives 14
75

Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman.

Cognates:

BIOL 101	General Biology	}	4
or			
BIOL 201	Anatomy and Physiology		
or		}	4
FDNT 220	Human Nutrition		
HIST 448	Twentieth Century America	}	4
or			
PLSC 224	American Government		
or			
PLSC 324	Comparative Governments	}	4
or			
PLSC 455 (or SOCI 455)	Western Political and Social Theory		
PSYC 130	General Psychology		4
	Psychology Electives		3

MAJOR IN SOCIOLOGY (Bachelor of Arts)

A student majoring in sociology must complete 45 quarter hours in the major, the required cognates, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin.

Major Requirements:

SOCI 204	General Sociology	4
SOCI 451	Research Methods	4
SOCI 452, 453	Research Practicum I, II	2
SOCI 454	Western Political and Social Thought	4
SOCI 455	Western Political and Social Theory	4
	Electives (10 must be upper division)	<u>27</u>
Electives must be chosen in consultation with and approved by the academic adviser assigned by the department chairman.		45

Cognates:

MATH 106	Applied Statistics	}	4
or			
PSYC 350	Elementary Statistics		

MINOR IN SOCIAL WORK

A student minoring in social work must complete 30 quarter hours:

SOCI 204	General Sociology	4
SOCI 424	Human Development and the Family	4
SOWK 264	Introduction to Social Work	3
SOWK 266	Social Welfare as a Social Institution	3
	Electives	<u>16</u>
Approval of social work adviser required.		30

SOCIOLOGY AND SOCIAL WORK

MINOR IN SOCIOLOGY

A student minoring in sociology must complete 30 quarter hours:

SOCI 204	General Sociology	4
	Electives (3 must be upper division)	<u>26</u>
	Approval of sociology adviser required.	30

ANTHROPOLOGY (ANTH)

ANTH 225 CULTURAL ANTHROPOLOGY 3

Study of the origin and nature of culture, the uniformities and variations in man's cultural development as seen in preliterate societies, with special emphasis upon the value of the cultural concept.

CORRECTIONS, LAW ENFORCEMENT AND CRIMINAL JUSTICE (CORR)

CORR 285 INTRODUCTION TO CRIMINAL JUSTICE 3

Study of the philosophy and history of law enforcement; includes an overview of crime and police problems, agencies involved in administration of criminal justice, processes of justice from detection of crime to parole of offenders, evaluation of modern police services, and a survey of professional career opportunities and qualifications required. Observations and field trips arranged.

CORR 365 LAW, POLICY AND SOCIETY 2

Study of the development and organization of the American legal system and policy formation: considers the work of lawyers, social workers, legislators and police, and their relationship with the courts and human service system. Selected topics are considered which relate the law to social change, social institutions, and morality and justice.

CORR 385 CRIMINOLOGY 3

Study of the historical background of crime and factors of deviant social behavior; includes a survey of criminological theories to analyze contributing factors and evaluate remedial measures now in common use. Visits to agencies and institutions arranged.

CORR 387 JUVENILE DELINQUENCY 3

Study of factors in delinquency, juvenile courts, detention and probation; an investigation and comparison of programs of treatment and prevention. Field trips arranged.

CORR 487 PERSPECTIVES ON THE TREATMENT OF OFFENDERS 3

Study of the treatment given juvenile and adult offenders from the arrest, through the court process and the incarceration, to the release. Field trips and guest speakers help the student evaluate the effectiveness of the criminal justice system.

SOCIAL WORK (SOWK)

SOWK 264 INTRODUCTION TO SOCIAL WORK 3

Introduction to the profession of social work in the United States; considers history, principles, methods and values of the social worker and settings for social work practice. Community service and field trips arranged.

SOWK 266 SOCIAL WELFARE AS A SOCIAL INSTITUTION 3

Study of the historical development of U.S. social welfare system; examination of current social welfare institutions in terms of political, social and value systems and in terms of needs they attempt to fulfill. Recommended prerequisite: SOWK 264.

SOWK 271 ASSERTIVENESS THEORY AND PRACTICE 2

Study of the concepts of rational and behavioral techniques with emphasis on self-awareness, intervention and assertiveness through cognitive and experiential learning.

SOWK 350 FIELD PLACEMENT ORIENTATION 1

A field placement orientation seminar intended to make students aware of agency possibilities, application and evaluation procedures, contracts and the field instruction learning process. Required of all juniors.

SOCIOLOGY AND SOCIAL WORK

- SOWK 371 SOCIAL WORK PRACTICE WITH INDIVIDUALS** 4
 Introduction to social work methods provided through a survey of basic intervention skills and basic interviewing techniques; explores the Christian value system as it relates to social work practice. Students participate in field experiences and video-taped interviews. Prerequisite: SOWK 264 or approval of instructor.
- SOWK 372 SOCIAL WORK PRACTICE WITH SMALL GROUPS** 4
 Introduction to the group process skills to build a basic foundation for group intervention methods. Students will participate in and observe small groups. Prerequisite: SOWK 371.
- SOWK 373 SOCIAL WORK PRACTICE WITH MARRIAGE AND FAMILY** 3
 Study of basic intervention skills expanded by experiencing family and marriage dynamics through role playing. Students will be exposed to various types of family practice intervention methods by audiovisual aids. Prerequisites: SOWK 371; SOWK 372.
- SOWK 375 SOCIAL WORK IN COMMUNITY SERVICES** 3
 Study of the social work method known as community organization in meeting the needs of large groups of persons such as churches, schools and neighborhoods; emphasizes skills. Prerequisites: SOCI 345; CORR 365.
- SOWK 464 SOCIAL WORK WITH CHILDREN** 3
 Study of social work intervention in child welfare; includes adoption, foster homes, child protection, illegitimacy, group homes, day care, children's institutions and dependency; study of historical and contemporary development.
- SOWK 465 POLICY, PLANNING AND ADMINISTRATION** 3
 Study of social policy, ideology, social policy formulation and analysis, social planning and administrative theory. Prerequisites: SOWK 375; CORR 365.
- SOWK 466 COMPARATIVE THEORIES OF SOCIAL WORK PRACTICE** 3
 Study of intervention strategies, change theories and therapeutic techniques employed at individual, family and group levels. Emphasizes criteria for selecting alternative approaches and appropriate intervention activities. Prerequisites: SOWK 264; SOWK 266; SOWK 371; SOWK 372; SOWK 373 or approval of instructor.
- SOWK 471 SOCIAL WORK AND HUMAN SEXUALITY** 3
 Study of the Christian perspective of human sexuality which forms a basis for appropriate intervention with sexual problems. Prerequisite: SOWK 371; SOWK 373 or permission of the instructor.
- SOWK 490 FIELD WORK** 2-14
 Training under a professional social worker in a public or private welfare or correction agency. Credit is earned at the rate of one quarter hour for three hours of field work per week approved by the supervisor and instructor. Written reports and evaluations are included. Placement may be taken in one quarter (block placement) or concurrently with course work over two or three consecutive quarters. Applications for placement must be submitted to the Placement Coordinator at least one quarter prior to the placement itself. Instruction is offered at various locations in such fields as medical social work, school social work, secondary school residence counseling, criminal justice, child and protective services and community organization. Prerequisites: SOCI 204; SOWK 264; SOWK 266; SOWK 350 and permission of the instructor. Corequisites or prerequisites: SOWK 371; SOWK 372; SOWK 373. Fourteen quarter hours are required for a social work major.
- SOWK 491 THE LIFE MODEL OF SOCIAL WORK PRACTICE** 3
 This course will serve as a seminar for social work majors to assist them in integrating theory and practice and to conceptualize how social work roles affect the interface between person and environment. The many roles and functions facing social work practitioners within diverse practice settings will be emphasized. In addition ethical and value dilemmas in practice will be highlighted. Prerequisite: SOWK 264. Corequisites: SOWK 371; SOWK 372; SOWK 373.
- SOWK 495 COLLOQUIUM** 0
 A lecture series designed to expose students to contemporary practitioners in the field of social work and to assist them in their professional development. Required of all social work juniors and seniors while in residence. Graded S or NC.

SOCIOLOGY (SOCI)

- SOCI 204 GENERAL SOCIOLOGY** 4
 Study of the fundamentals of group behavior, social conditions and dynamics; considers culture, groups, population trends, religions, institutions, social problems, theories and objectives.
- SOCI 224/424 HUMAN DEVELOPMENT AND THE FAMILY** 4
 Study of the individual as seen in the context of the family; explores the interrelation of biological, psychological and sociocultural systems and their effect on human development and behavior; studies the complete life cycle of the growth of an individual and current theories concerning each stage of the family life cycle as it applies to the modern American family as well as families of other cultures. Prerequisites: SOCI 204; PSYC 130.
- SOCI 225 MARRIAGE AND FAMILY LIFE** 2
 Study of the physical, economic and psychological adjustments necessary for happy marriage and parenthood; stresses Christian philosophy and principles; staff members and guest speakers will lecture and lead discussions.
- SOCI 234 CURRENT SOCIAL PROBLEMS** 3
 Study of theoretical perspectives of social problems of particular concern in contemporary society.
- SOCI 236 RACIAL AND ETHNIC RELATIONS** 3
 Study of the history, present status and problems of racial, religious and ethnic minorities in the United States and other countries.
- SOCI 325 THE SOCIAL PSYCHOLOGY OF FAMILY LIFE** 3
 Study of the social-psychological aspects of family life with special reference to the processes of family interaction in the development and maintenance of personal relationships.
- SOCI 337 POPULATION** 2
 Study of the principles of demography and analysis of population problems.
- SOCI 345 SOCIOLOGY OF COMMUNITIES** 3
 Study of the social structure and interaction patterns of communities; emphasizes the history of community development, urbanization and its effects on society.
- SOCI 349 RELIGION IN A SOCIAL CONTEXT (HONORS) [or RELH 349]** 4
 See the honors program listed under the Interdisciplinary section of this bulletin.
- SOCI 435 SOCIAL GERONTOLOGY** 3
 Study of problems concerning the social role of the aged in society.
- SOCI 437 DEATH AND DYING** 3
 Study of the complex, intriguing and poignant area of death and dying from four distinct perspectives: cultural, social, personal and professional.
- SOCI 444 SOCIOLOGY OF EDUCATION** 3
 Analysis of factors influencing the structure and function of the educational institution. Sociological factors related to the role of the school as a social system, with emphasis on peer groups and teenage subcultures, leadership types, power groups and the school as a selecting and sorting agency; sociometric devices.
- SOCI 447 SOCIOLOGY OF HEALTH AND ILLNESS** 3
 Study of social relations and culture as factors affecting health and illness, its prevention and treatment.
- SOCI 449 SOCIOLOGY OF RELIGION** 2
 Sociological study of organized religion, emphasizing the interaction between the church and its social setting; includes varieties and sources of collective religious behavior with examination and classification of religious movements and reforms.
- SOCI 451 RESEARCH METHODS** 4
 Introduction to the principles of research design; data collection through surveys and other methods; scaling, sampling; and computer assisted statistical analysis. Statistics highly recommended. Laboratory required. Same as MKTG 451 and PLSC 451.

SOCIOLOGY AND SOCIAL WORK

- SOCI 452, 453 RESEARCH PRACTICUM I, II** 1, 1
Directed design and execution of an empirical research project over a two quarter period.
- SOCI 454 WESTERN POLITICAL AND SOCIAL THOUGHT** 4
A survey of political and social thought from classical Greece to the Enlightenment. Same as PLSC 454.
- SOCI 455 WESTERN POLITICAL AND SOCIAL THEORY** 4
Survey of modern social, political and economic thought. Emphasizes 19th and 20th century theories and models which have contemporary research in the social sciences and have influenced public policy. Same as PLSC 455.

Financial Information

FINANCIAL INFORMATION

Walla Walla College desires that the financial arrangements and transactions be as considerate as possible for both students and parents. Several plans are available which should make it possible, as far as finances are concerned, for almost everyone who desires to attend Walla Walla College to realize this aim.

PAYMENTS REQUIRED TO REGISTER

A plan of finance plus a minimum payment of \$1,595 plus any balance due from a previous quarter is required on students not paying tuition, room and board in advance. Part-time students shall pay the full tuition charge in advance if less than \$1,595.

TUITION

1-12 quarter hours	\$ 149 (per quarter hour)
13-16 quarter hours	1,880 (per quarter)
above 16	131 (additional per quarter hour)

Residence hall students will normally be charged a minimum of 12 hours tuition per quarter except seniors in their final quarter who need less than 12 quarter hours to graduate. Exceptions should be processed through the Student Affairs Office.

FAMILY DISCOUNTS

A ten percent discount will be allowed on tuition for each student when three or more students from one family are enrolled for a minimum of 12 hours at Walla Walla College during the same quarter. A five percent discount will be allowed on tuition for each student when two students from one family are enrolled and meet the above criteria.

Discounts will be forfeited if student status is terminated prior to the end of the quarter for which the discount was given.

RESIDENCE HALL EXPENSES

Where there is dual occupancy, the room rental charge for each student per quarter is:

Conard Hall	\$340.00
Foreman Hall	362.00
Sittner Hall	340.00
Portland Campus	380.00

There is a \$5 quarterly fee for each dormitory room having a refrigerator. (The fee is divided among the occupants).

When rooms are available, single occupancy is permitted at an extra charge of \$95 per quarter.

Room Reservations. Each student resident in one of the college residence halls will be required to make a \$50 room deposit which will be credited to the account when the student permanently discontinues dormitory residence, less any room charges turned in by the dean for delayed departure, uncleaned rooms or room damage. This deposit will secure continuous room reservation on a year-by-year basis as long as the student desires dormitory residence.

A refund will be made until *September 1* each year upon receipt of a written cancellation of room reservation, but no refund is made thereafter.

Phone Monitor System. One student per residence hall room is required to make a \$40 phone deposit each year. The deposit will be returned one month after the student has discontinued dormitory residence, less any charges levied by the Phone Monitor System for unauthorized phone calls (receiving collect or third party billings).

BOARD

Vegetarian meals are provided by the Food Service which is operated on the cafeteria plan. Dorm students are expected to take their meals in the main cafeteria or the snack bar. All dorm students will be charged a quarterly minimum of \$214 which may be used in either serving area. A 60 percent discount will be applied to all food charges above \$274 per quarter. Community students will be on the regular a la carte plan.

STATEMENTS

Statements will be issued each month giving an account for the previous month. Tuition, room rent and minimum board for the quarter will be charged in advance at the beginning of each quarter. Village students may obtain their statements from the cashier in the Accounting Office.

It is expected that statements will be paid within ten days from time of mailing. The College operates on a cash basis and is dependent upon prompt payment of accounts.

Checks, drafts and money orders should be made payable to Walla Walla College and should be sent to:

Accounting Office
Walla Walla College
College Place, WA 99324

REFUNDS

A student withdrawing from classes during the quarter will receive the following refunds: (Student Association fees are not refundable.)

Tuition: 100% through the fourth day of classes after regularly scheduled registration*

75% second week

50% third and fourth weeks

No tuition is refunded after the fourth week

*Students dropping all classes during this period will be charged a processing fee of \$50 or 5% of tuition, whichever is less.

Room Rent: 90% during first week of quarter
80% during second week of quarter
70% during third week of quarter
60% during fourth week of quarter
50% during fifth week of quarter
40% during sixth week of quarter
30% during seventh week of quarter
20% during eighth week of quarter

The beginning of the quarter will be considered to be the first day of class instruction.

When a student withdraws during a quarter, no refund will be made until 30 days after the close of the month in which he withdrew. **STUDENTS WHO LEAVE SCHOOL WITHOUT COMPLETING WITHDRAWAL PROCEDURES WILL BE CHARGED UNTIL PROPER ARRANGEMENTS ARE MADE.** (Also see *Room Reservations.*)

PAST DUE ACCOUNTS

A **FINANCE CHARGE** computed at a periodic rate of one percent per month is assessed against a past due account. This is an **ANNUAL PERCENTAGE RATE OF 12 PERCENT.**

BOOKS AND SCHOOL SUPPLIES

Textbooks, school supplies and other materials needed for schoolwork may be obtained at the College Store. Students should plan on \$100 to \$150 extra for such purchases each quarter.

EMPLOYMENT (On-campus student work program)

Walla Walla College offers an excellent work program. To be eligible for student work on campus, you must be accepted and enrolled full-time (summer quarter excepted) during the quarter in which you wish to be employed. You can get application for work either at the Student Employment Office or at the various departments and industries around campus. While your completed application provides information for campus employees as they look for student help, it does not necessarily guarantee a specific job.

Usually, wages paid to students at Walla Walla College are close to minimum wage; they range from a slight sub-minimum to above the Federal minimum wage. What you earn from your campus job will be credited directly to your account.

It is a good idea to plan to work not more than 20 hours each week. Most students, in fact, work between 10 and 15 hours. In general, students find that three to four hour blocks of work time are ideal for their study schedules.

Foreign students who attend Walla Walla College while on student visas are permitted to work on campus only. Their student visas do not entitle them to take off-campus jobs in the community.

The responsibility of taking advantage of campus work opportunities rests with the student.

AUTOMOBILE PARKING FEE

Residence hall students bringing automobiles with them to the College Place campus will be charged a fee of \$9 per quarter for parking privileges. Covered parking is available at additional cost. The College does not carry parking lot insurance which will cover damage to the vehicle, or theft, or loss of any sort while parking in the lot. If such insurance is desired, comprehensive coverage can be secured by the owner at a more reasonable rate than can be provided by the College.

INTERNATIONAL STUDENTS

International students who are not citizens or permanent residents of the United States and its Territories are required to place a \$1,500 (U.S.) deposit with the college before final acceptance can be given and the I-20 form, necessary to secure the U.S. student visa, can be sent.

International students on student visas do not qualify for the majority of loans and grants described in the bulletin. International students may accept employment on campus only; however, spouses and children who are not students may not accept employment under any circumstances. To determine ability to meet educational costs without the need for financial aid the college requires applicants to submit a declaration of finances which will be sent at the time of application. Canadian students are not required to pay a foreign student deposit but must submit a declaration of finances before final acceptance is given.

MUSIC FEES

Music lessons can be taken for or without credit. The lesson fee is \$85.50 per quarter for nine half-hour lessons or \$153 for nine one-hour lessons. When credit is desired, tuition is also charged. Music majors and minors who are currently enrolled for, or have taken MUCT 121-123 and are registered for a full load (12 quarter hours or more) are eligible for a music fee scholarship equal to the lesson fees charged. Only those lessons which are needed to complete requirements for a music major or minor are included in the scholarship program. The scholarships do not apply to lessons taken off campus.

Credit is given for lessons on the following basis: A minimum of nine 30-minute lessons per quarter and daily practice amounting to five clock hours a week will yield one hour of credit. It is the responsibility of the student to meet the appointed time for lessons. The teacher is obligated to provide opportunity for makeup lessons only in the event of illness or emergency.

Excused absences may be made up at the discretion of the teacher if previous arrangements have been made. Lessons falling on holidays or vacations are not made up unless this results in the student's receiving fewer than nine lessons.

Music fee refunds are calculated on the basis of the number of lessons taken through the fourth week of the quarter, after which no refunds are granted. Students taking lessons for credit must submit a Change of Registration form to the Admissions and Records Office at the time lessons are discontinued. Drops for noncredit lessons must be registered at the music office.

Private lessons for elementary and secondary students, as arranged through the college, will be paid on the following basis:

From Music Faculty	\$85.50
From Student Teachers	\$56.25

These fees are for nine 30-minute lessons. It is the responsibility of the student to meet the appointed time for lessons. The teacher is obligated to provide opportunity for makeup lessons only in the event of illness or emergency. Lessons falling on holidays or vacations are not made up unless this results in the student receiving fewer than nine lessons.

Other Music Fees:

Organ (per quarter for students desiring practice only)	\$25
Band or Orchestral Instruments (per quarter for students desiring lessons and not possessing their own instruments)	\$20

PHYSICAL EDUCATION FEES

Backpacking	\$30
Canoeing	30
Camping and Survival	30
Cycling	10
Cycling Touring	30
Golf, Beginning	50
Golf, Advanced	70
Golf, Pro-Act	70
*Horsemanship	60
*Ice Skating	45
Kayaking and Rafting I	35
Lapidary	20
Mountaineering (Snow and Ice)	30
Orienteering	15
Rock Climbing	30
Roller Skating	20
Sailing	40
*SCUBA Diving	88
*Ski Instructor	85
*Skiing (Spout Springs)	60
*Skiing (Bluewood)	75
Skiing (Cross Country)	60
*nonrefundable	

SPECIAL FEES

Application (not refundable)	\$15.00
Audit class	Regular Tuition
Aviation (as announced)	
Challenge Examination per quarter credit	\$35.00
Plus special examination fee per exam	15.00
Class added	2.50
Class dropped	2.50
Classes having numerous or extended field trips will be given notice of special fees to cover expenses	
Degree, Bachelor's and Associate	7.50
Degree, <i>in absentia</i> , Bachelor's and Associate	22.50
ID Card Replacement	5.00

Junior Class Membership (plus any additional amount as voted by the class)	1.00
Late Registration (plus \$2 per day from published registration date)	20.00
Nursing	
Materials and supplies per quarter (except NRSO 410-412)	3.50 per nursing credit hour
Physical Fitness Testing	15.00
Out-of-Schedule Examination (per exam)	30.00
Returned Check	10.00
Senior Class Membership (as voted by the class)	
Special Examination	15.00
Student Pilot Insurance per quarter	9.00
Transcript, first copy (requests must be in writing)	free
Transcript, additional copies each	2.00
Tutoring by members of the faculty, triple tuition is charged for individual tutoring.	
Validating Examination Fee per quarter credit	2.00
Plus special examination fee per exam	15.00
Waiver Examination	15.00

STUDENT ASSOCIATION FEE

A fee of \$22 per quarter is charged students registered for six or more quarter hours which provides membership in the Student Association. This fee is subject to change only by vote of the Student Association.

STUDENT HEALTH CENTER

Clinical facilities are available for students requiring medical attention. Prescriptions and other medicines are available at special prices. In case of serious illness or surgery, the Walla Walla General Hospital provides complete service to students. Financial arrangements must be made directly with the hospital.

Students on the Portland campus receive routine health services through the Employee Health Department of Portland Adventist Medical Center. Major illnesses may be treated through the emergency room or through hospitalization. In case of hospitalization, the student must make financial arrangements with the Medical Center.

INSURANCE—MEDICAL, ACCIDENT AND HOSPITALIZATION

Walla Walla College does not provide medical, accident and hospitalization insurance for students; however, insurance may be purchased at the time of registration. Students not wanting coverage are required to sign a waiver declining participation. Dependency coverage is available for married students. The premium is charged on the student's first statement of account after his initial enrollment. No changes or refunds are allowed once the information has been sent to the insurance company (two weeks after the first day of classes). Information describing cost, coverage and claim procedures will be supplied each student at registration. Inquiries should be directed to the Student Health Center.

PERSONAL PROPERTY LOSS

The College cannot accept responsibility for any loss or damage to the personal property of any student.

RELEASE OF TRANSCRIPTS OR DEGREES

By action of the Board of Trustees of the College, a diploma or transcript may not be released until the following criteria is met:

- a. The student's account is paid in full.
- b. WWC has been released as cosigner on student's short term loan.
- c. The student's NDSL Nursing and Institutional Loans are current.

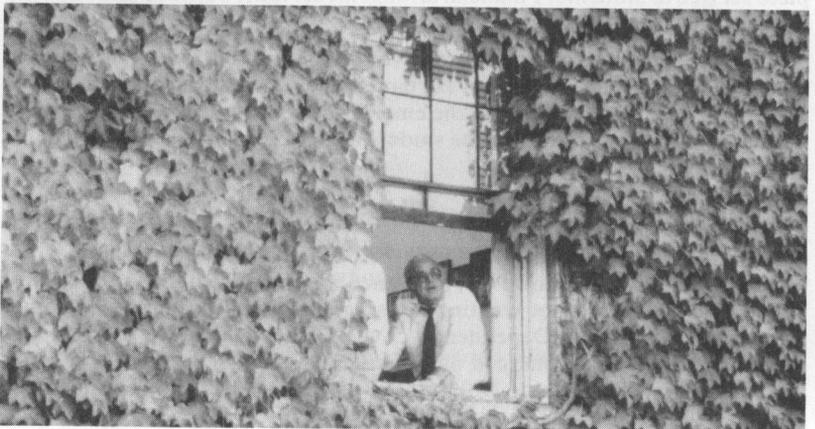
To expedite the release of transcripts, diplomas and other legal documents, the student should send a *money order* or *certified check* to cover the balance of his account when requesting transcripts, etc. Requests for transcripts must be in writing.

INQUIRIES

Inquiries concerning financial agreements for registration, payments on account and student employment opportunities should be directed to the Director of Student Accounts and Employment and those concerning financial aid should be directed to the Director of Financial Aid. Inquiries concerning the academic or instructional program or admission should be directed to the Office of Admissions.

BOARD ACTIONS

Actions voted by the College Board, Faculty, or Finance Committee at any time shall have equal force or, if necessary, supersede statements published in this bulletin.



FINANCIAL AIDS

FINANCIAL AID POLICY. Walla Walla College assumes that a student and his parents have the primary obligation of paying for his education. Parents are expected to provide, as they are able, the basic essentials of life, whether the student lives in the community or on campus.

For families unable to meet the full costs of attending Walla Walla College, financial aid is available in the form of student employment, grants, long-term loans and scholarships. Grants and scholarships are *gift aid* and do not have to be repaid. Interest rates for long-term loans are extremely low, and repayment does not begin until after a student leaves college.

A freshman requesting aid is expected to earn at least \$1,290 during the school year.

Eligibility for aid is based on individual financial need and is evaluated by submitting an Application for Financial Aid to Walla Walla College, and a Financial Aid Form (FAF) to College Scholarship Service (CSS). CSS will provide the college with a need analysis for determining the amount of aid to be awarded. In most cases, a student will be offered a package of financial aid including several forms of assistance.

Financial Aid Forms are available from academies, high schools and the WWC Financial Aid Office. First consideration for awards will be given to those students with financial need who apply **by April 1**. The application process includes (1) the results of FAF from CSS. This means you need to submit the FAF application by the first of March; (2) WWC Financial Aid application available from the WWC Financial Aid Office; (3) copy of parents 1983 income tax return 1040 or 1040A.

SATISFACTORY ACADEMIC PROGRESS. The amount of financial aid awarded to a student is subject to cancellation or revision if the student fails to maintain satisfactory academic progress. Students are expected to register for and complete a minimum of 12 hours per quarter (unless permission to register for less is approved by the Financial Aid Committee) with at least a 2.0 GPA. Students who fail to meet this standard will be placed on probation the next quarter with possible changes in aid. Students who are on probation for two consecutive quarters are not making satisfactory progress and may not receive further aid until they demonstrate that they can complete a minimum of 12 hours with at least a 2.0 GPA. Once this is demonstrated, they will be classified as making satisfactory progress and will be eligible to receive aid.

STUDENT EMPLOYMENT. As part of the financial aid package awarded to students at Walla Walla College, is their opportunity to defray part of the educational expenses through a work/study program. All students receiving aid are awarded expected student earnings as follows:

Freshmen	\$1,290
Sophomores	\$1,350
Juniors/Seniors	\$1,500

The responsibility of taking advantage of work/study opportunities rests with the student. For further information in job placement contact the Student Accounts and Employment Office.

SCHOLARSHIPS, ASSISTANTSHIPS AND GRANTS

MAXIMUM SCHOLARSHIP:

\$450-750 per year
Nonrenewable

ENTERING FRESHMAN ACHIEVEMENT AWARD. The College awards a nonrenewable scholarship to entering freshmen from the North Pacific Union Conference of Seventh-day Adventists who have placed scholastically in the top 10 percent of his graduating class. The scholarship ranges from \$450-750 depending on class standing. To validate this award, evidence of class standing must be submitted to the Director of Financial Aid.

\$500-700 per year
Nonrenewable

WALLA WALLA COLLEGE MERIT AWARD. The College will award scholarships to entering freshmen from the North Pacific Union Conference of Seventh-day Adventists who have placed in the National Merit Scholarship competition as follows:

Finalist	\$700
Semifinalist	\$600
Commended Student	\$500

These scholarships are nontransferable and nonrenewable.

\$500 per year
Nonrenewable

LEADERSHIP AWARD. The College awards a \$500 nonrenewable scholarship to entering freshmen from the North Pacific Union Conference of Seventh-day Adventists who served as senior class or Student Association President. To validate this award, evidence of office held must be submitted to the Director of Financial Aid.

Variable

PUBLISHING HOUSE SCHOLARSHIPS. Students may earn a portion of their school expenses by selling denominational literature during the summer. These scholarships apply to room, board, tuition and other direct school expenses. For details regarding this scholarship plan, write to the Publishing Secretary of the North Pacific Union Conference, P.O. Box 16677, Portland, OR 97216.

Variable

YOUTH SERVICE OPPORTUNITIES. The College, in cooperation with the youth department of the North Pacific Union and the local conferences, makes available variable scholarships for students participating in the Youth Services Opportunities program during the summer. Service opportunities are in the areas of youth camp work, vacation Bible schools, door-to-door visitations, etc. For additional information and application forms, write: Youth Department, P.O. Box 16677, Portland, OR 97216.

GRADUATE ASSISTANTSHIPS. A few assistantships are available for graduate students in biology and education. Candidates applying for these assistantships should write to the respective department chairmen.

ADDITIONAL SCHOLARSHIPS. The College offers additional scholarships as funds are available. The following is a partial list and amounts vary. For further information contact the Financial Aid Office at WWC.

- Rotary Scholarships
- Class of 65 Scholarships
- Chevron Merit Award
- Washington Automobile Dealers Association Scholarship
- Associated Grocers Award
- Merit Scholarships (Departmental)
- Farmers Insurance Group
- Robert L. Spies Memorial
- Kooreny Scholarship
- Breese-Trefz Scholarship
- Degering Educational Scholarship
- WWC Scholarship

MAXIMUM GRANT:

Up to
\$2,000 per year
Renewable

SUPPLEMENTAL EDUCATIONAL OPPORTUNITY GRANT. These grants are made available by the Department of Education. To qualify, a student must be enrolled as a full-time undergraduate student or have petitioned for reduced hours and have financial need as evidenced by submission of a Financial Aid Form (FAF) and a WWC application for financial aid. Applications and FAFs are available through the college financial aid office.

\$500 per year
Renewable

CARRIE WELCH CHALLENGE GRANT. This grant was established by the Carrie Welch Trust Estate as a work match grant for Washington State residents. Grants are awarded on the basis of need as evidenced by submission of a Financial Aid Form (FAF) and an application for Financial Aid. Matching earnings may be earned on or off campus from October through and including May. Students wishing to work off campus and receiving matching employment grant credit must first make special arrangements with the Financial Aid Office.

\$810
Per Year
Renewable

WASHINGTON STATE NEED GRANT. The State of Washington has made available a grant program for state residents only. Qualifications are state residency and financial need. Residency of dependent students follows that of the parents. A student must have been domiciled in the state for one full year prior to the commencement of the first day of the quarter for which aid is requested.

Application forms consist of a WWC financial aid application and a Financial Aid Form (FAF) and may be obtained from the college financial aid office.

Up to
\$500

NPUC EMPLOYMENT GRANT. The North Pacific Union Conference of Seventh-day Adventists and Walla Walla College jointly provide funds for this grant. Applicants must be baptized Seventh-day Adventists having home church membership in the North Pacific Union Conference. Grants are awarded on the basis of need as evi-

denced by submission of a Financial Aid Form (FAF) and an application for financial aid. Grant awards must be matched by student earnings from a school-term work program. Matching earnings may be earned on or off campus from October through and including May. Students wishing to work off campus and receive matching employment grant credit must first make special arrangements with the financial aid office.

Up to \$1,900
Renewable

PELL GRANT. This program is made available by the Department of Education. To qualify for a full Pell Grant students must be enrolled in at least 12 hours or more (less hours, smaller award) and have need according to a formula established by the Department of Education. Applications may be obtained from high school or academy counselors or the college financial aid office.

Variable
Renewable

B.I.A. GRANTS. Students having at least one-fourth American Indian or Eskimo blood may obtain considerable grant assistance from the Bureau of Indian Affairs. For applications and additional information, write to Bureau of Indian Affairs, 1425 NE Irving Street, Portland, OR 97208.

DEFERRED PAYMENT PLANS

THE INSURED TUITION PAYMENT PLAN. This program provides for dividing the entire four-year educational expenses into equal monthly payments. An extended repayment plan is available.

It includes insurance on the parent for death or total disability. The insurance is designed so that its value is always adequate to pay the remaining planned educational expense.

The earlier the plan is begun, the smaller will be the monthly payments and the longer the term of insurance coverage.

Additional information may be obtained from the director of student accounts and employment, Walla Walla College, or Richard C. Knight, Insurance Agency, Inc., Insured Tuition Payment Plan, 6 St. James Avenue, Boston, MA 02116.

LONG-TERM LOANS

An increasing number of students are financing their education through the use of loan funds. Several of these funds are available, making it possible for the great majority of students to continue school without interruption due to lack of finances.

**MAXIMUM
LOAN:**

THE GUARANTEED STUDENT LOAN PROGRAM (GSLP). This allows a student to borrow directly from commercial lenders and credit unions. These loans are available to students who are citizens or nationals of the United States, or those in the country for other than a temporary purpose. These loans which have an annual interest rate of 7-9 percent do not have to be repaid until 6 months after student status has terminated.

The loan limits are as follows:

Category of Borrower	Annual Loan Limits	Aggregate Loan Limits
Dependent Undergraduate	\$2,500	\$12,500
Graduate or Professional	\$5,000	\$25,000*

*Includes loans obtained at the undergraduate level.

Most states now have their own loan programs. Interested applicants may obtain further information and application forms from their bank in their home state or by writing the Walla Walla College Financial Aid Office.

NATIONAL DIRECT STUDENT LOAN. The National Direct Student Loan is made available through the Department of Education and Walla Walla College. To qualify, the student must have financial need as evidenced by submission of a WWC application for financial aid and a Financial Aid Form (FAF) by **April 1**. Repayments begin 6 months after the applicant's student status terminates.

Applications and FAFs are available through the college financial aid office.

NURSING STUDENT LOAN. Nursing Student Loans are made available through the U.S. Department of Health and Human Services and Walla Walla College.

To qualify, a student must have financial need as evidenced by submission of a WWC application for financial aid and a Financial Aid Form (FAF) by **April 1**. Repayments begin 9 months after the applicant's full-time nursing student status terminates.

Applications and FAFs are available through the college financial aid office.

ADDITIONAL LOANS. Through the generous gifts of friends of the College various loan funds have been established. To qualify, the student must have financial need as evidenced by submission of a WWC application for financial aid and a Financial Aid Form (FAF) by **April 1**. Repayments begin 6 months after the applicant's student status terminates.

LOANS TO PARENTS. A program of loans to parents for dependent undergraduate students has been established. The maximum amount a parent may borrow for any one student in any academic year is \$3,000. The aggregate loan limit for each dependent student is \$15,000. Repayment is required to begin within 60 days after disbursement, and there is no in-school Federal interest subsidy on these loans. The interest rate will be 12 percent.

Up to
\$6,000
Aggregate for
Undergraduate
Students

Up to
\$2,500 per year
Renewable

Up to
\$3,000 per year
Renewable

WALLA WALLA COLLEGE BOARD OF TRUSTEES

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N. Clifford Sorensen, *Secretary*

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Ted Jones
Barry Kellogg
Paul Nelson
Dorothy Patchett
G. L. Plubell
Don Reynolds
Manford Simcock
Jack Smith
Marge Washburn
William Woodruff

ADMINISTRATION

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Edward Boyatt, Ed.D., *Vice President for Student Affairs*
Manford Simcock, M.A., *Vice President for Financial Affairs*
Verne V. Wehtje, Ph.D., *Associate Dean for Academic Affairs*

ADMINISTRATIVE STAFF

Kathryn Andrews, B.A., *Associate Director of Academic Records*
Starr Bidwell, B.S., *Assistant Accountant*
Barbara Bigger, M.A., *Director, Career Development*
Gladys Biloff, *Assistant Dean of Women*
Joyce Blake, M.A., *Counselor*
Jerry Bokoles, M.A., *Director of Counseling Services*
John W. Bregar, Ph.D., *Dean, School of Engineering*
Carol M. Brown, Ed.M., *Assistant Dean, School of Nursing (College Place Campus)*
John C. Brunt, Ph.D., *Dean, School of Theology*
David Bullock, B.A., *KGTS Program Director*
Paula Chapman, *Dean of Women*
Shirley Cody, M.L.S., *Assistant Librarian*
Mark J. Copey, A.M.L.S., *Assistant Librarian*
Charles E. Davis, B.S., *Director of College Services*
Winston De Haven, M.A., *Chaplain*
Carolyn Dickinson, B.S., *Director, Personnel Services*
Edna M. Downing, M.S., *Assistant Dean, School of Nursing (Portland Campus)*
Betty Duncan, B.A., *Freshman Advisement Coordinator*
Scott R. Duncan, B.S., *Director of Audiovisual Services*
Dan A. Edge, B.S., *Director of Maintenance*
James Forsyth, M.A., *Director, Technical Services Shop*

Robert W. Gardner, Ph.D., *Director, Institutional Research*
 Carolyn Gaskell, M.A., *Assistant Librarian*
 Marilyn Glaim, M.A., *Director, Teaching Learning Center*
 Jim Hall, M.B.A., *Controller and Assistant Treasurer*
 Vivian Hassell, M.L.S., *Assistant Librarian*
 Dale B. Hepker, Ph.D., *Coordinator of Title III Program*
 Sergio Hernandez, Ed.S., *Director of Admissions and Financial Aid*
 Donald Holbert, *Director of Food Service*
 Ilo Hutton, *Residence Hall Dean (Portland Campus)*
 E. Lee Johnston, M.S.L.S., *Associate Librarian*
 Marble Jones, B.S., *HPER Facilities Coordinator*
 Marjorie Koenig, B.A., *Director, Administrative Data Processing*
 Elaine Lambertson, R.N., *Director of Health Service*
 Melvin S. Lang, Ph.D., *Director of Summer Session*
 Maynard E. Loewen, B.A., *Field Recruitment Officer*
 J. D. Losey, M.D., *College Physician*
 Elwood L. Mabley, M.S.L.S., *Director of the Libraries*
 Orpha Osborne, B.A., *Registrar and Director of Academic Records*
 Alfred E. Perry, Ph.D., *Associate in Development*
 Hollibert E. Phillips, Ed.D., *Dean, Graduate School*
 Lynn Prohaska, *Dean of Men*
 Kathleen (Cassie) Ragenovich, B.S., *Director of Student Accounts and Employment*
 Donald W. Rigby, Ph.D., *Director of Marine Station*
 Lynette Rogers, B.S.W., *Assistant Dean of Women*
 Doug Taylor, B.S.B.A., *Assistant Director of Student Accounts*
 Myron Titus, *Manager Rental Properties*
 Alfred O. Tucker, B.S., *Chief Accountant*
 Philip Velez, M.A., *Associate Dean of Men*
 Robert Wells, *Systems Analyst*
 Nancy Wickward, *Associate Director of Financial Aid*

AUXILIARY ENTERPRISES AND INDUSTRY, Managers

Manford Simcock, M.A., *General Manager*
 Jay Prohaska, *Manager, Perry's Texaco Service Station*
 Larry Adams, M.A., *College Dairy and Farm*
 Ivan Groulik, *College Place Bindery*
 Warren Winkle, *College Dairy Manager*
 Harold Kehney, B.S.B.A., *Color Press*
 Wendy Wade, *College Store*

INSTRUCTIONAL FACULTY†

- Terrie Aamodt, *Instructor in English* (1979)
B.A. 1976, Columbia Union College
M.A. 1978, The College of William and Mary
- Rosalee Abrams, *Assistant Professor of Nursing* (1972)
B.S. 1972, Walla Walla College
M.N. 1977, University of Oregon
- Charles J. Amlaner, *Assistant Professor of Biology* (1979)
B.S. 1974; M.A. 1976, Andrews University
D. Phil. 1983, Oxford University
- Terry L. Anderson, *Professor of Physics and Computer Science* (1972)
B.S. 1969; M.A. 1969, Pacific Union College
M.S. 1971; Ph.D. 1975, University of Nebraska
- Wanda Anderson, *Instructor in Nursing* (1968)
B.S. 1957, Walla Walla College
- James W. Aulick, *Assistant Professor of Business* (1983)
B.S.B.A. 1974, Union College
M.B.A. 1982, University of Minnesota
- Claude C. Barnett, *Professor of Physics* (1957)
B.S. 1952, Walla Walla College
M.S. 1956, State College of Washington
Ph.D. 1960, Washington State University
- Beverly G. Beem, *Professor of English* (1976)
B.A. 1967, Union College
M.A. 1969, Andrews University
Ph.D. 1974, University of Nebraska
- Frederick R. Bennett, *Professor of Engineering* (1961)
B.S. 1955, Walla Walla College
M.S. 1966; Ph.D. 1977, Washington State University
- Roland D. Blaich, *Professor of History* (1968)
B.A. 1966; M.A. 1967, California State College at Los Angeles
Ph.D. 1975, Washington State University
- Chester D. Blake, *Professor of Industrial Technology* (1966)
B.S. 1963, Walla Walla College
M.A. 1968, San Jose State College
Ed.D. 1980, Washington State University
- John W. Bregar, *Professor of Engineering* (1983)
B.S. 1948, Pennsylvania State University
Ph.D. 1966, University of Arizona
- Gary Brendel, *Associate Professor of Education and Psychology* (1980)
B.A. 1966, Union College
M.A. 1969, University of Denver
- Joseph H. Brooks, *Instructor in Music* (1982)
B.Mus. 1982, Walla Walla College
- Carol M. Brown, *Associate Professor of Nursing* (1971-73; 1976-79; 1980)
B.S. 1965, Walla Walla College
M.S. 1968, Loma Linda University
Ed.M. 1975; Ph.D. 1978, Oregon State University
- John C. Brunt, *Professor of Theology* (1971)
B.A. 1964, Loma Linda University
M.A. 1966; B.D. 1967, Andrews University
Ph.D. 1978, Emory University
- Rosemarie Buck, *Instructor in Nursing* (1983)
B.S. 1981, Walla Walla College
M.S. 1983, Loma Linda University

†Dates in parenthesis indicate the beginning year of employment at Walla Walla College.

- *Beverly Buckles, *Instructor in Sociology and Social Work* (1982)
 B.S.W. 1978, Walla Walla College
 M.S.W. 1983, Eastern Washington University
- Mima Burgher, *Assistant Professor of Nursing* (1983)
 B.S. 1976, Walla Walla College
 M.N. 1977, University of Oregon
- Ernest J. Bursey, *Associate Professor of Theology* (1973)
 B.A. 1964, Pacific Union College
 M.Div. 1971, Andrews University
 M.A. 1978; M. Phil. 1980, Yale University
- Ronald L. Carter, *Associate Professor of Biology* (1984)
 B.A. 1969, Columbia Union College
 Ph.D. 1976, Loma Linda University
- Robby Ghislain Chaffart, *Instructor in Modern Languages*, (1983)
 B.A. 1981, Seminaire Adventiste du Saleve
 M.A. 1983, Andrews University
- Lee Ann Church, *Instructor in Nursing* (1983)
 B.S. 1975, Southern Missionary College
- Jon A. Cole, *Professor of Engineering* (1964)
 B.S.C.E. 1961, Illinois Institute of Technology
 M.S. 1964; Ph.D. 1970, University of Wisconsin
- Mark J. Copsey, *Instructor in Library Science* (1984)
 B.A. 1981, Andrews University
 A.M.L.S. 1983, University of Michigan
- Carlton E. Cross, *Associate Professor of Engineering* (1981)
 B.S. 1966, Walla Walla College
 M.S.E.E. 1969; Ph.D. 1973, Oregon State University
- William A. Crow, *Assistant Professor of Industrial Technology* (1980)
 B.S. 1962, Walla Walla College
 M.Ed. 1968, Colorado State University
- Robert F. Cuffel, *Engineering Professor in Residence* (1981)
 B.S. 1959, Iowa State University
 M.S. 1960; Ph.D. 1964, California Institute of Technology
- Reinhard Czeratzki, *Associate Professor of Modern Languages* (1967)
 B.A. 1964, Atlantic Union College
 M.A. 1967, Middlebury College
- Donald Dawes, *Associate Professor of Industrial Technology* (1976)
 B.S. 1961, Walla Walla College
 M.Ed. 1966, Oregon State University
- Loren Dickinson, *Professor of Communications* (1962)
 B.A. 1957, Union College
 M.A. 1960, University of Nebraska
 Ph.D. 1968, University of Denver
- Susan C. Dixon, *Assistant Professor of Biology* (1981)
 B.S. 1974; M.S. 1976, Walla Walla College
- Edna M. Downing, *Assistant Professor of Nursing* (1970)
 B.S. 1965, Loma Linda University
 M.S. 1970, University of California at San Francisco
- Jon Dybdahl, *Associate Professor of Theology* (1976)
 B.A. 1965, Pacific Union College
 M.A. 1966; B.D. 1967, Andrews University
 Ph.D. 1981, Fuller Theological Seminary
- *Richard K. Emmerson, *Professor of English* (1971)
 B.A. 1970, Columbia Union College
 M.A. 1971, Andrews University
 Ph.D. 1976, Stanford University
- Thomas J. Emmerson, *Associate Professor of Art* (1976)
 B.A. 1972, Walla Walla College
 B.F.A. 1974; M.F.A. 1979, Otis Art Institute of Los Angeles County

*On Leave

- Allan D. Fisher, *Professor of Industrial Technology* (1980)
B.A. 1967; M.A. 1968, Pacific Union College
Ed.D. 1980, Oregon State University
- Garth E. Fisher, *Assistant Professor of Industrial Technology* (1975)
B.S. 1966, Andrews University
- Alfred Fox, *Assistant Professor of Industrial Technology* (1980)
B.S. 1970; M.A. 1972, Pacific Union College
- Joseph G. Galusha, *Professor of Biology* (1975)
B.S. 1968, Walla Walla College
M.A. 1971, Andrews University
D.Phil. 1975, Oxford University
- Robert W. Gardner, *Professor of Sociology* (1971)
B.A. 1969, Pacific Union College
M.A. 1971, Loma Linda University
Ph.D. 1977, University of Utah
- Carolyn S. Gaskell, *Assistant Professor of Library Science* (1978)
B.A. 1976, Pacific Union College
M.A. 1977, University of Denver
- Ann Gibson, *Associate Professor of Business* (1983)
B.A. 1968, Walla Walla College
M.B.A. 1970, Andrews University
- Lorne E. Glaim, *Professor of History* (1971)
B.A. 1964, Walla Walla College
M.A. 1966; Ph.D. 1973, Washington State University
- Marilyn S. Glaim, *Assistant Professor of Education* (1979)
B.A. 1967; M.A. 1973, Washington State University
- Albert E. Grable, *Associate Professor of Biology* (1963)
B.S. 1959, Loma Linda University
M.S. 1962; Ph.D. 1964, University of Minnesota
- *Eileen Watson Greenwalt, *Assistant Professor of Communications* (1976)
B.S. 1970, Loma Linda University
M.A. 1971, California State University
- *Glenn Greenwalt, *Assistant Professor of Theology* (1978)
B.A. 1971, Walla Walla College
M.Div. 1974, Andrews University
- Kenneth L. Gruesbeck, *Assistant Professor of Industrial Technology* (1964)
B.A. 1952, Columbia Union College
M.Ed. 1977, Walla Walla College
- Gary M. Hamburgh, *Associate Professor of Health,
Physical Education and Recreation* (1972)
B.A. 1971, Loma Linda University
M.A. 1974, California State University at Fresno
- James C. Hannum, *Associate Professor of Communications* (1983)
B.A. 1965, Southern Missionary College
M.A. 1972, University of Wisconsin
- Gordon B. Hare, *Professor of Mathematics* (1957)
B.A. 1951, Columbia Union College
M.S. 1954; Ph.D. 1964, University of Colorado
- Vivian Hassel, *Assistant Librarian* (1982)
B.A. 1950, Walla Walla College
M.L.S. 1963, University of Washington
- Rodney Heisler, *Professor of Engineering* (1970)
B.S.E. 1965, Walla Walla College
M.S.E.E. 1967; Ph.D. 1970, Washington State University

*On leave

- Robert A. Henderson, *Professor of History* (1967)
 B.A. 1962, Walla Walla College
 Ph.D. 1967, Washington State University
- Solange Henderson, *Assistant Professor of Modern Languages* (1973)
 B.A. 1971, Walla Walla College
 M.A. 1976, Middlebury College
- Dale B. Hepker, *Professor of English* (1973)
 B.A. 1953, Union College
 M.A. 1963; Ph.D. 1978, University of Nebraska
- Wilma M. Hepker, *Professor of Sociology and Social Work* (1973)
 B.A. 1953, Union College
 M.A. 1966; Ph.D. 1976, University of Nebraska
 M.S.W. 1983, Eastern Washington University
- Gloria Hicinbothom, *Assistant Professor of Education* (1976)
 B.S. 1966; M.Ed. 1971, Walla Walla College
- Juanita M. Hunter, *Assistant Professor of Nursing* (1975)
 B.S. 1955, Loma Linda University
 M.P.H. 1979, Loma Linda University
- Rodney Jenks, *Assistant Professor of Chemistry* (1981)
 B.S. 1967, Pacific Union College
 M.S. 1970, University of Arizona
 Ph.D. 1981, The American University
- Dale A. Johnson, *Professor of Education and Psychology* (1976)
 B.A. 1964, Union College
 M.A. 1967, University of Nebraska
 Ph.D. 1978, University of California, Riverside
- Gordon O. Johnson, *Professor of Physics* (1974)
 B.S. 1966, Walla Walla College
 M.S. 1967; Ph.D. 1972, California Institute of Technology
- E. Lee Johnston, *Associate Professor of Library Science* (1976)
 B.S. 1960, Loma Linda University
 M.Ed. 1965, University of California, Davis
 M.S.L.S. 1971, University of Southern California
- Paul W. Joice, *Professor of Business* (1971)
 B.S. 1949, Union College
 M.B.A. 1953, University of Denver
 Ed.D. 1962, University of Nebraska
- *James D. Klein, Jr., *Assistant Professor of Computer Science* (1979)
 B.S. 1970, Walla Walla College
 M.S. 1977, University of Colorado
- Lucile Harper Knapp, *Associate Professor of Theology* (1961)
 B.A. 1947, Walla Walla College
 M.A. 1949, Andrews University
- Wynn A. Knowling, *Associate Professor of Education* (1980)
 B.S. 1956, Union College
 M.A. 1970; Ed.S. 1972; Ph.D. 1977, University of Iowa
- Pauline Kooreny, *Assistant Professor of Education* (1972-74; 1980)
 B.A. 1946, Walla Walla College
 M.A. 1956, University of Colorado
- Curtis Kuhlman, *Instructor in Health, Physical Education and Recreation* (1983)
 B.S. 1981, Loma Linda University
- Leonard Laabs, *Assistant Professor of Industrial Technology* (1981)
 B.S. 1965; M.Ed. 1967, Walla Walla College

*On leave

- Holly Mae Lacey, *Instructor in Health, Physical Education and Recreation* (1983)
 B.S. 1979, Southern Missionary College
 M.S. 1981, University of Tennessee
- Daniel Lambertson, *Assistant Professor of English* (1981)
 B.A. 1971, Walla Walla College
 M.A. 1981, University of Montana
- Henry Lambertson, *Assistant Professor of Theology* (1981)
 B.A. 1971, Walla Walla College
 M.Div. 1974, Andrews University
- Melvin S. Lang, *Professor of Mathematics* (1967)
 B.S. 1957, Valley City State Teachers College
 M.A. 1958, Colorado State College
 Ph.D. 1972, University of Northern Colorado
- Steven Lee, *Assistant Professor of Chemistry* (1983)
 B.S. 1976, Andrews University
 Ph.D. 1981, University of Wisconsin
- H. Lloyd Leno, *Professor of Music* (1960)
 B.A. 1948, Walla Walla College
 M.A. 1954, Columbia Teachers College
 A.Mus.D. 1970, University of Arizona
- Lori C. Lewis, *Instructor in English* (1984)
 B.A. 1981, Atlantic Union College
 M.A. 1983, Andrews University
- Lee Loewen, *Assistant Professor of Office Administration* (1974)
 B.S. 1947, Union College
 M.Ed. 1968, Walla Walla College
- Annette Lofftus, *Assistant Professor of Nursing* (1969)
 B.S. 1955, Walla Walla College
 M.S. 1972, University of Oregon
- Elwood L. Mabley, *Associate Professor of Library Science* (1968)
 B.A. 1948, Walla Walla College
 M.S.L.S. 1959, University of Southern California
- Virginia Mabley, *Assistant Professor of Office Administration* (1971)
 B.A. 1948; M.Ed. 1973, Walla Walla College
- Kenneth R. MacKintosh, *Professor of Art* (1961)
 B.F.A. 1959; M.F.A. 1961, Otis Art Institute of Los Angeles County
- Barbara M. Maddox, *Instructor in Nursing* (1982)
 B.S. 1976, Columbia Union College
 M.S.N. 1982, Yale University
- Ron Manuel, *Associate Professor of Business* (1983)
 B.S. 1974, Columbia Union College
 M.B.A. 1981, University of Maryland
- Glenn W. Masden, *Professor of Engineering* (1957)
 B.S.E.E. 1955; M.S.E.E. 1958, University of Colorado
- Marlene McAninch, *Instructor in Nursing* (1983)
 B.S. 1978, Walla Walla College
 M.N. 1983, University of Washington
- Lawrence R. McCloskey, *Professor of Biology* (1971)
 B.A. 1961, Atlantic Union College
 M.A. 1965; Ph.D. 1967, Duke University
- William W. Messer, *Assistant Professor of Business* (1977)
 B.S. 1969, Andrews University
 M.B.A. 1973; J.D. 1975, University of Cincinnati
- Verlene Meyer, *Assistant Professor of Nursing* (1973)
 B.S. 1972, Walla Walla College
 M.N. 1977, University of Oregon

*On leave

- Samuel Myers, *Associate Professor of Engineering* (1981)
 B.S. 1952, University of California, Los Angeles
 M.A. 1967, Loma Linda University
- *Ronald Mitchell, *Assistant Professor of Nursing* (1973)
 B.S. 1972, Walla Walla College
 M.S. 1976, Fresno State College
- Robert L. Noel, *Professor of Engineering* (1963)
 B.S. 1950; M.S. 1951, University of Wisconsin
- Sylvia B. Nosworthy, *Assistant Professor of English* (1978)
 B.A. 1967; M.A. 1968, Andrews University
- Harold T. Ochs, *Professor of Education and Psychology* (1969)
 B.A. 1950, Walla Walla College
 M.Ed. 1957, Eastern Washington State College
 Ed.D. 1972, University of Idaho
- Merlene L. Olmsted, *Assistant Professor of Home Economics* (1977)
 B.A. 1969, Walla Walla College
 M.A. 1975, Loma Linda University
- Jack S. Paulman, *Associate Professor of Business* (1976)
 B.S. 1947, Pepperdine College
 M.S. 1953, University of Southern California
 M.P.H. 1975, Loma Linda University
- Ralph Perrin, *Assistant Professor of Health, Physical Education and Recreation* (1984)
 B.S. 1977, Walla Walla College
 M.P.H. 1980; D.H.Sc. 1981, Loma Linda University
- Alfred E. Perry, *Professor of Industrial Technology and Associate Professor of Biology* (1969)
 B.A. 1953; M.A. 1958, Walla Walla College
 Ph.D. 1965, Oklahoma State University
- Hollibert E. Phillips, *Professor of Education and Psychology* (1970)
 B.A. Hons. 1960, University of London
 M.A. 1964, Andrews University
 Ed.D. 1970, Boston University
- Paul Rasmussen, *Instructor in Industrial Technology* (1981)
 B.S. 1972, Walla Walla College
- Leonard Richter, *Associate Professor of Music* (1978)
 Diploma, 1961, Ostrava Conservatory
 B.A. 1970, University of Waterloo
 M.Mus. 1971, Andrews University
 M.Mus. 1977, Manhattan School of Music
- Donald W. Rigby, *Professor of Biology* (1958)
 B.A. 1950, Loma Linda University
 M.A. 1956, Walla Walla College
 Ph.D. 1967, Loma Linda University
- Donnie Thompson Rigby, *Associate Professor of Communications* (1958)
 B.A. 1952, Loma Linda University
 M.A. 1965, Redlands University
- Robert C. Rittenhouse, *Professor of Chemistry* (1976)
 B.S. 1971, Atlantic Union College
 Ph.D. 1975, Worcester Polytechnic Institute
- William Rouse, *Assistant Professor of Industrial Technology* (1981)
 B.S. 1972, Walla Walla College
 Ed.M. 1979, Oregon State University
- Kenneth Rudolf, *Instructor in Music* (1983)
 B.Mus. 1971, Walla Walla College
 M.A. 1975; Ph.D. 1982, University of Washington

*On leave

- Flo Ruth Schneider, *Assistant Professor of Nursing* (1973)
 B.S. 1973, Walla Walla College
 M.P.H. 1979, Loma Linda University
- Gary L. Schoepflin, *Associate Professor of Physics* (1979)
 B.S. 1963, Walla Walla College
 M.S. 1965, University of Washington
 Ph.D. 1977, Oregon State University
- Sheila Yates Schroeder, *Assistant Professor of Office Administration* (1981)
 B.S. 1976, Walla Walla College
 M.A. 1981, Loma Linda University
- *Carlos A. Schwantes, *Professor of History* (1969)
 B.A. 1967, Andrews University
 M.A. 1968; Ph.D. 1976, University of Michigan
- *Mary Schwantes, *Assistant Professor of Home Economics* (1969)
 B.S. 1968; M.S. 1972, Eastern Michigan University
- Charles Scriven, *Assistant Professor of Theology* (1981)
 B.A. 1966, Walla Walla College
 M.Div. 1968, Andrews University
- Marianne S. Scriven, *Professor of Music* (1979)
 B.A. 1967; M. Mus. 1968, Andrews University
 D.M.A. 1973, University of Missouri—Kansas City
- Carolyn Stevens Shultz, *Professor of English* (1970)
 B.A. 1965, Pacific Union College
 M.A. 1966, Loma Linda University
 Ph.D. 1977, University of Washington
- Dan M. Shultz, *Professor of Music* (1979)
 B.S. 1962, Atlantic Union College
 M.Mus. 1967, Andrews University
- Dale Snarr, *Associate Professor of Social Work* (1977)
 B.A. 1967, California State University at San Jose
 M.S.W. 1976, West Virginia University
- Ward A. Soper, *Associate Professor of Mathematics* (1965)
 B.A. 1961, Andrews University
 M.A. 1962, University of Michigan
- N. Clifford Sorensen, *Professor of Education and Psychology* (1972)
 B.S. 1958; M.A. 1963, Walla Walla College
 Ed.D. 1973, University of Southern California
- Glenn E. Spring, *Professor of Music* (1965)
 B.A. 1962, Loma Linda University
 M.Mus. 1964, Texas Christian University
 D.M.A. 1972, University of Washington
- James H. Stagg, *Assistant Professor of Sociology and Social Work* (1980)
 B.A. 1966, Walla Walla College
 M.S.W. 1980, University of Utah
- Calvin W. Thomas, *Associate Professor of Engineering* (1983)
 B.S. 1954, United States Naval Academy
 M.S. 1959, Air Force Institute of Technology
 Ph.D. 1970, University of Houston
- David Allen Thomas, *Associate Professor of Education* (1983)
 B.A. 1968, Wayne State University
 M.Ed. 1977, Walla Walla College
 Ed.D. 1983, Montana State University
- Alden L. Thompson, *Professor of Theology* (1970)
 B.A. 1965, Walla Walla College
 M.A. 1966; B.Div. 1967, Andrews University
 Ph.D. 1975, University of Edinburgh
- Thomas M. Thompson, *Professor of Mathematics* (1971)
 B.A. 1968, Walla Walla College
 M.A. 1971, University of Washington
 Ph.D. 1979, University of California at Davis

*On Leave

- Fred W. Troutman, *Associate Professor of Nursing* (1972)
 B.S. 1966, Walla Walla College
 M.S. 1974, Loma Linda University
- W. Arlene Underhill, *Associate Professor of Nursing* (1980)
 B.S. 1966; M.S. 1973, University of Oregon
- Larry E. Veverka, *Assistant Professor of Theology* (1976)
 B.A. 1965, La Sierra College
 M.A. 1966; B.D. 1966, Andrews University
 M.A. 1981, Loma Linda University
- Dale B. Visger, *Professor of Industrial Technology* (1977)
 B.S. 1958, Walla Walla College
 Ed.M. 1963; Ed.D. 1977, Oregon State University
- Robert Alan Wade, *Associate Professor of Chemistry* (1979)
 B.A. 1975, Kalamazoo College
 D.Phil. 1979, Oxford University
- Dale O. Wagner, *Professor of Education and Psychology* (1966)
 B.A. 1952, Walla Walla College
 Ed.M. 1958, Eastern Washington State College
 Ed.D. 1973, University of Idaho
- Verlie Ward, *Instructor in Education* (1983)
 B.S. 1971, Union College
 M.A. 1977, Andrews University
- *Rodney C. Wehtje, *Assistant Professor of Business* (1978)
 B.S. 1977, Pacific Union College
 M.B.A. 1978, University of Oregon
- Verne V. Wehtje, *Professor of English* (1976)
 B.A. 1956, Walla Walla College
 M.A. 1962, University of Washington
 Ph.D. 1967, University of Nebraska
- Lois A. Whitchurch, *Assistant Professor of Nursing* (1967)
 B.S. 1965, Walla Walla College
 M.S. 1967, Loma Linda University
- Kenneth L. Wiggins, *Associate Professor of Mathematics* (1980)
 B.A. 1968, Walla Walla College
 M.S. 1971; Ph.D. 1974, Montana State University
- Timothy Martin Windemuth, *Instructor in Health, Physical Education and Recreation* (1983)
 B.S. 1972; M.A. 1983, Loma Linda University
- Gerald R. Winslow, *Professor of Theology* (1968)
 B.A. 1967, Walla Walla College
 M.A. 1968, Andrews University
 Ph.D. 1979, Graduate Theological Union
- Gary Alan Wiss, *Professor of English* (1966)
 B.A. 1966, Walla Walla College
 M.A. 1969; D.A. 1976, University of Oregon
- Clarence A. Wood, *Associate Professor of Speech Pathology and Audiology* (1966)
 B.A. 1961, Loma Linda University
 M.A. 1963, University of Denver
- Robert F. Wood, *Professor of Engineering* (1976)
 B.S. 1960, Walla Walla College
 M.S. 1966, University of Texas
 Ph.D. 1970, University of Illinois
- Delores J. Wright, *Instructor in Nursing* (1984)
 B.S. 1967, Loma Linda University
 M.S. 1977, Southern Oregon State College

EMERITI

Irene T. Black, B.A., *Registrar*
 George W. Bowers, Ph.D., LL.D., *Professor of Chemistry*
 Lewis H. Canaday, Ed.M., *Professor of Industrial Technology*
 George L. Caviness, Ph.D., *Professor of Modern Languages*
 James R. Chambers, Ph.D., *Professor of Chemistry*
 Darrell J. Cowin, *Assistant Professor of Industrial Education and Technology*
 Edward F. Cross, M.E., M.A., *Doctor of Engineering, honoris causa, Dean of Engineering*
 Frederick R. Hanson, M.A., *Professor of Nursing*
 Carl T. Jones, Ph.D., *Professor of Chemistry*
 Frank E. Meckling, Ph.D., *Professor of History*
 Jacob G. Mehling, M.A., *Professor of Business*
 Hans L. Rasmussen, Ed.D., *Academic Dean*
 Lilah G. Schlotthauer Risinger, M.S., *Associate Professor of Mathematics*
 Agnes L. Sorenson, M.A., *Professor of Modern Languages*
 Henrique G. Stoehr, Dr.U.P., *Professor of Modern Languages*
 Calvin C. Trautwein, Ed.D., *Professor of Industrial Technology*
 Genevieve Stabler Weaver, B.A., *Associate Professor of Secretarial Science*
 Eugene S. Winter, Ph.D., *Professor of Physical Education*
 Evelynne F. Wright, M.S., *Professor of Home Economics*

Presidents of Walla Walla College

*Edward A. Sutherland	1892-1897
*Emmett J. Hibbard	1897-1898
*Walter R. Sutherland	1898-1900
*Edwin L. Stewart	1900-1902
*Charles C. Lewis	1902-1904
*Joseph L. Kay	1904-1905
*Marion E. Cady	1905-1911
*Ernest C. Kellogg	1911-1917
*Walter I. Smith	1917-1930
*John E. Weaver	1930-1933
*William M. Landeen	1933-1938
George W. Bowers	1938-1955
Percy W. Christian	1955-1964
William H. Shephard	1964-1968
Robert L. Reynolds	1968-1976
N. Clifford Sorensen	1976-

*Deceased

COMMITTEE ASSIGNMENTS

The letters following individual names are used to indicate the authority for the given membership as follows:

- P Appointed by President
- N Appointed by Nominating Committee
- F Elected by Faculty
- Sf Elected by Staff
- S Selected by ASWWC

The last academic year of the term of office is given by the dates in *italics* following the individual names.

ACADEMIC STANDARDS (VIII-23†) (Five-Year Terms)

- Verne Wehtje, *chairman*
- Rodney Heisler, *ex officio*
- Orpha Osborne, *ex officio*
- John Brunt, *F, 1984-85*
- Donald Rigby, *F, 1985-86*
- Robert Gardner, *F, 1986-87*
- Lorne Glaim, *F, 1987-88*
- Ron Manuel, *F, 1988-89*

ADMINISTRATIVE COUNCIL (VIII-5†) (One-Year Terms)

- N. Clifford Sorensen, *ex officio chairman*
- Manford Simcock, *ex officio*
- Delona Lang Bell, *ex officio*
- Paula Chapman, *ex officio*
- Ed Boyatt, *ex officio*
- Rodney Heisler, *ex officio*
- Elwood Mabley, *ex officio*
- Lynn Prohaska, *ex officio*
- Orpha Osborne, *ex officio*
- Richard Beck, *ex officio*
- Verne Wehtje, *ex officio*
- All Academic Department Chairmen

ADMISSIONS (VIII-24†) (Two-Year Terms)

- Sergio Hernandez, *ex officio chairman*
- Edward Boyatt, *ex officio*
- Paula Chapman, *ex officio*
- Betty Duncan, *ex officio*
- Rodney Heisler, *ex officio*
- Orpha Osborne, *ex officio*
- Lynn Prohaska, *ex officio*
- Dale Hepker, *F, 1984-85*
- _____, *F, 1985-86*
- _____, *P, 1984-85*
- _____, *P, 1985-86*

COMPUTER USERS (Ad Hoc to Office of Academic Affairs)

Robert Rittenhouse, *chairman*
_____, *executive secretary*

Charles Amlaner
James Aulick
Claude Barnett
Garth Fisher
James Hannum
Rodney Heisler
Robert Noel
Manford Simcock
Ward Soper
David Thomas
Two students

CURRICULUM (VIII-25†) (Five-Year Terms)

Rodney Heisler, *ex officio chairman*
Orpha Osborne, *ex officio*
Verne Wehtje, *ex officio*
Joseph Galusha, *F, 1984-85*
Robert Rittenhouse, *F, 1985-86*
Gary Wiss, *F, 1986-87*
Thomas Thompson, *F, 1987-88*
Ann Gibson, *F, 1988-89*

FACULTY DEVELOPMENT (VIII-21†) (Two-Year Terms)

_____, *chairman*
John Bregar, *F, 1984-85*
Joseph Brooks, *F, 1984-85*
Dave Bullock, *F, 1984-85*
_____, *F, 1985-86*
_____, *F, 1985-86*
_____, *F, 1985-86*

FACULTY GRANTS (VIII-6†) (Four-Year Terms)

Lawrence McCloskey, *chairman, P*
Manford Simcock, *ex officio*
Alfred Perry, *ex officio*
Robert Wade, *F, 1984-85*
Richard Emmerson, *F, 1985-86*
Carlton Cross, *F, 1986-87*
_____, *F, 1987-88*

FACULTY HANDBOOK (VIII-18†) (Three-Year Terms)

Carlton Cross, *chairman, P*
James Hannum, *F, 1984-85*
Carolyn Gaskell, *F, 1985-86*
Dale Visger, *F, 1985-86*
_____, *F, 1986-87*
_____, *F, 1986-87*

FACULTY INTERDISCIPLINARY COLLOQUIUM (VIII-27†)

(Three-Year Terms)

_____, *chairman*

Ann Gibson, *F*, 1984-85

Hollibert Phillips, *F*, 1984-85

Charles Amlaner, *F*, 1985-86

Carlos Schwantes, *F*, 1985-86

_____, *F*, 1986-87

_____, *F*, 1986-87

FACULTY SENATE (VIII-12†) (Two-Year Terms)

N. Clifford Sorensen, *ex officio* *chairman*

Rodney Heisler, *ex officio*

Elwood Mabley, *ex officio*

Orpha Osborne, *ex officio*

Manford Simcock, *ex officio*

Verne Wehtje, *ex officio*

Graduate School Dean, *ex officio*

Robert Gardner, *F*, 1984-85

Gordon Hare, *F*, 1984-85

Robert Wade, *F*, 1984-85

Clarence Wood, *F*, 1984-85

_____, *F*, 1985-86

_____, *F*, 1985-86

All Academic Department Chairmen and School Deans

Three students selected by ASWWC

GOVERNMENT (VIII-20†) (Two-Year Terms)

Edward Boyatt, *ex officio* *chairman*

Paula Chapman, *ex officio*

Lynn Prohaska, *ex officio*

Donnie Rigby, *F*, 1984-85

_____, *F*, 1985-86

_____, *P*, 1984-85

_____, *P*, 1985-86

GRADUATE COUNCIL (VIII-24†) (Two-Year Terms)

Hollibert Phillips, *ex officio* *chairman*

Joseph Galusha, *ex officio*

Rodney Heisler, *ex officio*

Orpha Osborne, *ex officio*

Dale Wagner, *ex officio*

Carolyn Shultz, *P*, 1984-85

_____, *P*, 1984-85

_____, *P*, 1984-85

_____, *P*, 1985-86

_____, *P*, 1985-86

GRIEVANCE (VIII-4†) (Two-Year Terms)

Gerald Winslow, *chairman*, *N*, 1984-85

Gary Brendel, *F*, 1984-85

William Crow, alternate for Gary Brendel, *F*, 1984-85

John Wolfswinkel, *Sf*, 1984-85

Gene Jacobson, alternate for John Wolfswinkel, *Sf*, 1984-85

_____, *F*, 1985-86

_____, *Sf*, 1985-86

Two students selected by ASWWC

HEALTH AND SAFETY COMMITTEE (VIII-13) (One-Year Terms)

Donald Lake, *chairman, P*

Charles Davis, *secretary*

Manford Simcock

Daniel Edge, *P*

Elaine Lamberton

Paula Chapman

William Koenig, *P*

Seven elected members from employees

Five students selected by ASWWC

HONORS (VIII-28†) (Four-Year Terms)

_____, *chairman,*

All Faculty Teaching in Honors Program

Robert Rittenhouse, *F, 1985-86*

_____, *F, 1986-87*

_____, *F, 1987-88*

HOUSE (VIII-5†)

N. Clifford Sorensen, *ex officio chairman*

Richard Beck, *ex officio*

Edward Boyatt, *ex officio*

Rodney Heisler, *ex officio*

Manford Simcock, *ex officio*

Verne Wehtje, *ex officio*

LIBRARY (VIII-27†) (Three-Year Terms)

_____, *chairman*

Elwood Mabley, *ex officio*

Lee Johnston, *N, 1984-85*

Larry Veverka, *F, 1984-85*

Beverly Beem, *F, 1985-86*

Kenneth Wiggins, *F, 1986-87*

_____, *P, 1984-85*

Lee Loewen, *P, 1985-86*

_____, *P, 1986-87*

Two students selected by ASWWC

LYCEUM SOCIAL ACTIVITIES (VIII-15†) (Two-Year Terms)

H. Lloyd Leno, *chairman, P*

ASWWC Social Vice President, *ex officio*

Kenneth Gruesbeck, *F, 1984-85*

_____, *F, 1985-86*

Carolyn Gaskell, *P, 1984-85*

_____, *P, 1985-86*

Three students selected by ASWWC

MASTER PLANNING

ACADEMIC MASTER PLANNING (VIII-7†) (Four-Year Terms)

- Jon Cole, *chairman, P*
- Rodney Heisler, *ex officio*
- ASWWC President, *ex officio*
- Roland Blaich, *F, 1984-85*
- Jon Dybdahl, *F, 1986-87*
- Allan Fisher, *N, 1985-86*
- Gordon Johnson, *N, 1985-86*

FINANCIAL MASTER PLANNING (VIII-8†) (Four-Year Terms)

- Jim Hall, *chairman, P, 1984-85*
- Manford Simcock, *ex officio*
- Richard Beck, *ex officio*
- _____, *F, 1987-88*
- Gordon Johnson, *N, 1985-86*

PHYSICAL MASTER PLANNING (VIII-9†) (Four-Year Terms)

- Fred Bennett, *chairman, P*
- Dan Edge, *ex officio*
- Tom Emmerson, *F, 1985-86*
- Chester Blake, *F, 1986-87*
- _____, *N, 1987-88*

NOMINATING (VIII-19†) (Three-Year Terms)

- _____, *chairman*
- Rodney Heisler, *ex officio*
- N. Clifford Sorensen, *ex officio*
- Gordon Johnson, *F, 1984-85*
- Robert Wood, *F, 1984-85*
- Dale Visger, *F, 1985-86*
- _____, *F, 1986-87*
- _____, *F, 1986-87*

PREPROFESSIONAL EVALUATION (VIII-14†) (One-Year Terms)

- Rodney Heisler, *ex officio chairman*
- Edward Boyatt, *ex officio*
- Paula Chapman, *ex officio*
- Lynn Prohaska, *ex officio*
- Robert Rittenhouse, *ex officio*
- Joseph Galusha, *P*
- Melvin Lang, *P*
- Gary Schoepflin, *P*

PREVIEW (VIII-14†) (Two-Year Terms)

- Henry Lambertson, *chairman, F, 1984-85*
- Scott Duncan, *ex officio*
- _____, *F, 1985-86*
- _____, *P, 1984-85*
- _____, *P, 1985-86*
- Two students selected by the ASWWC

PUBLIC RELATIONS (VIII-11†) (Two-Year Terms)

Delona Lang Bell, *ex officio* chairman

David Bullock, *P*, 1984-85

Kenneth MacKintosh, *P*, 1984-85

RANK AND TENURE (VIII-22†) (Three-Year Terms)

Loren Dickinson, *chairman*, *F*, 1985-86

Rodney Heisler, *ex officio* nonvoting

Lawrence McCloskey, *F*, 1984-85

Lee Johnston, *F*, 1985-86

Sheila Schroeder, *F*, 1986-87

Dan Shultz, *P*, 1985-86

RELIGIOUS INTERESTS (VIII-16†) (One-Year Terms)

Winston De Haven, *chairman*, *P*

Darold Bigger, *ex officio*

Edward Boyatt, *ex officio*

John Brunt, *ex officio*

Paula Chapman, *ex officio*

Lynn Prohaska, *ex officio*

Walt Anderson, *P*

Church Lay Activities Leader

Faculty Advisers for SS, MV, ASWWC Religious Activities;

Spiritual Vice Presidents of EMS, AGA, OPS, Village Singles

Club, ASWWC; Senior Sabbath School Superintendent; MV

Leader

Two students selected by the ASWWC

STUDENT AFFAIRS, (VIII-15†) (Two-Year Terms)

Edward Boyatt, *ex officio* chairman

Paula Chapman, *ex officio*

Lynn Prohaska, *ex officio*

Cassie Ragenovich, *ex officio*

Carol Brown, *F*, 1984-85

_____, *F*, 1985-86

_____, *F*, 1985-86

_____, *P*, 1984-85

_____, *P*, 1985-86

Representative from Academic Affairs Office

Four students selected by the ASWWC

STUDENT FINANCIAL AID (VIII-10†) (Two-Year Terms)

Sergio Hernandez, *ex officio* chairman

Paula Chapman, *ex officio*

Lynn Prohaska, *ex officio*

Orpha Osborne, *ex officio*

Cassie Ragenovich, *ex officio*

Ernest Burse, *P*, 1984-85

_____, *P*, 1985-86

Two students selected by the ASWWC

STUDENT INVOLVEMENT (VIII-17†) (Two-Year Terms)

_____, *chairman, P*

Verlie Ward, *F, 1984-85*

Tim Windemuth, *F, 1984-85*

_____, *F, 1985-86*

Ward Soper, *P, 1984-85*

_____, *P, 1985-86*

Four students selected by the ASWWC

SUMMER SESSION (VIII-10†) (Two-Year Terms)

Melvin Lang, *ex officio chairman*

Ronald Carter, *ex officio*

Dale Wagner, *ex officio*

Roland Blaich, *N, 1984-85*

_____, *N, 1985-86*

TEACHER EDUCATION COUNCIL (VIII-25†) (Three-Year Terms)

Dale Wagner, *ex officio chairman*

Rodney Heisler, *ex officio*

_____, *F, 1986-87*

_____, *F, 1986-87*

_____, *F, 1986-87*

One graduate student

†*Walla Walla College Faculty Handbook* page number.

**These numerals refer to committee categories as outlined in the *Faculty Handbook*.

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<p>SEPTEMBER - 1964</p> <p>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30</p>	<p>OCTOBER - 1964</p> <p>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31</p>	<p>NOVEMBER - 1964</p> <p>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30</p>
<p>DECEMBER - 1964</p> <p>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31</p>	<p>JANUARY - 1965</p> <p>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31</p>	<p>FEBRUARY - 1965</p> <p>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28</p>
<p>MARCH - 1965</p> <p>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31</p>	<p>APRIL - 1965</p> <p>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30</p>	<p>MAY - 1965</p> <p>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31</p>
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WALLA WALLA COLLEGE CAMPUS

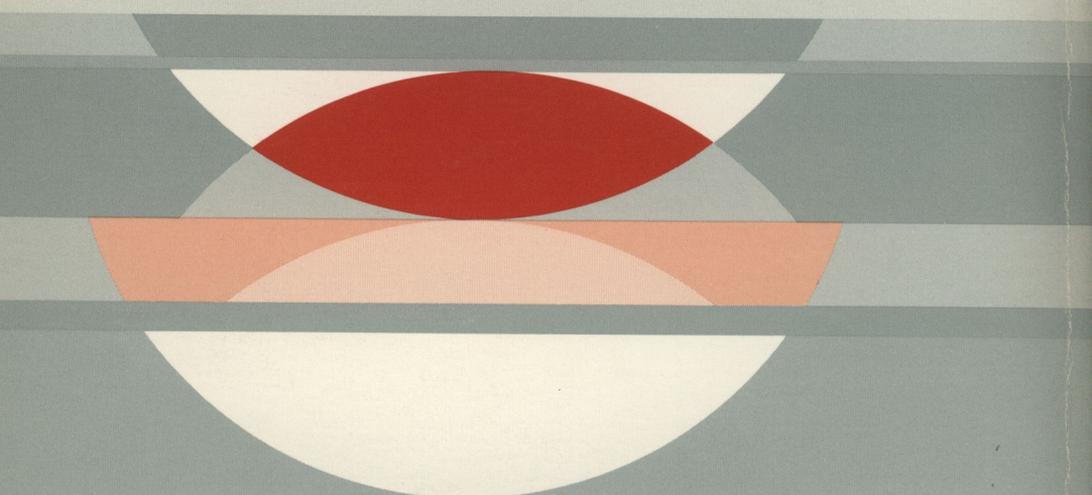


IDENTIFICATIONS FOR CAMPUS MAP

1. Peterson Memorial Library
2. Kellenzo Administration Building
3. Fine Arts Center
4. Alumni Center
5. College Post Office
6. Color Press
7. College Store
8. Conrad Hall (Men's Residence)
9. Foreman Hall
10. College Place Bindery
11. Women's Residence
12. Counseling & Career Development Center, Teaching Learning Center
13. Sitter-East (Men's Residence, Health Center)
14. Kelling Hall, Student Association Center
15. Smith Hall (Education, Psychology)
16. Life Sciences Complex and Educational Center (Biology, Chemistry, Home Economics, Educational Computer Center)
17. Powerhouse
18. Technical Services
19. Bowers Hall
20. Kratschmar Hall (Engineering, Math, Physics)
21. Plant Services
22. Walla Walla Community School
23. College Church
24. Health Sciences Complex (gymnasium, pool, tennis/raquetball courts)
25. Sitter Hall (Technology Center)
26. Sitter Hall (Men's Residence)
27. Whitman Lodge, Work Department
28. Whitman Lodge, Work Department
29. Hallmark Apartments (Married Student Housing)
30. Married Student Housing
31. Married Student Housing
32. Married Student Housing
33. Married Student Housing
34. Married Student Housing
35. U.S. Post Office
36. Adventist Book Center
37. Track of Pendleton Plant 23
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