WALLA WALLA UNIVERSITY

UNDERGRADUATE BULLETIN

2024-2025

2024-2025 UNDERGRADUATE BULLETIN

WALLA WALLA UNIVERSITY

204 South College Avenue
College Place, WA 99324
(509) 527-2327
(800) 541-8900
wallawalla.edu/bulletin

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ACCREDITATION OF WALLA WALLA UNIVERSITY

accredited by

Northwest Commission on Colleges and Universities

Accrediting Association of Seventh-day Adventist Schools, Colleges and Universities (Adventist Accrediting Association)

programs accredited by

Accreditation Council for Business Schools and Programs (Bachelor of Business Administration, Bachelor of Science in Business Administration, and Bachelor of Arts in Business Administration degree programs)

The baccalaureate degree program in nursing at Walla Walla University is accredited by the commission on Collegiate Nursing Education. www.ccneaccreditation.org

Engineering Accreditation Commission of ABET, Inc. (Bachelor of Science in Engineering degree program)

Council on Social Work Education (Bachelor of Social Work and Master of Social Work degree programs)

State of Washington Professional Educator Standards Board (PESB)

a member of

Accreditation Council for Business Schools and Programs (ACBSP)

Adventist Association of Movement Professionals (AAMP)

American Academy of Underwater Sciences (AAUS)

American Association of Collegiate Registrars and Admissions Officers

American Association of Higher Education

American Society for Engineering Education

Council of Christian Colleges & Universities (CCCU)

Council for Higher Education Accreditation

Council on Social Work Education

Independent Colleges of Washington, Inc.

National Alliance of Concurrent Enrollment Partnerships

National Association of College and University Business Officers

National Association of Independent Colleges and Universities

National Association of Student Financial Aid Administrators

Orbis Cascade Alliance

Pacific Association of Collegiate Registrars and Admissions Officers

Washington Association of Colleges for Teacher Education

Washington Consortium for the Liberal Arts (WaCLA)

Washington Friends of Higher Education

approved by

The Attorney General of the United States for non-immigrant students

The Washington Student Achievement Council (HECB/SAA) for enrollment of persons eligible to receive educational benefits under Title 38 and Title 10 USC.

Washington State for training in Vocational Rehabilitation

Authorization for Washington

Selected academic programs of study at Walla Walla University are approved by the Washington Student Achievement Council for enrollment of persons eligible to receive educational benefits under Title 38 and Title 10, U.S. Code.

Authorization for Oregon

Walla Walla University is a non-profit corporation authorized by the state of Oregon to offer and confer the academic degrees of Bachelor of Science with a major in Nursing as described herein following a determination that state academic standards will be satisfied under OAR 583-030. Inquiries concerning the standards of school compliance may be directed to the Office of Degree Authorization, 1500 Valley River Drive, Suite 100, Eugene, OR 97401.

Equal Opportunity Commitment

The mission of Walla Walla University is to foster the unique gifts of every individual within this Christian community of faith and discovery. The University adheres to all federal and state civil rights laws and regulations prohibiting discrimination in public and private universities of higher education (Title IX of the Education Amendments of 1972, Title VI and Title VII of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973, and Washington State House Bill 1751). Walla Walla University is a religiously qualified institution of higher education. It does not discriminate whether explicitly or implicitly against students, or applicants for admission on the basis of race, color, national origin, sex, age, honorably discharged veteran or military status, pregnant or parenting statuses, the presence of neuro diverse abilities (sensory, mental, or physical abilities), or the use of a trained dog guide or service animal by a person with a disability.

In keeping with its commitment to maintaining an

environment that is free of unlawful discrimination and with its legal obligations, Walla Walla University maintains a policy prohibiting unlawful harassment and sexual misconduct including, but not limited to sex-based intimidation and harassment, hate crime, domestic and dating violence, hazing, stalking, and assault. For further information or to report an incident, go to: wallawalla.edu/titleix.

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.

CONTACT INFORMATION

Phone numbers
(509) 527-2615
(800) 541-8900
(509) 527-2397 Fax

Mailing address
Walla Walla University
204 South College Avenue
College Place, WA 99324

Email address
info@wallawalla.edu

Marketing and Enrollment Services
Associate Vice President, Trevor Congleton
(509) 527-2327
info@wallawalla.edu
Application Forms for Admission, General Information

Academic Records
Registrar, Jerry Entze
(509) 527-2811
registrar@wallawalla.edu
Academic Information, Transcripts and Transcript Evaluation, Transfer Student Information, Veteran Information

Student Financial Services
Director, Gayla Rogers
(509) 527-2815
student.financials@wallawalla.edu
Financial Information, Student Work Opportunities, Financial Aid, Loans, and Grants, Financial Planning, Payment Arrangements

Student Life
Vice President, Darren Wilkins
(509) 527-2511
student.life@wallawalla.edu
Student Life Information, Associated Students of Walla Walla University, Campus Clubs

Chaplain's Office
Lead Chaplain, Albert Handal
(509) 527-2010
chaplain@wallawalla.edu
Campus Ministries, Student Missions, Worship Opportunities

Residential Life and Housing
Director, Anthony Handal
Sittner/Meske, (509) 527-2111
Foreman/Conard, (509) 527-2531
Portland, (503) 251-6118
Village Housing, (509) 527-2109
residencehalls@wallawalla.edu
village@wallawalla.edu

Branch Campuses

Portland Campus
10345 S.E. Market St.
Portland, OR 97216
(503) 251-6115

Rosario Beach Marine Laboratory
15510 Rosario Beach Rd.
Anacortes, WA 98221
(360) 293-2326

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

WALLA WALLA UNIVERSITY BULLETIN
VOLUME 130, NUMBER 2
UNDERGRADUATE EDITION
JULY 2024

AREAS OF STUDY

BACCALAUREATE DEGREES

Bachelor of Arts (B.A.)
Business Administration (p. 62)
Computer Science (p. 73)
Digital Communication (p. 68)
English (p. 95)
History (p. 104)
Humanities and Multi-Disciplinary Studies (p. 112)
International Communication (p. 69)
Mathematics (p. 115)
Psychology (p. 84)
Strategic Communication (p. 69)
Theology and Religious Studies Major (p. 142)
*Chaplaincy Ministry (p. 143)
*Pastoral Ministry (p. 143)

Bachelor of Business Administration (B.B.A.)
*Accounting (p. 61)
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*Finance (p. 61)
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*Marketing (p. 62)

Bachelor of Fine Arts (B.F.A)
Film (p. 145)
Fine Art (p. 146)
Graphic Design (p. 147)

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Music (p. 117)
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*Preparation for Music Education Certification (B.Ed.) (p. 118)
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Music Production (p. 114)

Bachelor of Education (B.Ed.)
Secondary Education (p. 81)

Bachelor of Liberal Studies (B.L.S.)
Liberal Studies (p. 121)

Bachelor of Science (B.S.)
Automotive Management (p. 106)
Automotive Service (p. 136)
Aviation Management (p. 106)
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Biochemistry (p. 108)
Bioengineering Science (p. 110)
Biology (p. 58)
Biophysics (p. 111)
Business Administration (p. 62)
Chemistry (p. 66)
Computer Science (p. 73)
Cybersecurity (p. 74)
Elementary Education (p. 78)
Exercise Science (p. 98)
Forensic Psychology (p. 86)
Game Development (p. 74)
Health Science (p. 99)
Information Systems (p. 113)
Marine Biology (p. 58)
Mathematics (p. 115)
Nursing (p. 125)
Physics (p. 126)
Product Design (p. 138)
Psychology (p. 85)
Science Education (p. 80)
Sports Management and Coaching (p. 100)

Bachelor of Science in Engineering (B.S.E.)
Engineering
*Bioengineering (p. 90)
*Civil Engineering (p. 90)
*Computer Engineering (p. 91)
*Electrical Engineering (p. 92)
*Mechanical Engineering (p. 93)

Bachelor of Social Work (B.S.W.)
Social Work (p. 134)
**Indicates concentration available*

ASSOCIATE DEGREES (TWO-YEAR PROGRAMS)

Associate of Science (A.S.)
Automotive Technology (p. 139)
Aviation Technology (p. 139)
Business (p. 63)
Liberal Studies (p. 121)
Pre-Dental Hygiene (p. 101)
Pre-Nutrition and Dietetics (p. 101)
Pre-Physical Therapy (p. 102)
Pre-Speech-Language Pathology (p. 70)
Product Design (p. 140)
Associate of Fine Arts (A.F.A.)
Visual Arts (p. 148)

ACADEMIC MINORS

Biological Sciences Department
Biology (p. 59)

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- Accounting (p. 63)
- Business Administration (p. 64)
- Economics (p. 64)
- Global Development (p. 64)
- Leadership (p. 64)
- Marketing (p. 64)

Chemistry Department
- Chemistry (p. 66)

Communication Department
- Drama (p. 71)
- International Communication (p. 71)
- Journalism (p. 71)
- Media and Production Ministry (p. 72)
- Speech Communication (p. 72)

Computer Science Department
- Computer Science (p. 75)
- Cybersecurity (p. 75)

School of Education and Psychology
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- Psychology (p. 86)
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English and Modern Languages Department
- Language (p. 97)
- Arabic
- French
- German
- Italian
- Portuguese
- Spanish
- Literature (p. 96)
- Writing (p. 97)

Health and Physical Education Department
- Athletic Coaching (p. 102)
- Health (p. 103)
- Physical Education (p. 103)

History and Philosophy Department
- History (p. 105)
- Legal Studies (p. 105)
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Mathematics Department
- Mathematics (p. 116)
- Mathematics for Middle School Teachers (p. 116)

Music Department
- Music (p. 119)

Physics Department
- Physics (p. 127)

School of Social Work and Sociology
- Social Welfare (p. 134)
- Sociology (p. 134)

Technology Department
- Aviation (p. 141)
- Technology (p. 141)

School of Theology
- Biblical Languages (p. 143)
- *Religion (p. 144)*

Visual Arts Department
- *Film (p. 149)*
- *Fine Art (p. 149)*
- *Graphic Design (p. 149)*
- *Photography (p. 149)*

CERTIFICATES

Community Impact
Professional Writing (p. 72)
Social Media and Digital Marketing (p. 72)
X + Data (p. 114)

PREPROFESSIONAL CURRICULA

The University offers courses required for admission to professional or technical schools. Most preprofessional curricula require two units of high school mathematics (algebra and geometry.) All programs should be planned in consultation with and approved by the assigned academic advisor.

Requirements for admission to preprofessional programs vary among different professional schools and are subject to change. Students should request information about current admission requirements from the professional school they plan to attend.

Dentistry (p. 128) (4)
Law (p. 128) (4)
Medical Radiography (p. 128) (1)
Medicine (p. 129) (4)
Nursing (p. 130) (2)
Occupational Therapy (p. 130) (2)
Optometry (p. 130) (2)
Orthotics and Prosthetics (p. 130) (2)
Pharmacy (p. 131) (2)
Physical Therapy Assistant (p. 132) (1)
Physician Assistant (p. 132) (2)
Veterinary Science (p. 133) (4)

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

GRADUATE DEGREES

(See Graduate Bulletin for details.)
Master of Business Administration (M.B.A.)
Master of Education (M.Ed.)
Concentrations:
- Educational Leadership
- Literacy Instruction
- Special Education

Teaching and Learning
Master of Engineering (M.Eng.)
Master of Initial Teaching (M.I.T.)

Specializations:
    Instruction with Certification (Elementary)
    Instruction with Certification (Secondary)
Master of Science (M.S.)
    Biology
Master of Social Work (M.S.W.)
Doctor of Social Work (D.S.W.)

ACADEMIC CALENDAR 2024-2025

Autumn Quarter

September

22-27, S-F	University Experience and Orientation
30, M	Instruction Begins

October

4, F	Last Day to Register
4, F	Last Day for Registered Students to Add a Class or Change to/from Audit

November

19, T	Last Day to Withdraw from Classes

December

16-18, MTW	Final Exams

Winter Quarter

January

6, M	Instruction Begins
10, F	Last Day to Register
17, F	Last Day for Registered Students to Add a Class or Change to/from Audit

February

25, T	Last Day to Withdraw from Classes

March

17-19, MTW	Final Exams

Spring Quarter

March

31, M	Instruction Begins

April

4, F	Last Day to Register
11, F	Last Day for Registered Students to Add a Class or Change to/from Audit

May

20, T	Last Day to Withdraw from Classes

June

9 -11, MTW	Final Exams
15, S	Commencement (8:30 a.m.)

Summer Quarter

June

23, T	Instruction Begins

August

15, F	Eight-week Session Ends
29, F	Ten-week Session Ends

OUR MISSION

Vision

A community of faith and discovery committed to the following core values:

- Excellence in thought
- Generosity in service
- Beauty in expression
- Faith in God

Philosophy

Walla Walla University is founded on Christian teachings and values as understood and appreciated by the Seventh-day Adventist Church. Central to these teachings is the belief that every person is created in the image of God as a being of inestimable value and worth, imbued with powers of intelligence, stewardship, and creativity akin to those of the Creator. Walla Walla University, therefore, seeks in its mission to foster the unique gifts of every individual within this Christian community of faith and discovery. Committed to excellence in thought, the University seeks to impart a broad knowledge of the arts, sciences, and professions by careful instruction and open inquiry at both the undergraduate and graduate levels. Recognizing that God is the source of all truth, goodness, and beauty, the University seeks to convey to students a wisdom that translates academic achievement into responsible citizenship, generous service, a deep respect for the beauty in God's creation, and the promise of re-creation through Jesus Christ.

THE UNIVERSITY CAMPUS

Walla Walla University is located in the city of College Place, in the historic, fertile Walla Walla Valley of southeastern Washington. The Old Oregon Trail, passing west of the campus, leads directly to the nearby Whitman Mission National Historic Site. The scenic Blue Mountains to the east and the Snake and Columbia Rivers to the north and west offer opportunities for recreation and relaxation.

The University was originally established as Walla Walla College on December 7, 1892, in harmony with a resolution unanimously adopted at the General Conference of Seventh-day Adventists held in Battle Creek, Michigan in 1891.

MONTANA CAMPUS. Walla Walla University has a branch campus in Billings, Montana maintained by the Wilma Hepker School of Social Work and Sociology. This campus serves the needs of students enrolled in the Master of Social Work program.

PORTLAND CAMPUS. Walla Walla University operates a separate campus in Portland, Oregon maintained by the School of Nursing. The campus is located on the grounds of the Adventist Health Portland hospital and consists of an academic building and a residence hall for students enrolled as nursing majors.

ROSARIO BEACH MARINE LABORATORY. Walla Walla University operates a biological research and academic facility at Rosario Beach, adjoining Deception Pass State Park, Anacortes, Washington. This facility occupies 40 acres of beach and timberland, and includes laboratory buildings, a cafeteria, assembly hall, and cabins for student and staff housing.

OUR HERITAGE

Founding a college is a tremendous undertaking. It can be especially intimidating in the dead of winter, with snow on the ground and quilts for heat. Such was the case in 1892, when Walla Walla College began on a frozen prairie a few miles west of Walla Walla, Washington. One building, five teachers, 101 students of all grades. If you like pioneer stories, we've got one for you. Sally Sutherland, wife of the first president, describes the scene:

> "We began school without locks on the doors, with the kitchen unfinished, and without heat in the building. I kept the tuition (money) under my pillow with my bed in front of the door . . . The first breakfast was cooked on a borrowed stove, with the pipe leading out the kitchen window, and was served to eighty hungry students in a cold dining room...Thus, by the light of kerosene lamps and amid the sound of hammers on the unfinished building, those pioneer students studied, played, laughed and worked through their college days..."

The first few years were a struggle for survival. The college finally granted a full four-year degree in 1909. The next decade saw the founding of the Associated Students of Walla Walla College, and of the Alumni Association, and expansion of the academic program.

At the conclusion of World War II, WWC began a twenty-year period of expansion both academically and physically. Programs such as engineering were started during this period. The biology department added the Rosario Beach Marine Laboratory in 1954. A large scale building program culminated in the 1960s with the addition of several modern buildings, including the new College Church, Kretschmar Hall, Fine Arts Center, and Rigby Hall.

In the 1970s, WWC completed the Winter Education Complex and added a new campus for the School of Nursing in Portland, Oregon. The college remained forward-looking in the early 1980s with a new Alumni Center and plans for a major endowment drive to carry WWC into the 21st century.

The School of Social Work began a masters program (M.S.W.) in the late 1980s, expanding eventually to campuses in Montana--to Missoula in 1996; to Billings

in 2001. The program expanded again to offer the university's first doctoral degree (D.S.W.) in 2020.

A new Administration Building was completed in early 2007. The building houses the major administrative offices as well as the offices of Marketing and Enrollment Services and University Relations. In addition, it serves as the home for three academic departments: English and Modern Languages, History and Philosophy, and the School of Theology.

On September 1, 2007, Walla Walla College, following a vote by its constituency and approval by its Board of Trustees, officially became Walla Walla University.

Today, Walla Walla University has locks on the doors, heat in the buildings, a cafeteria and a business office to replace Sally Sutherland's pillow. Some things haven't changed, though. The faculty and students still study, work, play, and pray together. Alumni are loyal to their school and support it generously. And the pioneer dedication to religion and Christian education that has strengthened Walla Walla University for over 100 years is very much alive today.

STUDENT LIFE

Walla Walla University is dedicated to the academic, spiritual, social and physical aspects of a total education. Believing that these dimensions are closely related, the University provides a broad range of activities and opportunities designed to add depth and maturity to a Christ-centered life.

CHRISTIAN COMMITMENT

Walla Walla University welcomes students from all backgrounds and asks them to respect the distinctive Seventh-day Adventist way of life both on and off campus. Adventism, at its best, is characterized by an emphasis on Christian faith and spiritual discipleship; a personal relationship with a gracious, loving, Creator God; moral and intellectual integrity and maturity of character; the sanctity of life; a positive regard for differences of conviction and perspective; healthful living, daily worship and Sabbath rest.

SABBATH OBSERVANCE. The Seventh-day Sabbath is observed at Walla Walla University from sunset Friday to sunset Saturday. Students are expected to treat these sacred hours with reverence.

CHURCH AND SABBATH SCHOOL. Each Sabbath, the Walla Walla University Seventh-day Adventist Church offers a formal opportunity for worship and spiritual renewal. There are also several less formal student-led sabbath programs to choose from. The Sabbath School program provides numerous settings campus-wide for formal and informal group Bible study, prayer, music, reflection and discussion.

CHAPEL EXPERIENCE. The chapel experience at WWU—known as *CommUnity* —includes Tuesday assembly and other events that offer opportunities for the entire campus to gather for worship, academic reflection and discussion, celebrations of school spirit, social outreach, and civic enlightenment. These events are important to the spiritual and social unity of the University family. Most undergraduate students are required to participate.

WORSHIPS. Providing programs conducive to academic and spiritual growth is the reason Walla Walla University exists. To preserve this distinctive objective, and to develop a habit of worship, selected attendance at a variety of worship events is required for students living in the residence halls. Morning prayer services, small groups, and evening worships are available every day to give students several opportunities to meet the requirement.

CAMPUS MINISTRIES. Campus Ministries is an organization on campus, led by the Campus Chaplain and student leaders, that promotes religious understanding and activity on and off campus. Typical activities include Friday evening programs, a variety of worship opportunities throughout the week, small groups, prayer meetings, opportunities to socialize in a Christian context, and community service projects.

OFFICE OF STUDENT MISSIONS. Through the Student Missions (SM) Office, many WWU students take advantage of international student mission and North American volunteer opportunities. Participating students typically spend up to one year away from the WWU campus in volunteer service settings worldwide.

VOLUNTEER MINISTRIES. Involvement in ministry on campus, at the campus church, and in the community are an integral aspect of a community committed to being generous in service. A wide range of opportunities are provided to serve in these areas, as well as service days throughout the year, Sabbath afternoon outreach events, and travel to churches and academies throughout the Northwest to put on vesper programs and church services.

SMALL GROUPS. Campus Ministries (Chaplain's Office) encourages spiritual growth in small groups. This is vital to the religious life of Walla Walla University. Many groups meet weekly on campus for encouragement and spiritual growth.

PRAYER MINISTRIES. Campus Ministries (Chaplain's Office) provides a variety of opportunities for times of singing, praying, and spiritual support.

SOCIAL OPPORTUNITIES

Walla Walla University places an emphasis on providing on-campus social opportunities consistent with its Christian mission.

ASSOCIATED STUDENTS OF WALLA WALLA UNIVERSITY. All WWU faculty and regularly enrolled undergraduate students are members of the ASWWU. ASWWU elected officers are responsible for a wide range of social and religious activity planning, and for representing student needs and concerns to WWU administrators. The ASWWU is also responsible for production of the Mask online student directory, the Collegian weekly student newspaper, and the Mountain Ash yearbook. ASWWU is sponsored by the Assistant Vice President of Student Life.

CAMPUS CLUBS. Students of varying interests and social tastes support a variety of campus clubs and interest groups. Most academic departments sponsor organizations designed to foster academic interaction in more informal settings. Other campus clubs include Aleph Gimel Ain (AGA), residence hall women; Omicron Pi Sigma (OPS), residence hall men; and Village Club.

LOCAL OPPORTUNITIES. In addition to on-campus social activities, WWU students take advantage of a variety of local cultural opportunities. These include performances by the Walla Walla Symphony, art exhibits, lectures by leading political and entertainment personalities, and live theatrical productions.

CAMPUS SPORTS AND RECREATION

ATHLETIC OUTREACH. The athletic program encourages students to grow in their Christian experience and develop a willingness to share that relationship with others. The opportunity is available for the student-athlete to be an active witness on the WWU campus and the community around us. Student-athletes can be active witnesses on the WWU campus and the community around us.

ATHLETIC PROGRAM. Recognizing that athletics are an integral part of campus life at WWU, the athletic program is designed to provide opportunities for our student-athletes to participate and excel in high-level athletic endeavors. The performance-based activities are designed to move beyond traditional intramural sports and encompass the following: Both men's and women's teams for soccer, volleyball, cross country, golf, and basketball.

INTRAMURALS. A recreational sports program in individual and team sports that encourages campus-wide involvement at all skill levels. Many WWU students participate in at least one intramural sport during the school year.

REGIONAL OPPORTUNITIES. Regional sporting opportunities include wind-surfing on the nearby Columbia and Snake Rivers; hiking, mountain biking, and rock climbing in the Blue Mountains, or skiing/snowboarding at any of several ski resorts.

ASWWU OUTDOORS AND MT. RENTS. These ASWWU programs provide students with opportunities to connect to nature through a variety of outdoor recreational trips, educational courses, and rental gear for outdoor adventures in the Pacific Northwest during the school year.

STUDENT HOUSING

RESIDENCE HALLS. Students under the age of 22 who have successfully completed fewer than 136 credits must live in a Walla Walla University residence hall. Students enrolled in fewer than 6 credits for in-person classes are not required to live in the residence halls. Those enrolled in fewer than 6 credits must seek approval to live in the residence halls. Requests may be sent to residencehalls@wallawalla. Residence Hall housing is limited to students aged 24 and under only, and not for family members of students. Campus residence hall options include:

Foreman/Conard Hall. This residence hall complex houses approximately 400 women. The Foreman portion is a seven-story high-rise for upper-division women, featuring a fitness center, elevator service and air-conditioned rooms. The Conard portion includes a large worship room, study areas, and small parlors. Foreman/Conard provides laundry and kitchen facilities.

Sittner Hall. Accommodating approximately 450 men. This residence hall includes lounges, a recreation room, a large collaborative study space, and health club facilities.

Hansen Hall, Portland Campus. Hansen Hall is designated for unmarried students and is adjacent to the WWU School of Nursing and Adventist Health Portland. Housing for students older than age 24 may be available to Portland campus students based on availability and approval. Requests may be sent to hansen.hall@wallawalla.edu.

OFF-CAMPUS HOUSING. Village Housing has off-campus apartments and houses to meet a variety of needs. To reside in Village Housing, students must be enrolled full-time in a degree-track program and meet eligibility to live off campus. Most units are unfurnished. To request alternative housing, please contact the Village Housing office at village@wallawalla.edu or telephone (509) 527-2109

STUDENT SERVICES

INFORMATION TECHNOLOGY. Information Technology operates computer systems for the use of faculty, staff, and students of WWU. All systems are connected to the internet by a campus-wide wired and wireless computer network. To do their classwork, students can use campus computer labs or personal computers connected to the campus network. On campus connections can be made via wireless or LAN

while off-campus access can be accomplished through the use of the student VPN.

A wide variety of software applications are available for the use of faculty, staff, and students. These include popular programs for word processing, spreadsheets, databases, programming languages, graphic design, CAD, communications, and mathematical computation. All faculty, staff, and students also have access to Office 365 applications which can be accessed online or downloaded onto personal devices.

CENTER FOR HUMANITARIAN ENGAGEMENT

Located in Kretchmar Hall, Room 217
Contact information: (509) 527-2100
che@wallawlla.edu | wallawalla.edu/CHE

Living out generosity in service is central to the mission of Walla Walla University. The Center for Humanitarian Engagement (CHE) promotes a campus-wide lifestyle of service by connecting the WWU campus with service-oriented tools, resources, and opportunities. Determined to help WWU students find a calling—not just a career—the CHE works to build long-term relationships with the community and plugs students with specific skills in to the needs of local and global organizations.

CHE serves as a link between WWU students and incredible opportunities to serve both on campus and in the community. Ways to engage with service include:

- Weekly service opportunities (C.A.R.E. Weekends)
- Fall Service Day and Spring Tri-College Community Day
- The Community Impact Certificate
- Blue Zones Project Walla Walla Valley
- Blue Mountain Volunteer Corps – a guide to volunteering in the Walla Walla Valley
- Many service-oriented student clubs and organizations

Make sure and follow CHE on Instagram for more details. www.instagram.com/che.wwu

ACADEMIC SERVICES

KGTS/POSITIVE LIFE RADIO NETWORK

KGTS is federally licensed as an educational, community-service station. Owned by Walla Walla University and operated as an Academic Support department, the station serves the Communication Department and others by training students in broadcasting, management, audio production, sales and development, engineering and research. KGTS/Positive Life Radio Network is funded primarily by listeners and local businesses with support from WWU. (509) 527-2991 or www.plr.org

At Positive Life Radio, we are compelled to:

- Be approachable
  Philippians 1:9-11 So this is my prayer: that your love will flourish and that you will not only love much but well. Learn to love appropriately. You need to use your head and test your feelings so that your love is sincere and intelligent, not sentimental gush... making Jesus Christ attractive to all, getting everyone involved in the glory and praise of God.
- Demonstrate integrity
  1 Chronicles 29:17 I know, my God, that you test the heart and are pleased with integrity. All these things have I given willingly and with honest intent. And now I have seen with joy how willingly your people who are here have given to you.
- Pursue a devotion to service
  Matt 5:14-16 Here's another way to put it: You're here to be light, bringing out the God-colors in the world. God is not a secret to be kept. We're going public with this, as public as a city on a hill. If I make you light-bearers, you don't think I'm going to hide you under a bucket, do you? I'm putting you on a light stand. Now that I've put you there on a hilltop, on a light stand—shine! Keep open house; be generous with your lives. By opening up to others, you'll prompt people to open up with God, this generous Father in heaven.

Who We Are:

- A community of believers—the staff, the listeners, supporters and friends.
- A cooperative effort of partnering stations around the Northwest—and around the world on our website.
- Financially supported and programmed for people of many faiths.
- Ownership of stations broadcasting Positive Life Radio. All station owners are non-profit organizations as defined by the IRS.

How We Do It:

- Music with a message that encourages and challenges us all.
- Heavy involvement with community events: bringing you concerts by Christian artists, assisting local churches in promoting their events, and partnering with them in serving the communities we're in.
- Through our Hands & Heart initiative. International projects such as Rice for Cambodia and Days of Compassion; local projects such as Christmas in July food drive.

Why We Do It:

- We have a love for God, our communities, our neighbors, and the beautiful Northwest.
- We are excited about sharing with others how God has changed us and can change them as well.

WWU LIBRARIES

Faculty librarians, library staff, and student assistants seek to inspire excellence in thought by bringing people and information together in innovative ways at the WWU Libraries including Peterson Memorial Library on the College Place campus, the School of Nursing Library on the Portland campus, the MSW focused library on the Billings campus, and distance learning students. From each campus, librarians are available to facilitate student success by helping students learn information literacy concepts, connect to reference and research support, and access academic sources.

LEARN. DEVELOPING THE INFORMATION LITERATE STUDENT. Beginning with JumpStart, the university library's Information Literacy Program supports student growth in research and encourages critical thought about information and learning processes throughout the student's academic career. Closely aligned with the university's general studies objectives, this program provides students with the opportunity to learn about the contextual authority of information, explore information creation as a process, consider the value of information, practice research as inquiry, scholarship as communication, and searching as exploration.

CONNECT. RESEARCH AND REFERENCE ASSISTANCE. Librarians, library staff, and library student assistants are dedicated to serving the information needs of students and faculty. They seek to facilitate student success through assistance in finding articles and other resources for papers, speeches, and other assignments through Research Guides, databases, face-to-face interactions, chat and email reference, and the LibAnswers Knowledge Base. More in-depth research consultation with faculty librarians is also available.

ACCESS. RESOURCES AND RESEARCH CENTRAL. Research Central, WWU's online discovery system, connects students and faculty on all campuses to the WWU Libraries' collections. The combined WWU libraries contain over 490,000 items, including books, eBooks, print and online journals, videos, DVDs, and streaming video. Over 100 full-text databases provide access to thousands of journal articles, academic videos, and reference resources. Subscriptions for many of the library's databases are made possible by membership in library consortia such as the Adventist Library Information Cooperative (ALICE) and the Orbis Cascade Alliance. Off-campus access is available to current students and faculty with their university login.

Research Central also connects students to resources in the university's Curriculum Library (School of Education), Hutto Patterson Research Center (history department), and the English department's film literature collection.

Summit Borrowing in Research Central, made available through membership in the Orbis Cascade Alliance, offers direct access to over 28 million items, including books, eBooks, sound recordings, and films held by academic libraries throughout Washington, Oregon, and Idaho. College Place and Portland students, faculty, and staff may request Summit items online directly through Research Central. Material pick-up is available for the Peterson or Portland libraries and delivery time is typically five to seven business days.

Interlibrary Loan. For those items not available in the university's collections or Summit, yet needed for either course work or faculty research, the university libraries offer an interlibrary loan service for resources available within the United States. Requested materials generally arrive within two weeks.

STUDY AREAS. Study spaces are available on every campus. Peterson Memorial Library offers online room reservations, accessible through the library's website, for a number of its study areas.

CURRICULUM LIBRARY. Located in Smith Hall and operated by the School of Education, the Curriculum library contains K-12 textbooks, children's literature and magazines, standardized tests, math and science manipulatives, games, puppets, laminator, computers, and maker space.

VETERANS BENEFITS

Walla Walla University is an approved training institution for veterans eligible for educational benefits. The required course load is twelve hours per quarter in order to maintain eligibility to receive maximum benefits. If you have questions about veterans' policies, please contact the Veterans Administration coordinator in the Academic Records Office (509) 527-2811.

Walla Walla University in accordance with Title 38 US Code 3679 subsection (e), adopts the following additional provisions for any students using U.S. Department of Veterans Affairs (VA) Post 9/11 G.I. Bill® (Ch. 33) or Vocational Rehabilitation and Employment (Ch. 31) benefits, while payment to the institution is pending from the VA. WWU will not prevent the student's enrollment, assess a late penalty fee, require student to secure alternative or additional funding, deny access to any resources (access to classes, libraries, or other institutional facilities) available to other students who have satisfied their tuition and fee bills.

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 University 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 University does expect students to live as members of a Christian community as detailed in the Student Handbook.

STUDENT APPEALS. Students have a right to appeal decisions and actions relating to their programs. Academic appeals should be directed to the Associate Vice President for Academic Administration, social appeals to the Vice President for Student Life, and financial appeals to the Director of Student Financial Services. If satisfaction is not obtained, students may consult the Walla Walla University Grievance Policy.

FAMILY EDUCATION RIGHTS AND PRIVACY ACT (FERPA)

In accordance with the Family Educational Rights and Privacy Act (commonly referred to as FERPA, or the "Buckley Amendment,") Walla Walla University has adopted the following policies and procedures to protect the privacy of education records. Students will be notified of their FERPA rights annually by publication in the Bulletin and on the WWU homepage.

Definitions

Walla Walla University uses the following definitions in this policy:

Student: any person who attends or has attended WWU.

Education records: any record maintained by the University which is directly related to a student, with the following exceptions:

Personal records kept by university employees which are in the sole possession of the maker and are not accessible or revealed to any other person except a temporary substitute;

Employment records unless the employment records are contingent on the fact that the employee is a student;

Right of the University to Refuse to Provide Copies

Walla Walla University reserves the right to deny copies of transcripts or other records (not required to be made available under FERPA), if the student has an overdue financial obligation to the University or if there is an unresolved disciplinary or academic dishonesty action against the student.

Disclosure of Education Records

Walla Walla University will disclose information from a student's education records only with the written consent of the student, except:

To school officials who have a legitimate educational interest in the records.

A school official is:

1. A person employed by the University in an administrative, supervisory, academic, research, or support staff position
2. A person elected to the Board of Trustees
3. A person employed by or under contract to the University to perform a special task, such as legal counsel or an auditor
4. A student serving on an official committee, such as a disciplinary or grievance committee, or assisting another school official in performing his or her task

A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill his or her task. Examples include:

- To perform a task that is specific in his or her job description or by a contract agreement
- To perform a task related to a student's education
- To provide a service or benefit relating to the student or student's family, such as health care, counseling, job placement, or financial aid
- To supply relevant information to officials of another school, upon request, in which a student seeks or intends to enroll
- To support certain officials of the U.S. Department of Education, the Comptroller General, and state and local educational authorities, in connection with certain state or federally supported education programs
- To fulfill a student's request for, or receipt of, financial aid, as necessary to determine the eligibility, amount, or conditions of the financial aid, or to enforce the terms and conditions of the aid
- To accommodate a state law requiring disclosure that was adopted before November 19, 1974
- To enable organizations to conduct certain studies for, or on behalf, of the University
- To allow accrediting organizations to carry out their functions
- To comply with a judicial order or a lawfully issued subpoena
- To support appropriate parties in a health or safety emergency

- To an alleged victim of any crime of violence or sexual harassment offense of the results of any institutional disciplinary proceeding against the alleged perpetrator with respect to that crime or offense

Record of Requests for Disclosure

Walla Walla University will maintain a record of all requests for and/or disclosure of information from a student's education records. The record will indicate the name of the party making the request, any additional party to whom it may be re-disclosed, and the legitimate interest the party had in requesting or obtaining the information. The record may be reviewed by the student.

Directory Information

Walla Walla University designates the following categories of student information as public or "Directory Information." Such information may be disclosed by the institution at its discretion.

- Name
- Address
- Telephone number
- Email addresses
- Current enrollment status (e.g. undergraduate, graduate, full-time, part-time, or not enrolled)
- Dates of attendance
- Class standing
- Previous institution(s) attended
- Major field of study
- Awards and honors (including Dean's List)
- Degree(s) conferred (including dates)
- Visual images (photographs or videos)
- Participation in officially recognized activities and sports
- Height, weight, and hometown of athletic team members

In addition, WWU has designated date of birth as limited directory information; it may be used only as detailed below:

- Date of birth is only released to official agencies as required for matching student records (e.g., National Student Clearinghouse) or as positive identification of a student when furnished by a person making an inquiry.

Currently enrolled students may withhold the disclosure of Directory Information by going to Academic Permissions in myWWU. Directory Information will then be withheld indefinitely until the student unselects it online or the Academic Records Office receives in writing a revocation of the request for nondisclosure.

Walla Walla University will honor a request to withhold information listed but cannot assume responsibility to contact the student for subsequent permission to release the requested information. Regardless of the effect upon the student, the institution assumes no liability as a consequence of honoring instructions that directory information be withheld.

Correction of Education Records

If students believe that any information contained in their education records is inaccurate, misleading, or in violation of their privacy rights, they may request in writing that the office which contains those records amend them. Students should identify the part of the record they want changed and specify why they believe it is inaccurate, misleading, or in violation of their privacy rights.

That office will reach a decision and inform students in a reasonable amount of time after receiving the request. If the records custodian refuses to amend the record, students have the right to a hearing. This hearing will be conducted by an appropriate committee appointed by the Academic Vice President of the University. The hearing will be held within a reasonable amount of time after the request for a hearing has been made. The hearing committee will notify the student, reasonably in advance, of the date, place, and time of the hearing.

Students will be afforded a full and fair opportunity to present evidence relevant to the issue raised. Students may be accompanied by one or more other persons. The committee will make its decision in writing based on the evidence presented at the hearing. The decision will include a summary of the evidence presented and the reasons for the decision.

If the hearing committee supports the complaint, the education record will be amended accordingly and students will be so informed. If the hearing committee decides not to amend the education record, students have the right to place in the education record a statement commenting on the challenged information and/or stating the reasons for disagreeing with the decision. This statement will be maintained as part of the education record as long as the contested portion is maintained, and whenever a copy of the education record is sent to any party, the student's statement will be included.

ADMISSION TO THE UNIVERSITY

Walla Walla University welcomes to its school family students who wish to obtain a quality education in a Christian environment (Walla Walla University is affiliated with the Seventh-day Adventist Church).

Students, faculty, and staff share in the mutual obligation to uphold the Christian philosophy and policies of the University.

It is the policy of Walla Walla University to provide equal educational opportunity without regard to age, race, color, religion, national origin, sex, marital status, disability or other protected classes as required by local, state, and federal laws that apply to the University. In addition, the University provides equal employment opportunity without regard to age, race, color, national origin, sex, marital status, disability or other protected classes as required by local, state, and federal laws that apply to the University.

ADMISSION REQUIREMENTS

(U.S. Citizens, Canadian Citizens and U.S. Permanent Residents)

(International applicants refer to Admission Requirements and Procedures for International Students (p. 23))

Walla Walla University practices a selective admissions policy. To be considered for admission to the University, students should demonstrate scholastic achievement, good character, and financial support.

Prospective students must submit a completed application form available online. Paper copies of the official form are available from the Marketing and Enrollment Services Office. Although Walla Walla University has rolling enrollment for most areas of study, the preferred deadlines are: Autumn Quarter, September 1; Winter Quarter, December 1; Spring Quarter, March 1; Summer QUarter, June 1.

The following entrance requirements apply to students entering all bachelor and associate degree programs.

FIRST-TIME FRESHMEN. Students who have not received post-secondary credit from another institution after the summer, or subsequent summers, of their high school graduation. Minimum requirements for admission include:

1. Official transcript from the high school graduating the student. Transcripts from the accredited high school must be received from the school registrar. Transcripts from an unaccredited high school must be signed and sealed by a designated school official. Home school transcripts may need to be notarized as an official transcript representing the student's academic work and signed by the home school program administrator. All transcripts must show a cumulative grade point average and date of graduation or completion of high school.
2. A minimum unweighted cumulative grade-point average of 2.5 for all high school work.
3. The high school transcript must show completion of the following credits and evidence of meeting the student's home state requirements:
    a. English – 40 credits
    b. History – 20 credits
    c. Math – 30 credits* to include Algebra 2/Intermediate Algebra, or equivalent.
    d. Science – 10 credits
    e. Laboratory Science – 10 credits
4. Transcripts from unaccredited high schools and unaccredited home school programs must demonstrate that all their state requirements for high school graduation have been completed.
5. Students who cannot provide an official transcript that meets the above requirements 1-4 must provide official GED scores showing a total score of 640 or higher with sectional scores of 150 or higher.
6. Official copy of the ACT and/or SAT exam scores, while not required for admission, may be used for scholarship and advising purposes.
7. Satisfactory personal reference. One completed recommendation form from a teacher, school counselor, principal, employer, pastor, co-worker, or other adult who has insight into the character/academic ability of the prospective student. This person must be a non-family member.
8. Official copy of TOEFL/iTEP/IELTS test scores if English is not the student's primary language. A score of 79 or higher is required for the TOEFL, 3.9 or higher for the iTEP, or 6.5 or higher for the IELTS to be admitted. English proficiency scores may be waived if the most recent four years of school attendance has been in a school where the language of instruction was English.*Students who are missing Algebra 2/Intermediate Algebra, or equivalent, can be accepted with a cumulative grade point average of 2.5 or higher but must make up the math deficiency. If the math deficiency is not made up before coming to Walla Walla University, they will be placed in MDEV 003.

Occasionally students are admitted into WWU who have a high school grade-point average below 2.5 and/or who lack one or more of the other requirements for entrance. Students with a high school grade point average below 2.5, if admitted, will be admitted on academic probation as listed under Conditions of Academic Probation, during the first term of enrollment. If this requirement is met, the student may continue enrollment on regular basis. If a 2.0 term grade-point average is not achieved during the probationary term, the student is automatically dismissed from the University. If Conditions of Academic Probation have been met, the student may continue enrollment under normal status.

Any student admitted with a grade-point average below 3.25 is required to enroll in GNRL 102 (p. 188) On Course.

A student who has "P" grades (pass grade) on their high school transcript should be aware that in order for a student to meet the entrance requirements and/or be eligible for the First-time Freshman scholarship grade point average criteria they must produce a transcript with a minimum of two years of calculable high school grades from an accredited agency. For scholarship purposes, If a student is unable to produce the required amount of calculable grades, they will default into the ACT/SAT test score.

A student accepted with entrance deficiencies must either make up the deficiencies prior to enrollment or enroll in the appropriate remedial course(s) at WWU. The student should consult the Director of Academic Advisement about specific courses for making up these deficiencies. All students must satisfy the entrance requirements in mathematics before enrolling in any college-level mathematics course.

In order to continue enrollment at WWU, students must make up all entrance deficiencies by the end of the third term of enrollment at WWU.

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

	Semester Credits
Foreign Language	20
Social Studies	10
Laboratory Science (additional)	10
*Mathematics	10

*Some departments require 10 semester credits of advanced mathematics, including trigonometry. These departments include Chemistry, Computer Science, School of Engineering, Mathematics, Physics, and School of Business.

TRANSFER STUDENTS. Transfer students are those who have received post-secondary credit from another institution after the summer of their high school graduation. Minimum requirements for admission include:

1. A grade-point average of 2.00 on all transferable, post-secondary work from all institutions combined.
2. An official final high school transcript with graduation date from an accredited secondary school, or an official GED score report. GED scores must show a total score of 150 or higher for each section of the exam and a total average score of 640 or higher. (Transfer students who have junior or senior status [90+ quarter credits] are not required to supply WWU with an official high school transcript.)
3. Official transcripts from all post-secondary institutions attended. Any student receiving GI Bill®* education benefits while attending WWU is required to obtain transcripts from all previously attended schools and submit them for review of prior credit.
4. Satisfactory personal reference. WWU requires one completed recommendation form from the most recent educational institution attended. The recommendation form needs to be completed by a former teacher, guidance counselor or school administrator. **Transfer students who apply to the WWU School of Nursing are required to submit three completed recommendation forms. Students who have been academically dismissed or have been on academic probation and students who have been convicted of a misdemeanor or felony may be asked to submit recommendation forms or court papers.** Recommendation forms may be submitted online or emailed directly to admissions@wallawalla.edu.
5. Official copies of TOEFL/iTEP/IELTS test scores if English is not the student's primary language. Ask the testing service to send these scores directly to the Walla Walla University Admissions Office. English proficiency scores may be waived if the most recent four years of school attendance has been in a school that uses English as the medium of instruction.

Students who have not previously attended a Seventh-day Adventist college, please see the Religion and Theology section under General Studies requirements.

*GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs (VA). More information about education benefits offered by VA is available at the official U.S. government website.

Accredited Colleges. Applicants who have attended North American accredited institutions of higher education and who have official transcripts showing a minimum cumulative grade-point average of 2.00 on all course work taken may be admitted at a level determined by the number of credits transferred.

Non-Accredited Colleges. Students transferring from non-accredited institutions may be required to take validating examinations should they wish credit to be transferred to Walla Walla University.

Community Colleges. A minimum of 96 of the 192 quarter hours required for graduation must be taken at a four year accredited college or university.

Vocational or Technical Credit. A maximum of 15 credits of vocational or technical courses, C- or better, taken at a regionally accredited college or university, may be transferred to Walla Walla University as general electives. Credits do not apply toward a major, minor, or general studies.

Foreign Transcript Evaluation. Transcripts received from foreign institutions will be evaluated on an individual basis. In most instances, the student will be required to obtain an official evaluation from a foreign credentialing education service. Any transcript not in English, or where the program is not similar to college/university in the USA, will require a transcript evaluation to be submitted to WWU from an NACES member evaluation service. Accepted courses will be issued a pass/fail grade and will not be calculated into the cumulative GPA for graduation.

Senior Transfer Students. Transfer students with senior standing are required to be in residence three consecutive quarters and complete a minimum of 40 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. See minimum residency requirements section of this bulletin.

Engineering Transfer Students. Students enrolled in the Engineering affiliation program will be allowed to graduate under any official Walla Walla University bulletin dated not more than three academic years prior to their first year on this campus. Students who withdraw 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 their withdrawal.

Engineering transfer students applying for admission to Walla Walla University must supply a letter of recommendation from one of their engineering professors at their most recent educational institution attended. Recommendation forms may be submitted online.

Nursing Transfer Students. Refer to the Nursing section of this Bulletin for additional requirements.

Military Credits. Two quarter credits of the general studies physical education requirement will be waived for students eligible for VA benefits. Students who provide an official accredited military transcript listing Basic Training may be awarded a maximum of 6 quarter credits of physical education. The remainder of the transcript will be evaluated as other accredited transcripts. No credit will be awarded for specialty training or vocational programs.

International Baccalaureate (IB) Program. Students who engaged in college-level study in high school through the International Baccalaureate (IB) Program can obtain credit toward a WWU degree on the basis of their performance on the higher level IB exam. Students should submit an official IB transcript to the Academic Records Office for evaluation. All IB evaluations will be in collaboration with the appropriate WWU department. Credits accepted will be on a pass/fail basis.

Appeal of Transfer Credit Evaluation. If a student questions the evaluation of their transfer credits they may appeal to the Registrar. The student may be requested to submit a syllabus of the course(s) in question and/or any documents that may support the appeal. If resolution is not met in consultation with the Registrar, the student may petition Academic Standards Committee for a review of their request.

POSTGRADUATE STUDENTS. Students who have completed a baccalaureate degree from a regionally accredited institution and are not applying for an advanced degree. Minimum requirements for admission include:

1. A grade-point average of 2.00.
2. Official transcripts from all post-secondary institutions attended.
3. Satisfactory personal reference. Recommendation forms may be submitted online.
4. If English is not the student's primary language, then official copies of English proficiency test scores (TOEFL, iTEP, or IELTS) unless graduation is from a four-year English-speaking institution. Request the Testing Service to send these scores directly to the Walla Walla University Admissions Office.

RETURNING STUDENTS. Students who have attended Walla Walla University previously but were not enrolled at Walla Walla University the preceding quarter (excluding summer quarter) are classified as returning students. Returning students must reapply for admission into and be accepted again to be enrolled at Walla Walla University. Minimum requirements for readmission include:

1. A grade-point average of 2.00 on course work taken at Walla Walla University or a cumulative grade-point average of 2.00.
2. An acceptable citizenship record while at Walla Walla University.
3. Official transcripts from each post-secondary institution attended since the last quarter at Walla Walla University with a grade-point average of 2.00.

NONMATRICULATED STUDENTS. These are students who are not seeking or ineligible for regular admission and who are not candidates for a degree or financial aid from Walla Walla University. Nonmatriculated students may register for credit for any course for which they have sufficient academic background and teacher approval. By completing requirements for regular admission, a nonmatriculated student may become a degree candidate. Application must be made through the WWU Records Office.

GUEST STUDENTS. These are students who have been in residence at other institutions of higher

education and who are not candidates for a degree or financial aid from Walla Walla University. Guest students must show that they are in good and regular standing at the university or college to which the credits are to be transferred. The application process is initiated through the Office of the Vice President for Academic Administration.

DUAL CREDIT STUDENTS. Students who are currently enrolled as a junior or senior in secondary school, have a high school GPA of 3.0 or higher, have successfully completed Algebra I and Geometry with a C or higher, and who have permission from their high school instructor or principal, may register for selected Walla Walla University courses up to eight credits per high school semester (16 credits per year). Dual credit students are not eligible for financial aid. Application needs to be made through the WWU Academic Records Office. Please see Dual Enrollment Policies (p. 34) in the Academic Information and Policies section of this bulletin for more details.

ADMISSION PROCEDURES

(U.S. and Canadian Citizens and Permanent Residents)

APPLICATION. Applications must be completed entirely, to begin the admissions process. Applications may be submitted on-line at apply.wallawalla.edu. School of Nursing transfer students are required to complete a general WWU application which will include nursing specific questions.

OFFICIAL TRANSCRIPTS. Request official transcripts from each institution attended and have them sent directly to the Admissions Office of Walla Walla University. *Failure to indicate at the time of application that work has been taken at other institutions invalidates the admission process.* Undergraduate students must have on file with the University either official final high school transcripts, official GED scores or California state high school proficiency scores. Students who complete a GED may submit official transcripts of all high school work completed. Transfer students who are entering WWU are not required to supply an official high school transcript if they have 90 or more quarter credits. Students already holding a baccalaureate degree are not required to submit high school transcripts. Should transcripts not be received in the time-frame described under the section Registration Without Official Transcripts, student status and financial aid at Walla Walla University may be affected. International transcripts must be evaluated by any NACES member transcript evaluation company.

Academic records become the property of the University and may be released intra-campus for purposes of academic advisement/evaluation/administration as deemed necessary. Copies or originals of admission documents cannot be released to the applicant. **T**ranscripts, applications and other credentials submitted for admission will be destroyed after two years if the applicant does not enroll.

PERSONAL REFERENCES. Request one individual, who knows your academic qualities well, and is not related to you, to complete a reference form on your behalf. A possible reference may come from your academic advisor, guidance counselor, teacher/professor, or school administrator. The School of Nursing program requires three completed recommendation forms.

Students who have been academically dismissed or have been on academic probation and students who have been convicted of a misdemeanor or felony may be asked to submit additional recommendation forms or court papers and may be required to submit a background check. Recommendation forms may be submitted online or emailed directly to admissions@wallawalla.edu.

Transfer students must be in good and regular standing from the institution most recently attended when transferring to Walla Walla University. A letter of reference is requested from the most recently attended institution. Additional forms are available online.

TOEFL, iTEP, IELTS TEST REQUIREMENT. If English is not their first language, students will demonstrate the ability to pursue studies in the English language by passing the TOEFL (Test of English as a Foreign Language), the iTEP (international Test of English Proficiency), or the IELTS (International English Language Testing System). The following scores are required for entry into Walla Walla University:

A score of 79 or higher on the internet-based exam (TOEFL)
A score of 3.9 or higher on the iTEP
A score of 6.5 or higher on the IELTS

English proficiency scores may be waived if the most recent four years of school attendance has been in an a school which uses English as the medium of instruction.

LETTER OF ACCEPTANCE. After the applicants' transcripts and references have been received and approved by the Admissions Office, notification of acceptance is sent via email. Applicants should not consider themselves accepted (and should not plan to reside or work on campus) until official notification of acceptance is received. Applicants may check on the status of their application by calling (509) 527-2327, (800) 541-8900 or by emailing admissions@wallawalla.edu

ENROLLMENT FEE.

- If you are enrolling for six or more credit hours, a $200 non-refundable enrollment fee will hold your

spot at WWU. Payment of this fee allows us to confirm your WWU housing arrangements and allows you to register and be placed in classes.

- A $100 rebate will be applied to your school bill when you enroll at WWU if your fee is paid according to these deadlines:
  - Autumn enrollment - received by April 30th preceding the Autumn term.
  - Winter/Spring/Summer enrollment = received two weeks before the first day of classes for the respective quarter.
- Students who do not pay the enrollment fee by the above deadlines will lose their placement in classes and will not be allowed to enroll until the fee is paid.

MEDICAL INFORMATION. The WWU Student Life office requires students to complete an insurance form and a Personal Health Assessment record, inclusive of immunization status. Forms are available from the Student Life office or online.

CERTIFIED BACKGROUND CHECK. Applicants who have been convicted of a misdemeanor and/or felony may be required to complete a certified background check before admission to Walla Walla University. The results of the background check will be reviewed by the Walla Walla University Admissions Committee and the admissions committee will make the admissions decision to either accept or deny admission into the university. Nondisclosure of criminal activity will invalidate application/enrollment.

ADMISSION BY ALTERNATE MEANS

An individual without an accredited high school diploma who has not completed secondary school may be admitted to freshman standing on the basis of:

1. Unaccredited Home School

Students who attend unaccredited home school programs are required to meet state high school graduation requirements for home school students. An official final home school transcript must be provided to the Admissions Office. To be considered official, the transcript must be dated, signed and include the date of completion/ graduation of requirements for high school in the student's home state. Unaccredited home school transcripts do not count towards first-time freshman merit scholarships.

2. GED Scores

Average score of 640 on the four sections, with no individual score below 150. All students admitted with GED scores will take placement tests in Mathematics and English to determine appropriate courses.

3. California High School Proficiency Examination

Applicants who are under 18 years of age but have successfully completed 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 reason, goals and objective for acceleration. A copy of this letter will be sent to the applicant's high school principal and residence dean/counselor for their reactions and recommendations.

ADMISSION REQUIREMENTS AND PROCEDURES FOR F-1 VISA INTERNATIONAL STUDENTS

International applicants who are seeking to obtain an F-1 visa are welcomed to Walla Walla University when the conditions stated below are met. In many cases, certified copies of certificates issued by the Department of Education or an approved National Government agency or a university examination board will be needed to verify appropriate completion of the secondary level of education. Additional documentation may be required from specific countries. Minimum requirements for admission include:

1. A **completed application form** (including the international section).
2. A **completed financial analysis sheet** with a bank statement from the financial sponsor verifying ability to pay expenses. Note: Official government scholarships need to include an official letter from the government issuing the scholarship.
3. **Letter of recommendation** from one person who knows you well (teachers, employers, pastors, etc. No family members, please). A person recommending you may submit an **Online Reference** at wallawalla.edu/reference
4. **Certified copies** of your secondary-level certificate, with English translations if necessary. Certificate(s) with passing marks is/are required from a university preparatory school. Additional requirements include passing scores in government examinations where offered. All transcripts or transcript evaluations must come directly from the institution or evaluating organization, via email or mail. International transcripts will be evaluated in conjunction with published guidelines for each country. Any transcript not in English or where the program is not similar to college/university in the USA, will require a transcript evaluation to be submitted to WWU from an NACES member evaluation service.
5. **Official copies of your TOEFL/iTEP/IELTS test scores**. Ask the testing service to send these scores

directly to the Walla Walla University Admissions Office.

Prior to acceptance into any program and before an I-20 form is issued to international students, an $3,000 (U.S.) deposit is necessary (except Canadian and specified U.S. Trust Territory students).
See International Students (p. 237) in the Financial section of this bulletin.

STUDENT SUCCESS

ACADEMIC ADVISEMENT

Academic Advisement is an important part of a student's progress through a chosen program of study at WWU. Academic advisors assist students in their consideration of life goals and in developing an educational plan to meet those goals. Academic advisors provide students with information about career options, academic policy, procedures, resources and programs. Specific attention is given to appropriate placement and satisfactory academic progress. If a student fails to maintain satisfactory academic progress, the academic advisor works with the student to develop a plan to achieve academic success.

All degree seeking undergraduate students are assigned an academic advisor to assist them in making the most of their university experience. Preprofessional students are assigned academic advisors who are familiar with specific professional programs.

STUDENT ATHLETE ACADEMIC ATTENDANCE AND SUCCESS POLICY

INTRODUCTION. The athletics program is a valuable feature of Walla Walla University. The program provides an opportunity for students to challenge themselves physically, to develop leadership skills, to achieve an academic degree, and to grow spiritually within a supportive Seventh-day Adventist environment. The program also provides extracurricular opportunities for the university and for athletes to represent the university as they engage in competitions.

The university desires each athlete to achieve their academic and personal goals. Academic success is impacted by student engagement and course attendance, and athletes will miss some course sessions to participate in athletics. This policy provides guidance for students, instructors and athletics personnel to work together to support student success. In some instances, it may not be possible for a student to participate in athletics due to academic requirements such as clinical experiences, activity courses, courses with significant group interactions, field courses, student teaching, etc. which cannot be rescheduled.

GUIDELINES

1. Athletes may not miss more than 20% of regular course sessions in a single course due to athletics.
2. Athletes may not miss regular course sessions for practices.
3. Coaches may not penalize athletes for missing practices due to attendance of regular course sessions.
4. Athletes may not miss regular class sessions prior to 2 hours before a home competition.
5. Athletes may not miss regular class sessions prior to 30 minutes before departure for away competitions
6. Competitions may not be scheduled during final examinations.
7. Athletes who believe they are not receiving reasonable academic adjustments or support should contact the Faculty Athletics Representative (FAR) or the Athletics Program Director (APD).
8. Exceptions to these guidelines may be made with approval by the APD and the Associate Academic Vice President for special circumstances such as championship play.

STUDENT ATHLETE RESPONSIBILITIES

1. Meet with academic advisor as early as possible to plan course enrollments to minimize absences.
2. Provide instructors a complete list of regular course session which will missed due to athletic events within the first week of the course.
3. Notify instructors in advance of any conflicts due to athletic events with the completion of assessments (quizzes, exams, etc.) and make arrangements to complete them.
4. Complete and submit all assignments (homework, reports, etc.) by the same deadline as other students unless otherwise approved by the instructor.

INSTRUCTOR RESPONSIBILITIES

1. Reasonably support and accommodate student athletics and their academic success.
2. Check university email for notifications of when an athlete will miss a regular class session.
3. Do not penalize athletes for missing a regular class session due to athletic program activities beyond what occurs for other students missing classes for other excused reasons (illness etc.).
4. Submit academic progress reports as appropriate for athletes.
5. Notify the Student Success Coordinator and APD if an athlete is struggling academically or personally.
6. Check the online athletics schedule and team rosters for information if needed.

Compliance concerns regarding instructors should be referred to the Associate Academic Vice President and the APD. Concerns involving a student should be referred to the Vice President for Student Life and could result in the discontinuation of membership in the athletics program and athletics scholarships.

ACADEMIC PROBATION

The probation policy and conditions are intended to enhance the probability of academic success. Students should be aware that many types of financial aid are dependent on academic success or adequate academic progress. Students may become ineligible for financial aid for either poor academic performance (GPA) or for lack of academic progress (not successfully completing enough credits). Student Financial Services may be consulted for detailed information.

CALCULATION OF GRADE POINT AVERAGE (GPA) FOR PROBATION. For academic probation consideration, the GPA includes all Walla Walla University courses as well as the default grade of all Walla Walla University courses with a grade of Incomplete. Grades in remedial courses (courses numbered 001-100) or transfer courses do not count in the probation GPA calculation.

ACADEMIC WARNING. A student whose Walla Walla University cumulative and previous term GPAs are 2.0 or higher, but whose current term GPA is below 2.0, receives a warning notification from the Associate Vice President for Academic Administration. A warning notification is also sent to the student's academic advisor. Freshmen and sophomore students who go on academic warning who have not previously enrolled in and successfully completed GNRL 102 On Course with a C- or above, will be required to enroll.

ACADEMIC PROBATION AND DISMISSAL. Students must show satisfactory academic performance by maintaining a term and cumulative GPA of 2.0 or above. At the end of each term, students' academic performance is reviewed. Students are automatically placed on academic probation if their performance places them in one of the two categories described in the following paragraphs. Probationary status is communicated to them in writing by the Associate Vice Present for Academic Administration. A warning notification is also provided to each student's academic advisor. After the fourth day of the term, a student's probation status does not change for that term even if a subsequent grade change is submitted or an Incomplete is finished.

Students on academic probation have one term in which to demonstrate satisfactory academic achievement. During that term, they must comply with the conditions listed in the following section, "Conditions of Academic Probation." At the end of the term, each student's performance will again be reviewed.

A student is automatically placed on probation when:

1. The student's cumulative grade point average for courses taken at Walla Walla University, including default grades for Incompletes, is below 2.00.
   The student is placed on probationary status for the ensuing term, at the end of which the student must earn a term GPA of at least 2.3 (C+ average). A student who meets this requirement may continue on academic probation for the following term. When the cumulative GPA reaches 2.0, the student returns to regular status. If neither a 2.3 term GPA nor a 2.0 cumulative GPA is achieved during the probationary term, the student is automatically dismissed from the University. The Associate Vice President for Academic Administration notifies the student of the dismissal and process of potential appeal.
2. The student's term GPA at Walla Walla University, including default grades for Incompletes, is below 2.0 for two consecutive terms, even though the cumulative GPA is above 2.0.
   The student is placed on probationary status for the ensuing term, at the end of which the student must earn a term GPA of at least 2.0. A student who meets this requirement returns to regular status. If a 2.0 term GPA is not achieved during the probationary term, the student is automatically dismissed from the University. The Associate Vice President for Academic Administration notifies the student of the dismissal and process of potential appeal.

A student dismissed for academic reasons may, following at least six months' absence from the University, apply for readmission by contacting the Associate Vice President for Academic Administration. Convincing evidence will be required to demonstrate the student's commitment and potential for academic success.

CONDITIONS OF ACADEMIC PROBATION. Academic probation entails the following conditions to assist a student in improving academic performance:

1. The student must meet in person with the Associate Vice President for Academic Administration within the first three days of the term to remove the probation hold.
2. The student must complete an Academic Plan for Success form.
3. Students must also meet with the Student Success Coordinator and their mentor to discuss the completed form by the second week of the quarter.
4. Non-freshman students will be required to participate in a special mentoring program. A fee for this service will be charged to the student's account. See the Academic Fees section of the Financial Bulletin.
5. Enrollment is limited to 13 quarter credits. Students are advised to repeat courses with a grade less than C. Students with Incompletes should consider further reducing their academic load.

6. Freshmen and sophomore students who go on academic warning or academic probation who have not previously enrolled in and successfully completed GNRL 102 On Course with a C- or above, will be required to enroll.
7. Courses outside the University, such as correspondence or online classes, are not permitted.
8. Participation in the university Athletics Program, Adventist Colleges Abroad, or multiday trips that necessitate missing other classes is not permitted.
9. Extracurricular activities which necessitate class absences are not permitted.
10. The student is not permitted to hold office in any student organization or serve as a student missionary or taskforce worker.

Note: A student receiving financial aid must also meet satisfactory progress standards adopted by Student Financial Services. See the Satisfactory Academic Progress Policy in the Financial Bulletin for details.

HEALTH AND WELLNESS CENTER

COUNSELING SERVICES. The Counseling and Testing Center (C&TC) provides counseling services for WWU students free of charge for a maximum of 10 sessions during the academic year. Counseling services are available for students during Fall, Winter, and Spring quarters. Counselors can help with a variety of challenges, such as: anxiety, depression, relationship struggles, substance use, stress and time management, loss and grief, and career uncertainty. All sessions are confidential.

Applications for counseling services are available online via the student portal. Please visit our website to find options for mental health support during the summer. We begin processing applications for counseling at the start of Fall Quarter.

A therapist will contact students via WWU email to schedule a counseling appointment after they complete the Counseling Application, GAD-7 and PHQ-9 surveys, and sign the Privacy form.

Questions concerning counseling can be directed to our email at: counseling@wallawalla.edu

HEALTH CLINIC. Columbia County Health has contracted with the university to offer on campus medical services to our students. The clinic will be open Monday-Thursday from 9am-5:30pm (PST) by walk-in or appointment. To schedule an appointment call (509) 382-8349.

TESTING SERVICES. The Counseling and Testing Center (C&TC) is the official testing center for most standardized tests administered on campus. These tests are given on dates specified in advance by the testing companies, and most require advance registration. Many of these tests require a fee paid by the student directly to the testing company. Registration information is available at the Testing Center. Tests administered at C&TC include:

- Area Concentration Achievement Test ACAT (Art majors)
- College-Level Exam Program (CLEP)
- Correspondence/Distance Learning Tests
- Graduate Management Admission Test (GMAT)
- International Test of English Proficiency (iTEP)
- Major Field Test (MFT)
- Math Placement tests – offered to WWU students only
- Fundamentals of Engineering (FE)
- National Evaluation Systems (NES)
- Nursing
- Washington Educator Skills Test (WEST-B and WEST-E)

FEES AND SCHEDULING. Questions related to testing fees can be directed to the Counseling and Testing Center at (509) 527-2147 or testing@wallawalla.edu.

Students may email the Counseling & Testing Center to schedule testing appointments.

DISCOVER PROGRAM

Students who have not chosen a major are eligible to participate in the Discover Program. Services include a career fair, informational sessions, and specialized advising in choosing two exploration courses in their top areas of interest. In addition, students will be placed in core general classes that will apply to a broad scope of degree requirements. They may also register for CDEV 210 Career Development, which provides career testing and practice setting goals, job readiness training, informational interviews, and job shadowing.

STRATEGIES FOR SUCCESS PROGRAM

The Strategies for Success Program is designed to encourage and support student success by providing educational tools and practices for early academic engagement. Strategies for Success is required for any incoming first-time freshman that enters with a high school GPA less than 3.25. Students in the program will be enrolled in designated general studies classes, a non-college-level math class if appropriate, and GNRL 102 *On Course*; be placed with a specialized academic advisor and mentor, and be assigned as a pre-major in their chosen academic discipline. Students may also be required to join the Strategies for Success Program if their first or second quarter WWU GPA is less than 2.0. Continued participation will be evaluated on a quarterly basis subject to the student's academic and student life progress. If the University has not received a high school transcript by Wednesday of JumpStart

week, the student will automatically be placed in the Strategies for Success Program.

GNRL 102 *ON COURSE*. *On Course* provides strategies for Creating Success in College and in Life. Enrollment in *On Course* is required for:

1. All freshmen who enter with a high school GPA less than 3.25.
2. Freshmen and sophomore students who go on academic warning or academic probation and have not previously enrolled in or successfully completed the course with a C- or above.
3. Transfer students with a college transfer GPA less than 2.5.

STUDENT DEVELOPMENT CENTER

Located in the Lower Level of Village Hall
Walla Walla University, 204 S. College Ave., College Place, WA 99324
General e-mail and phone number: (509)-527-2313 | student.development@wallawalla.edu | wallawalla.edu/sdc

The Student Development Center (SDC) houses Career Development Services, Internship Services, Employer Relations, Disability Support Services, and Peer Tutoring. The SDC provides free services to current students, helping students to progress academically and personally to achieve their educational goals.

CAREER DEVELOPMENT SERVICES. Deciding on and developing a career path are very important parts of one's educational experience. The staff at the Student Development Center are dedicated to providing students with a multitude of experiences and resources that will enable them to make informed career decisions. The staff also provides comprehensive career planning to students and alumni. These services include career advising, career assessments, internship coordination, graduate school personal statement support, job and internship searches, job shadow resources, LinkedIn evaluations, mock interviews, and résumé and cover letter assistance.

Career Coaching and Assessments. Students can take assessments and meet with a career counselor to look at what they've done so far, and what they might like to do to determine their true interests. Once a student has conducted research, they are encouraged to create a list of short and long-term career goals. This includes professional networking and counseling.

Career Events. Various events are hosted and coordinated through Career Services, such as in-person and virtual job fairs, networking meet-ups, career and professionalism panels, career workshops, graduate school fairs and visits, and professional etiquette workshops.

INTERNSHIP SERVICES. Internship support and job shadowing integrates academic learning within a work environment. Students may receive academic credit for pre-arranged work experience. (See listing under specific departments/schools for credit and grading applicable to the major.) Internship Services monitors students' progress, while the internship advisors evaluate learning objectives and assign grades.

For more information, contact career@wallawalla.edu; (509) 527-2664; or visit their website.

DISABILITY SUPPORT SERVICES. Walla Walla University is committed to providing educational opportunities and access to programs and services to qualified individuals who have a documented disability in accordance with Section 504 of the Rehabilitation Act, the Americans with Disabilities Act (ADA) as amended, and Washington State laws. The Disability Support Services (DSS) office is here to advise and assist with student's disability-related needs, determine eligibility for various support services, and arrange academic adjustments and other accommodations.

Examples of accommodations are: testing accommodations, scribes for exams, readers for exams, books in alternative format, texts in accessible format, assistive technology, and accessible classrooms and housing.

To request accommodations, students should fill out the request on Accommodate will be the online database and upload documentation from a qualified provider. This is found at www.wallawalla.edu/dss. If you need further assistance, please email dss@wallawalla.edu or phone (509) 527-2366.

PEER TUTORING. The Student Development Center offers drop-in tutoring free of charge to current students at Walla Walla University during posted hours. Tutoring is offered to students taking classes in the areas of business, mathematics, engineering, languages, science, and writing. The writing center helps students with papers assigned for any class.

STUDENT SUCCESS CENTER

Kretschmar Hall, Room 214
Phone number: (509) 527-2715

The Student Success Center plays a key role in cultivating strategies and skills that promote student success at Walla Walla University. This is executed through three areas: the freshman mentoring program, probation mentoring, and intensive outreach.

MENTOR PROGRAM. The Mentor Program focuses on individualized encouragement and support as students transition to college life. Mentors deliver a Freshman Experience curriculum that encourages a balanced life of academic, spiritual, and social practices. The student experience is enriched by participation in organizations sponsored by the

University, community service involvement, and developing their connections with faculty, staff, and other students. Mentors assist students in setting and achieving academic and career goals by encouraging personal ownership and responsibility and strengthening their time management and study skills. They also aid students in identifying the causes and solutions to specific challenges they may face, including effectively using campus resources. All freshmen are required to participate in the Mentoring Program. A fee is assessed for this program; see the Academic Fees Section of the Financial Bulletin.

PROBATION MENTORING. The Probation Mentoring program focuses on developing accountability and coaching students in order to improve their academic performance. The probation mentors first meet with the student and the Student Success Coordinator to discuss the student's Academic Plan for Success form. Probation mentors then meet with students and promote progress towards the goals outlined in their Academic Plan for Success. The student also benefits from the mentor actively facilitating connections with campus resources, addressing factors such as class attendance, completion of course work, and communication with professors. Probation mentors work with students to address the factors that led the student to be on academic probation, such as class attendance, completion of course work, communication with professors, etc. A fee for this service is charged to the student's account. See the Academic Fees section of the Financial Bulletin.

INTENSIVE OUTREACH. The Student Success Center collaborates with professors and instructors to provide intensive outreach to students who are not meeting academic benchmarks outlined in course descriptions. The Student Success team coordinates outreach and support for students who are identified as struggling with class attendance, homework completion, or other external/internal forces that negatively impact a student's academic performance. This outreach is carried out by the Student Success Coordinator, a masters-level case manager, as well as the trained freshmen and probation mentors. The Student Success team works with students to identify the presenting issue, examine strengths and challenges, develops relevant goals, and connects them with necessary services.

UNIVERSITY EXPERIENCE (JUMPSTART)

All freshmen are required to attend the JumpStart Program (University Experience class), which takes place the week prior to the beginning of Autumn quarter classes. The JumpStart Program focuses on topics and activities that will help students make a successful transition to the university academically, socially, and spiritually. JumpStart includes regular orientation information, financial clearance, course placement, academic advisement, and finalization of the registration process. Students who successfully complete the JumpStart Program receive one elective credit. A fee is assessed for this program; see the Academic Fees Section of the Financial Bulletin.

ACADEMIC INFORMATION AND POLICIES

ACADEMIC POLICIES

Academic policies developed and announced in the course of the school year have the same application as those published in this bulletin. Students wishing any exception to published policy may petition to the Academic Standards Committee. The form for this purpose is available online at wallawalla.edu/student-forms.

ATTENDANCE POLICY

Course attendance is an integral part of a successful WWU education. Students may receive a failing grade for missing 25% or more of total class periods for late registration or any other reason. Departments or instructors may adopt and post more stringent attendance policies on their syllabi.

COURSE LOAD

The academic study load at Walla Walla University is computed in quarter hours, one quarter hour normally representing one class meeting per week or three hours of laboratory work per week. 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 at least two clock hours a week in outside preparation or three hours a week in supervised study or laboratory work.

The normal course load is 16-17 hours per quarter. Sophomores, juniors, and seniors may register for 18 quarter hours if their cumulative WWU grade-point average is 3.00 (B) or better. Undergraduate students on academic probation will carry a reduced course load.

The following minimum study loads will satisfy the parties indicated; however, in order to graduate in four years the student should take 16 hours per quarter.

Financial Aid	12 quarter hours
Immigration Authorities	12 quarter hours
Social Security	12 quarter hours
Veterans	12 quarter hours

REGISTRATION

The academic year is divided into four academic quarters: Autumn, Winter, Spring, and Summer. Full-year online registration is available to all continuing students who have obtained Junior or Senior status. Continuing Freshmen and Sophomores may register online quarter by quarter. Registration dates will be announced. Registration is official only after all procedures required by the University have been completed and all fees have been paid. Students who do not receive financial clearance by the deadline will have their registration cancelled and will have to re-register on a space-available basis.

Faculty advisors are available to assist students with registration and in planning academic programs. Advisor approval is required for class registration. Advisor signatures are required on Change of Registration forms for undergraduate students. In the event of temporary unavailability of the assigned advisor, the student should first consult the department chair/school dean. If the chair/dean is not available, the forms may be signed by the Director of Academic Advisement. It is the student's responsibility to inform the assigned advisor of the action.

Students are not permitted to attend courses for which they have not registered. Students will not be permitted to register for two classes which meet concurrently.

REGISTRATION WITHOUT OFFICIAL TRANSCRIPTS. Walla Walla University recognizes that in some instances a student may not be able to provide an official transcript immediately prior to enrolling at the University. At the University's discretion, some students may be allowed to enroll prior to admission on the basis of work shown on unofficial or incomplete transcripts. Students who have enrolled directly from high school in this fashion will have a maximum of three consecutive quarters to have their official transcripts received by the Marketing and Enrollment Services Office. No further enrollment will be allowed until the transcripts are on file. Transfer students allowed to enroll on this basis must have their official complete transcript(s) on file by the end of their first quarter in order to continue enrollment.

LATE REGISTRATION. Students citing unusual circumstances may register after the designated registration periods; however, they will be charged a late registration fee, and may expect a reduction in course load. Students may register between the 6th and 10th days of the quarter only with permission of the instructors involved.

CHANGES IN REGISTRATION. Changes in registration may be made during the first five days of instruction without charge. Course changes after that require advance permission from the instructor and from the student's academic advisor; there is also a fee for each course added or dropped. Courses may not be added after the tenth day of any quarter.

CONCURRENT REGISTRATION. Concurrent registration at another accredited college/university may occasionally be advisable because of course

unavailability or schedule conflicts. Students who are considering this option should consult their advisor and the registrar to ensure that their total course load is reasonable, that the transfer course will not interfere with their Walla Walla University class schedule, and that the course will satisfy the intended requirement. Transfer course approval requests are available online. It is the student's responsibility to have a transcript sent to Walla Walla University as soon as the course has been completed. Seniors should not enroll for courses at other colleges without prior approval from Academic Standards Committee (see Residency Requirements in this bulletin).

Students in good and regular standing may request to concurrently enroll in a Whitman College class through a reciprocal program in which tuition is paid at Walla Walla University while the student registers at Whitman College. Some restrictions apply; the program is intended for students who wish to take a course that is not available at Walla Walla University. The application process should be initiated through the office of the Associate Vice President for Academic Administration at least three weeks before the beginning of the term in which concurrent enrollment is desired.

SENIOR REGISTRATION FOR GRADUATE COURSES. Seniors who wish to take graduate (500-level) courses must submit a petition, a copy of a degree audit or a copy of their approved senior outline, and a current transcript to the Graduate Standards Committee for evaluation. Approval to register is based upon the student's background for the course in question and a minimum of 2.75 cumulative GPA. Academic Standards Committee must approve the petition to have the course apply to the undergraduate program. Courses so taken will be marked on the transcript as applying to the undergraduate degree. Seniors wishing to take credit to be applied toward a future graduate program should consult the Graduate Bulletin.

ADMISSION TO UPPER-DIVISION STATUS. Students may register for upper-division courses provided that they have completed 45 quarter hours of university course work, have completed the general studies mathematics requirement, and have completed ENGL 122 or HONR 141 with a grade of C- or higher.

AUDIT. Students may audit classes provided that there are seats available in the course on the first day of the term, and they (1) register in the usual manner; (2) receive prior approval of the instructor, because certain classes and labs may not be audited; (3) pay any special fees, as appropriate; and (4) pay audit tuition as defined in the Financial Bulletin. Students auditing courses are not required to do class assignments or take tests. They receive no grades and no academic credit. The deadline for changing to or from audit status is the tenth day of the quarter. Students may not take challenge examinations for courses they have audited and may not add the class for credit after the 10th day of the quarter. A course may not be audited more than once without the permission of the department chair or school dean. Students with a Walla Walla University cumulative grade-point average of at least 3.00 and a course load of at least 13-16 hours (excluding audit courses) pay a special fee if their total credits exceed 16 hours. See the Academic Fees section of the Financial Bulletin.

WITHDRAWALS. Students withdrawing from all classes must submit an official University Withdrawal Form available online. Students withdrawing from individual courses must submit a Change of Registration form online once approved by the instructor involved and the student's advisor. The final date for dropping a course is listed in the academic calendar.

An instructor or department chair/school dean may drop a student from a course during the 100% refund period if the student has not satisfied the prerequisites for the course and the student is informed.

STUDENT DISMISSAL DUE TO POOR ACADEMIC ENGAGEMENT. The university recognizes the important relationship between student engagement and academic success. Any class session missed reduces the opportunity for learning and adversely affects student achievement. Regular class attendance is expected of all students. Attendance requirements can vary by course or academic program, and, in some cases such as clinical labs, student teaching, etc., may also affect a student's enrollment status in a given academic program.

Any student whose class attendance or completion of academic responsibilities (assignments, quizzes, etc.) show a pattern of little or no engagement may be dropped from all courses and administratively dismissed from the university. Such decisions are made by the Academic Standards Committee in the case of undergraduate students or by the Graduate Standards Committee in the case of graduate students. The Chair of the Standards Committee will notify the student by email at least one week before any meeting for consideration of their dismissal. The student may submit a written statement for consideration by the Standards Committee during the meeting. The Standards Committee will consider the relevant information during a closed meeting and determine whether a dismissal or other consequence is warranted.

The student will be promptly notified of the Standards Committee decision by email. A dismissed student may appeal to enroll for a future term by submitting an Appeal for Re-Admission along with supporting evidence to the Standards Committee.

TRANSFER POLICY AND PROCEDURE

Admissions Policies and Procedures

College-level transcripts for courses taken prior to the student's first quarter at the university must be submitted to the Office of Marketing and Enrollment Services as part of the admission process. Walla Walla University (WWU) requires official transcript(s) from all post-secondary institutions attended, even if credit may not be transferable.

Applicants who have attended North American regionally accredited institutions of higher education and who have official transcripts showing a minimum grade-point average of 2.00 on all course work may be admitted at a level determined by the number of credits transferred.

WWU recognizes that in some instances a student may not be able to provide an official transcript immediately prior to enrolling at the university. At the university's discretion, some students may be allowed to enroll prior to admission on the basis of work shown on unofficial or incomplete transcripts.

Transfer students allowed to enroll on this basis must have their official complete transcript(s) on file by the end of their first quarter in order to continue enrollment.

Evaluation of Transcript

A preliminary evaluation of transfer credit can be made using an unofficial transcript once a WWU ID number is established. However, official transfer credit will be granted only upon receipt of an official transcript from each institution. WWU does not have a limit on the number of credits that can be transferred in; however, every student must meet all degree and residency requirements.

Transfer transcripts are evaluated on a face-value, course-by-course basis by the Office of the Registrar. Transfer credit for courses taken at institutions operating on a semester system are computed to equivalent quarter credits. (To convert semester to quarter credits, multiply by 1.5. For example, a student who earns 30 credits at an institution on a semester calendar would have earned 45 quarter credits at WWU.) Acceptance of any credit does not imply that major or university requirements have been satisfied. Therefore, in order to graduate, students may be required to complete more than the minimum number of credits necessary for a particular degree program.

Direct Transfer Agreement

A student who has completed a DTA associate degree from a Washington State community or technical college with 90 transferrable credits and a 2.0 GPA will have completed the general studies (general education) requirements for a four-year degree at WWU except for the following:

- Must have 4 credits of college-level mathematics (a course with a Mathematics prefix numbered above 099). This could be completed at the CC or WWU
- Must complete 10 credits of general studies religion courses at WWU as outlined in the standard transfer policy for students from a non-Seventh-day Adventist, regionally accredited college/university

A student who has completed an Associate of Arts Oregon Transfer (AAOT) associate degree from an Oregon State community or technical college with 90 transferrable credits and a 2.0 GPA will have completed the general studies (general education) requirements for a four-year degree at WWU except the following:

- Must complete 10 credits of general studies religion courses at WWU as outlined the standard transfer policy for students from a non-Seventh-day Adventist, regionally accredited college/university

  Foreign Transcript Evaluation

  Transcripts received from foreign institutions will be evaluated on an individual basis. In most instances, the student will be required to request an official evaluation from a WWU approved foreign credentialing education service. Accepted courses will be issued a pass/fail grade and will not be calculated into the cumulative GPA for graduation.

Nursing Credits

WWU does not directly transfer in nursing courses from another school of nursing but uses a process of validation of previous nursing education to give advanced placement to RN's with an associate degree in nursing or a diploma in nursing.

Military Credits

Two quarter credits of the general studies physical education requirement will be waived for students eligible for VA benefits. Students who provide an official accredited military transcript listing Basic Training may be awarded a maximum of 6 quarter credits of physical education. The remainder of the transcript will be evaluated as other accredited transcripts. No credit will be awarded for specialty training or vocational programs.

Science Credits

Transfer science courses must be from the major's courses at the granting institution to be accepted toward the major or minor in that science discipline at WWU. Transfer science courses may, however, be accepted as cognates or general studies courses.

Advanced Placement (AP) Program

Regular university credit may be awarded by successful completion of an Advanced Placement (AP)

examination. These tests are graded on a scale of 1 to 5. Credit will be established upon receipt of an official College Board transcript and in accordance to the WWU articulation policy. Credit accepted will be on a pass/fail basis.

College-Level Examination Program (CLEP)
WWU grants credit for selected undergraduate college CLEP courses. These exams may not be repeated and must be taken prior to the student's completion of a total of 45 quarter hours of college-level credit (90 quarter hours of college-level credit for the Modern Languages examination). Credit accepted will be on a pass/fail basis.

International Baccalaureate (IB) Program
Students who engaged in college-level study in high school through the International Baccalaureate (IB) Program can obtain credit toward a WWU degree on the basis of their performance on the standard and higher level IB exam. Students should submit an official IB transcript to the Academic Records Office for evaluation. All IB evaluations will be in collaboration with the appropriate WWU department. Credit accepted will be on a pass/fail basis.

Courses Receiving No Credit
The university reserves the right to deny credit for courses that are not compatible with those offered in its baccalaureate degree programs. Some general categories of courses that never receive transfer credit include the following:

- courses below college level (usually numbered below 100)
    - remedial English (e.g., reading, vocabulary development, grammar, speed reading, or any courses that are preparatory to an institution's first freshman composition course)
    - mathematics courses considered below college level, including basic math and beginning and intermediate algebra
- courses providing instruction in English as a second language (100-level or above)
- more than one iteration of a course
- courses with duplicate subject content
- coursework earned at an institution that did not hold at least candidacy status with its regional accrediting association when the coursework was taken
- courses offered for continuing education units
- non-academic or vocational-technical courses
- work or life experience

Alternative Credit Options
WWU 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, validating, or waiving comparable classes offered by the university. All options require a formal approval process and a fee will be charged as listed in the WWU Financial Bulletin. For examination request forms, contact the WWU Academic Records Office.

- *Challenge Exams*
  A challenge examination is a university-prepared or standardized examination which, if successfully completed, will yield regular university credit. 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. Grades will be issues in the same manner as the university course. (Certain university classes may not be challenged.)
- *Validation Exams*
  Students who have transcripts from non-accredited colleges and/or transcripts showing nontransferable college courses may request to take validation examinations in courses which are comparable to those offered by WWU. Credit will be awarded on a pass/fail basis.
- *ASE Exams*
  Based on successful completion of a standardized examination, students with current National Institute of Automotive Service Excellence (ASE) certification will be granted automotive credit as listed in the WWU bulletin. Credit will be awarded on a pass/fail basis.

Transfer Credit by Examination
Credit earned by examination at other colleges or universities may be transferred provided such credit meets the guidelines used by WWU for credit by examination.

WWU Transcript
The online evaluation is not an official transcript. The official WWU transcript – which is sent to other institutions, employers, etc. – does not include the transfer GPA or a detailed listing of the transfer credit that WWU awarded; it merely lists the other colleges the student has attended, and the total number of transfer credit awarded by each college. Transfer grades are not included in the WWU GPA.

Cumulative GPA
Candidates for the baccalaureate degree with the appropriate GPA, both overall and for credit earned at WWU, will be awarded the degree with appropriate distinctions as outlined in the university bulletin.

Residency and Degree Requirements
The university's policies governing transfer student degree completion stipulates the following:

Residency Requirements:

1. At least 40 of the last 45 credits before degree completion must be WWU credits.
2. A minimum of 25% of the requirements in each major and minor must be WWU credit.
3. At least nine upper-division credits in the major and three upper-division credits in the minor be completed at WWU.

Degree Requirements:

1. At least 60 credits in courses at the 300 or 400-level be completed for overall degree requirements.
2. A minimum of 96 credits be from a 4-year institution.
3. All transfer transcripts be on file in the Academic Records Office prior to the end of the final quarter in residence to avoid delay in graduation.
4. Student meets all degree requirements.

Pre-approval for Transfer Credit

Before taking courses out-of-residence it is advisable to complete a Transfer Course Approval Request form to ensure proposed credits satisfy requirements needed. Forms are available in the Academic Records Office or online here.

Appeal of Transfer Credit Evaluation

If a student questions the evaluation of their transfer credits they may appeal to the Registrar. The student may be requested to submit a syllabus of the course(s) in question and/or any other documents that may support the appeal. Forms are available in the Academic Records Office or online here.

If resolution is not met in consultation with the Registrar, the student may petition Academic Standards Committee for a review of their request.

UNIVERSITY CREDIT OPTIONS FOR HIGH SCHOOL STUDENTS

High school students and their families should thoughtfully consider the options available to receive credit towards a university degree. Well-designed dual enrollment programs can improve high school achievement, increase university graduation rates, and potentially reduce the cost of a higher education degree. Dual credit courses go on a student's permanent university record, so it is important that the student is ready for the demands of a university class. Withdrawing from a class taken for dual credit could impact high school graduation. Parents and students should carefully consider the value and risks of any such course before enrolling.

Walla Walla University offers three pathways for high school students to earn college credit. These options are available to accredited local and NPUC high school students. WWU is a member of the NACEP and bases its program on the NACEP standards.

NACEP is the only national accrediting body for dual enrollment programs.

Three Options:

1. College Provided Faculty (CPF)
   a. Online course, synchronous or asynchronous, taught by WWU faculty
   b. Can count as dual enrollment or early university credit
   c. NACEP standards require that CPF courses be identical in rigor, numbering, and processing, as all other courses provided by the university
   d. Students are responsible for discounted tuition, course fees, textbooks and course supplies, per course requirements
2. Concurrent Enrollment Program (CEP)
   a. Dual enrollment courses taught at a participating NPUC high school by university-approved high school teachers as a partnership between relevant WWU department and each high school
   b. NACEP standards require that participating high school teachers have the same qualifications as the university has for its adjunct professors
   c. Dual enrollment courses at the high school extend over an entire semester. This can convey a false sense of the pace compared to a quarter-system university course
3. High School Enrichment (HSE)
   a. On-campus face-to-face WWU courses
   b. This program is for qualified high school students from the local Walla Walla area who wish to take a course on the WWU campus
   c. Can count as dual enrollment or early university credit
   d. Students are responsible for discounted tuition, course fees, textbooks and course supplies, per course requirements

Student Qualifications and Requirements:

1. Be enrolled at a local or NPUC high school and have junior or senior status
2. Have a cumulative high school GPA of 3.25 or higher
3. Obtain permission from the academy principal/vice principal/registrar prior to enrollment
4. Maintain a WWU GPA of 2.0 or higher to remain eligible for future courses through the WWU dual enrollment program
5. Complete placement examinations for some WWU courses (such as Math) and receive an

acceptable placement score in addition to satisfying the general criteria above

6. Be enrolled in a maximum of eight university credits per high school semester (16 credits per year)

Advantages:

1. Save time and money by earning credit for both high school and university at a 90% discount of the per-credit WWU tuition rate, though course specific fees remain the same for all students
2. Qualify to receive academic advising from WWU to avoid earning college credit that may not count toward a desired degree
3. Receive university-level courses, during high school, from a Seventh-day Adventist perspective

Disadvantages:

1. Course instruction will be at the university level, requiring roughly two hours of homework outside of class for every hour in class
2. Students will begin an official college/university transcript that will positively or negatively impact future financial aid and academic standing based on course performance
   a. Students who obtain a term GPA below a 2.0 will go on academic warning and will be required to enroll in GNRL 102: On Course their first quarter as a regular WWU student
3. Once a course has begun, there is no refund

Other Information:

1. **Withdrawal:** A student who stops attending a course from any of the above programs is not automatically dropped from the class
   a. To withdraw from a CPF or HSE course, a student must submit a Change of Registration form. The instructor, advisor and the Academic Records office must approve the request before the class is dropped.
   b. To withdraw from a CEP course, a student must contact the high school principal or registrar (as the academic advisor) who will then inform the WWU Academic Records Office.
2. **WWU ID card:** HSE students will be issued an ID card which can be only used at the library, gymnasium, and WWU events that are free to WWU students. The card cannot be used for charging at the University Bookstore, Express, cafeteria, campus clubs, etc.

OTHER ACADEMIC POLICIES

CHANGE OF MAJOR/MINOR AND ADVISOR. Students who wish to declare or change a major/minor are required to complete a Change of Major/Advisor form online through myWWU. If the declaration of major requires the selection of a new advisor, the student is required to consult with the Director of Academic Advisement for a new advisor assignment. Students are assigned a secondary advisor for the chosen minor, and the student is expected to consult with the advisor to ensure appropriate course selection. Students who are pursuing secondary education certification must consult with the certification officer in the School of Education and Psychology.

FINAL EXAMINATIONS. All students are expected to take final examinations as scheduled. Requests for exceptions are to be submitted to the Associate Vice President for Academic Administration three weeks prior to the close of the quarter. A fee is assessed for each out-of-schedule examination; see the Academic Fees section of the Financial Bulletin.

TRANSCRIPTS. Requests for official transcripts may be made online. A processing fee will be charged (see Financial Bulletin). More information on ordering official transcripts is available at wallawalla.edu/transcripts.

CLASSIFICATION OF STUDENTS

FRESHMEN. Students who have met the University's entrance requirements and have completed less than 45 quarter hours are classified as freshmen.

SOPHOMORES. Students who have completed a minimum of 45 quarter hours with a grade-point average of at least 2.00 are classified as sophomores.

JUNIORS. Students who have completed a minimum of 90 quarter hours with a grade-point average of at least 2.00 are classified as juniors.

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

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

GRADUATE STUDENTS. Students who have been accepted into one of the graduate programs are classified as graduate students.

NONMATRICULATED STUDENTS. Individuals ineligible for regular admission or who do not intend to matriculate in an academic program at Walla Walla University are considered nonmatriculated. (See Admission to the University: Nonmatriculated Admission).

DUAL CREDIT STUDENTS. Students who are currently enrolled as a junior or senior in secondary school, have a cumulative high school GPA of 3.25 or higher, and who have permission from their high principal or vice principle, may register for selected

Walla Walla University courses. In some cases, students must also successfully pass placement examinations. Dual credit students are not eligible for financial aid. Please see Dual Enrollment Policies (p. 34) in the Academic Information and Policies section of this bulletin for more details.

ACADEMIC INTEGRITY POLICY

An integral part of the mission of Walla Walla University is to prepare its students to be responsible individuals with Christian values. The University expects all members of its community to have integrity, including a steadfast adherence to honesty. Faculty have a responsibility to foster integrity by example and instruction. Students have a responsibility to learn, respect, and practice integrity.

All acts of dishonesty are unacceptable, including cheating, plagiarism, forgery, misrepresentation, falsification, prohibited collaboration, and prohibited use of files. Departments or schools may have specific criteria for behavior and skills suitable to their disciplines which will be communicated to students, typically in course syllabi.

Any violation of the academic integrity policy will result in disciplinary action. Teachers and administrators will follow approved guidelines which are available upon request in the office of the Associate Vice President for Academic Administration or online at: wallawalla.edu/academic-integrity.

GRADING SYSTEM

The grade-point average is computed by totaling the grade points of all courses taken at Walla Walla University 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.** Default grades of Incompletes are included in the grade point calculation. The AU, IP, NC, S, W, X, and Z are disregarded in computing the grade-point average. Once a course grade has been recorded, students may not submit additional coursework.

A report of grades is available on the WWU website for students at the end of each quarter. Classes taken for 0 credit may only be graded S/NC.

The following grades are used:

A	4.0	C+	2.3	D	1.0
A-	3.7	C	2.0	D-	0.7
B+	3.3	C-	1.7	F	0.0
B	3.0	D+	1.3	S/NC	0.0
B-	2.7				

In place of grades, the following symbols are used:

I **Incomplete**

An Incomplete "I" is a temporary grade which may be given at the instructor's discretion to a student when illness, necessary absence, or other reasons beyond the control of the student prevents completion of course requirements by the end of the academic term.

Incomplete grades may be given only in the following circumstances: Appropriate grades must be assigned in other circumstances. An X grade may be recorded for students who cease attending class within the first 50% of the course at the instructor's discretion.

The following procedures for incomplete grades apply:

I* **Standing Incomplete**

Final grade for coursework not completed within appropriate timeframe.

IP **In Progress**

IP grading is a temporary grade that may be assigned if a student has completed a minimum of 50% of the required coursework. IP grades may be assigned to preapproved courses such as Internship, Research, Thesis, Seminar, or other courses that extend beyond regular grading periods. If a final grade is not submitted within three terms (excluding summer) after the original enrollment term, the IP will automatically become an IP* (standing IP). Requests for time extension beyond the one-year deadline must be submitted to the Associate Vice President for Academic Administration prior to the end of the one-year deadline. With appropriate approval an IP grade can be extended for a maximum of two years from the original enrollment term after which the student must reregister for the course.

IP* **Standing In Progress**

Final grade for coursework not completed within appropriate timeframe

S/NC **Satisfactory/No Credit**

Indicates that credit earned was satisfactory (C or better) or that the credit was not earned because 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.**

W **Official Withdrawal**

Courses dropped during the first week 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**

Indicates that the student discontinued class attendance prior to the fifth week, mid-term, but failed to withdraw officially.

Z **Administrative Withdrawal**

AU Audit

GRADE ERRORS AND CORRECTIONS. Grades will be processed and posted online for viewing at the close of each quarter. Upon viewing grades via the secured website, the student should carefully check the accuracy of the courses recorded, quarter hours, and grades. Grades may be changed only if an error has been made in calculating or recording the grade. Students will have until the last day to drop classes during the next regular quarter to report any discrepancies to the Academic Records Office.

ACHIEVEMENT RECOGNITION

DEAN'S LIST. Each quarter Walla Walla University recognizes its top academic achievers by publishing the Dean's Lists*, which are maintained by the associate vice president for Academic Administration.

Undergraduate students who have earned at least 15 credits** during the quarter are recognized on the following Dean's Lists, based on their term GPA:

- The Dean's List recognizes students with a 3.500–3.749 term GPA.
- The Dean's List of Distinguished Students recognizes students with a 3.750–4.000 term GPA.

Please note: According to our FERPA guidelines, students who have elected to block the release of directory information by providing written notification to the University Registrar will not be included on these public lists.

Any questions about these lists should be directed to the office of the associate vice president for Academic Administration.

*Eligibility for inclusion on the Dean's Lists will not be recalculated in the event of a grade change after the first week of the following quarter.

**A minimum of 15 credits does not include remedial or experiential courses; courses graded Satisfactory (S), In progress (IP), or Incomplete (I); and not-yet-graded courses taken through Acadeum.

GRADUATION WITH HONORS. Candidates for the baccalaureate degree with the appropriate GPA, both overall and for credits earned at Walla Walla University, will be awarded the degree with the following honors distinction:

3.500 - 3.749	*cum laude* (with distinction)
3.750 - 3.899	*magna cum laude* (with great distinction)
3.900 - 4.000	*summa cum laude* (with highest distinction)

The WWU Records office calculates Graduation with Honors based on the following:

1. Combined GPA of all courses taken (transfer GPA(s) plus WWU GPA), and
2. WWU only GPA.

WWU will award the distinction based on the lower of the two above.

CREDIT BY EXAMINATION

Walla Walla University 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, validating, or waiving comparable classes offered by the University. (Certain university classes may not be challenged.)

APPLICATION FORMS. A current student wishing to obtain credit by examination must apply. Permission from the chair of the department in which the course is offered and permission of the course instructor are required. The application form for challenge and validation examinations is available online. A student must have approval for an exam prior to taking an exam. Fees for these examinations are listed under the heading Examination Fees in the Academic Fees section of the Financial Bulletin.

RESTRICTIONS. The following restrictions apply to all credit earned by examination:

1. A student must have an approved examination application on file in the Academic Records Office before credit by examination can be recorded on the permanent record.
2. A student must be currently enrolled before credit by examination can be recorded on the permanent record.
3. Credit by examination may be earned only if a student has not already earned credit in a similar course, or taken advanced courses.
4. Grades are issued as on normal test scores, and all grades are recorded on the permanent record of the student.
5. Examinations may not be repeated.
6. Repeat course work and F grades are not open to credit by examination.
7. Students may not take challenge examinations on courses they have audited.
8. Examinations must be taken prior to the last 3 weeks of any quarter.
9. CLEP examinations must be taken prior to the student's completion of a total of 45 quarter hours of university credit.

CHALLENGE EXAMINATIONS. A challenge examination is a university-prepared or a standardized examination which, if successfully completed, will yield regular university credit. 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. Labs may be challenged by permission of school/department.

ADVANCED PLACEMENT EXAMINATION (CEEB). Regular university credit may be established by successful completion of an Advanced Placement (AP) examination. These tests are graded on a scale of 1 to 5.

Discipline	Exam	Minimum Exam Score	WWU Course(s)	WWU Credits
Biology	AP	5	BIOL 141, BIOL 142, BIOL 143	12
Biology	AP	4	BIOL 141, BIOL 142	8
Chemistry	AP	5	CHEM 141, CHEM 142, CHEM 143, CHEM 144, CHEM 145, CHEM 146	12
Chemistry	AP	4	CHEM 141, CHEM 142, CHEM 144, CHEM 145	8
Chemistry	AP	3	CHEM 141, CHEM 144	4
Computer Science A	AP	3	CPTR 141	4
Computer Science Principles	AP	4	CPTR 141	4
English Language and Composition	AP	4	ENGL 121	3
Literature and Composition	AP	4	ENGL 121	3
French Language and Culture	AP	5	FREN 101, FREN 102, FREN 103	12

French Language and Culture	AP	4	FREN 101, FREN 102	8
French Language and Culture	AP	3	FREN 101	4
German Language and Culture	AP	5	GRMN 101, GRMN 102, GRMN 103	12
German Language and Culture	AP	4	GRMN 101, GRMN 102	8
German Language and Culture	AP	3	GRMN 101	4
United States History	AP	4	HIST 221, HIST 222	8
United States History	AP	3	HIST 221	4
Calculus AB	AP	5	MATH 171, MATH 172	8
Calculus AB	AP	3	MATH 171	4
Calculus BC	AP	5	MATH 171, MATH 172, MATH 273	12
Calculus BC	AP	3	MATH 171, MATH 172	8
Spanish Language and Culture	AP	5	SPAN 101, SPAN 102, SPAN 103	12
Spanish Language and Culture	AP	4	SPAN 101, SPAN 102	8
Spanish Language and Culture	AP	3	SPAN 101	4

CAMBRIDGE INTERNATIONAL. Walla Walla University recognizes A Level and AS Level curriculum as a challenging academic program that provides excellent preparation for university study.

In general, up to a full year of quarter credits may be granted for A Level exams with a passing grade. AS Level exams with a passing grade may be awarded half the credit allowed for the A Level course. A Level or AS Level exams credits are awarded on an S/NC grading basis.

Credits will be awarded with equivalencies for specific WWU courses as available. Non-WWU equivalency exams may be applied as general elective credit. See below for further information about WWU course designations. Other exams not listed below may be considered for credit by contacting the WWU Academic Records Office.

Credit awarding policies are reviewed on a regular basis and are subject to change.

Exam Equivalencies

Discipline	Exam	Minimum Exam Score	WWU Course(s)	WWU Credits
Chemistry	A Level	C	CHEM 141, CHEM 142, CHEM 143, CHEM 144, CHEM 145, CHEM 146	12
Computer Science 9608	A Level	B	CPTR 141 & CPTR 280	8
Computer Science	AS Level	B	CPTR 141 & CPTR 280	8
English Literature	A Level	B	Credit may be granted for A-Level examinations upon review.	
French – Language	A Level	C	FREN 101, FREN 102, FREN 103	12
German – Language	A Level	C	GRMN 101, GRMN 102, GRMN 103	12
History 9389	A Level	B	HIST 399	4
History 9489	A Level	C	HIST 399	4

Mathematics 9709	A Level	C	MATH 121, MATH 122, MATH 171, MATH 172	16
Mathematics Further	A Level	C	MATH 121, MATH 122, MATH 171, MATH 172, MATH 239, MATH 274	24
Physics	A Level	B	PHYS 211, PHYS 212, PHYS 214, PHYS 215	8
Physics	AS Level	B	PHYS 211, PHYS 214	4
Psychology	A Level	C	PSYC 130	4
Psychology	AS Level	C	PSYC 130	4
Sociology	A Level	C	SOCI 204	4
Spanish – Language	A Level	C	SPAN 101, SPAN 102, SPAN 103	12
Spanish – Language	AS Level	C	SPAN 101	4
Spanish – Literature	A Level	C	SPAN 399	4

COLLEGE-LEVEL EXAMINATION PROGRAM (CLEP). Walla Walla University grants credit for selected undergraduate college courses. For dates and specific information, candidates should consult the Counseling and Testing Department in the Health and Wellness Center (testing@wallawalla.edu or (509) 527-2147), which administers these computer-based tests by appointment. These tests may not be repeated and must be taken prior to the student's completion of a total of 45 quarter hours of college-level credit (90 quarter hours of college-level credit for the Modern Languages examination). Credit will be granted on a pass/fail basis.

A number of subject-matter examinations are offered by CLEP. Students obtaining the scaled scores established by the following departments will receive credit toward that basic requirement. Students wishing credit in courses other than those listed below should consult the appropriate department chair.

Discipline	Exam	Minimum Exam Score	WWU Course(s)	WWU Credits
Accounting (Financial Accounting)	CLEP	50	ACCT 201	4
Biology	CLEP	54	BIOL 141, BIOL 142, BIOL 143 (does not count toward biology major and professional schools)	12
English (College Composition with Essay)	CLEP	50	ENGL 121	3
History (American History)	CLEP	60 (either or both exams)	HIST 221 (test on early colonization to 1877), HIST 222 (test on 1865 to present)	4 or 8
Mathematics (College Mathematics)	CLEP	55	MATH 105	4
Mathematics (Precalculus)	CLEP	55	MATH 117	5
Mathematics (College Algebra)	CLEP	55	MATH 121	4
Mathematics (Calculus)	CLEP	55	MATH 171	4
Modern Languages (French, German, Spanish)	CLEP	50-54	FREN 101, GRMN 101, or SPAN 101	4
Modern Languages (French, German, Spanish)	CLEP	55-60	FREN 101 and FREN 102, or GRMN 101 and GRMN 102, or SPAN 101 and SPAN 102	8
Modern Languages	CLEP	61	FREN 101, FREN 102, and FREN 103; or GRMN 101, GRMN	12

(French, German, Spanish)			102, and GRMN 103; or SPAN 101, SPAN 102, and SPAN 103.	
Psychology (Introductory Psychology)	CLEP	50	PSYC 130	4
Psychology (Human Growth and Development)	CLEP	50	PSYC 215	4
Sociology	CLEP	50	SOCI 204	4

INTERNATIONAL BACCALAUREATE. Credit is awarded for International Baccalaureate (IB) standard and higher-level examinations with a score of 4 or higher. Please see the equivalency chart below. Other exams not listed below may be considered for credit by contacting the WWU Academic Records Office.

Discipline	Exam	Minimum Exam Score	WWU Course(s)	WWU Credits
Chemistry	HL	7	CHEM 141, CHEM 142, CHEM 143, CHEM 144, CHEM 145, CHEM 146	12
Chemistry	HL	6	CHEM 141, CHEM 142, CHEM 144, CHEM 145	8
Chemistry	HL	4	CHEM 141, CHEM 144	4
Chemistry	SL	4	CHEM 105	5
English A: Language and Literature	HL	4	ENGL 121	3
English A: Language and Literature	HL	6	ENGL 121, ENGL 122	6
English A: Literature	HL	6	ENGL 204	4
Physics	HL	5	PHYS 211, PHYS 212, PHYS 214, PHYS 215	8
Physics	SL	5	PHYS 201, PHYS 202, PHYS 204, PHYS 205	8
Psychology	HL	3	PSYC 130	4

VALIDATION EXAMINATIONS. Students who have transcripts from non-accredited 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 University. Upon successful completion of the examination(s), the student will be given credit as specified.

TRANSFER CREDIT BY EXAMINATION. Credit earned by examination at other colleges or universities may be transferred provided such credit meets the guidelines used by Walla Walla University for credit by examination.

REPEAT COURSES

Students may register up to a maximum of three times for any course in which a grade is recorded on the transcript (includes grades A-F, X, I, IP, S, NC, and W). A course may not be repeated if the original grade earned was a B or better. Academic credit may be earned only once. The best grade will be computed in the overall grade-point average, though all grades remain on the permanent academic record. A repeat course must be taken as a regularly offered class. Challenge examinations and independent or directed study are not allowed for repeat course work.

Students should typically not repeat any course with a grade of C or better. Some programs have specific policies for repeated classes and minimum course grades. Students should consult with their academic advisor before repeating any class.

Financial aid is not available for any course taken more than two times total. Repeating any course is subject to the Satisfactory Academic Progress (SAP) policy and may result in a student not earning sufficient credits to maintain financial aid eligibility (see a financial counselor in Student Financial Services).

EXTENSION COURSE WORK

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

The University 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 University, together with 13 other Seventh-day Adventist colleges in North America, founded the Adventist Colleges Abroad (ACA) organization in 1967. The ACA program allows students to immerse themselves in the culture and life of the host country and to become conversant in the language. Summer, quarter-by-quarter, and full-year opportunities are available. Presently, students may take courses at:

Universidad Adventista del Plata, Entre Rios, Argentina	(Spanish)
Seminar Schloss Bogenhofen, Austria	(German)
Faculdade Adventista da Bahia, Bahia, Brazil	(Portuguese)
Salève Adventist University, Collonges-sous-Saleve, France	(French)
Istituto Avventista Villa Aurora, Florence, Italy	(Italian)
Sahmyook University, Seoul, Korea*	(Korean)
Escuela Superior de Español de Sagunto, Sagunto, Spain	(Spanish)

*Summer term only.

Course Evaluation and Credit Toward Degree

In keeping with typical regional accreditation standards, courses listed in the applicable ACA bulletin and taken while studying through an ACA program are considered in-residence and will be recorded on the WWU transcript. Courses will be evaluated based on content rather than course prefix. (For example, though a student enrolls in History of Italian Art at Villa Aurora with a HIST prefix, the course will be evaluated as an ART course at WWU based on its content.) WWU/ACA course equivalency information is available in the Academic Records office or online at: wallawalla.edu/adventist-colleges-abroad.

College-Level ACA Program Participation Guidelines

To participate in ACA through WWU, a student

- must be an accepted WWU student and pay the $100 ACA processing fee prior to the application being submitted to ACA
- College level students may enroll in an ACA program without prior WWU attendance; however, they must pay the $200 WWU enrollment fee and
- must meet the prerequisites set by ACA. See www.acastudyabroad.com for details
- must not be on academic probation
- may not enroll in more than 18 quarter credits per academic term without prior approval made in advance through Academic Standards
- should understand that by withdrawing from all ACA courses within a term, the student will be considered fully withdrawn from WWU, which may affect continuing financial aid and scholarship eligibility
- should understand that they may lose WWU scholarship eligibility if they attend an ACA program for more than 3 terms, not including summer
- must pay ACA tuition in full in advance, less subsidy and awarded financial aid

ACA Application Process

Students planning to study under the full-year program must pay a $100 processing fee and submit a completed ACA application to the Academic Records office by July 1. Applications may be obtained online at www.acastudyabroad.com.

Applicants must consult with their academic advisors, financial aid counsellor, and the ACA Coordinator prior to enrollment.

All applications and payments for tuition, room, and board are to be made through Walla Walla University. Any deviation from this schedule by students of Walla Walla University must be arranged in advance with the Office of Student Financial Services.

Students cannot plan on financial credit for work while residing in foreign countries. The student financial aid officer has information on grants and loans available to students for overseas study. Academic credit may be granted for these studies so that a student may be able to complete a full college year abroad.

Students wishing to study Spanish in either Spain or Argentina must have successfully completed 2 years of Spanish language in high school or one year of Spanish in college. There is no language prerequisite for the summer program in Spain, and no language prerequisite for all other language programs.

Academy/High School Student Participation

A student who has not yet earned a high school diploma but is seeking college-level ACA credit may be accepted as a WWU participant in a language program. **Participation is limited to summer term only and a maximum of 9 quarter credits**.

The following guidelines apply. The student must:

- be accepted as an incoming freshman at WWU and have paid the WWU enrollment fee; or
- have junior or senior status and pay a $250 WWU processing fee
- have a cumulative high school GPA of 3.25 or above
- submit a recommendation by the high school principal or vice-principal to participate in the program
- submit a WWU High School College Credit Application
- submit a completed ACA application to Academic Records
- meet the prerequisites set by ACA. See www.acastudyabroad.com for details
- Pay in full all fees, including tuition, room, and board to WWU prior to application being submitted to ACA.

ACA coursework will be recorded on the permanent university transcript, which may enhance or reduce acceptance to a specific university. Dual credit may be earned for both the high school diploma (at the discretion of the high school) and a university degree.

WWU will not bill subsidy. Parents may work directly with employer to determine subsidy eligibility. Some employers may pay in advance to help meet the payment-in-full requirement. Students are not eligible for financial aid until high school diploma is earned.

ACADEMIC PROGRAMS AND GRADUATION REQUIREMENTS

UNDERGRADUATE DEGREES OFFERED

Walla Walla University offers courses of study leading to the following undergraduate degrees:

- Associate of Science (A.S.)
- Bachelor of Arts (B.A.)
- Bachelor of Business Administration (B.B.A.)
- Bachelor of Education (B.Ed.)
- Bachelor of Fine Arts (B.F.A.)
- Bachelor of Liberal Studies (B.L.S.)
- Bachelor of Music (B.Mus.)
- Bachelor of Science (B.S.)
- Bachelor of Science in Engineering (B.S.E.)
- Bachelor of Social Work (B.S.W.)

Walla Walla University is a comprehensive institution of higher education offering not only traditional liberal arts and professional programs, but also preprofessional and special two-year associate degree curricula for students who may wish to pursue a terminal program of a vocational nature. For a listing of undergraduate areas of study offered see Areas of Study section as listed in this bulletin. For a listing of graduate areas of study offered see the Graduate Bulletin.

GRADUATE DEGREES

Walla Walla University offers courses of study leading to the following graduate degrees:

- Master of Business Administration (M.B.A.)
- Master of Education (M.Ed.)
- Master of Engineering (M. Eng.)
- Master of Initial Teaching (M.I.T.)
- Master of Science (M.S.)
- Master of Social Work (M.S.W.)
- Doctor of Social Work (D.S.W.)

Students desiring information concerning graduate degree requirements (standards of admission, degree candidacy, curricula, etc.) should consult the Graduate Bulletin, which is available online.

TEACHER EDUCATION PROGRAM

The Walla Walla University School of Education and Psychology is authorized by the Washington State Board of Education to recommend the residency teachers' credential. Students who plan to enter the teaching profession with a denominational or state teaching credential should become thoroughly acquainted with the certification requirements listed in the Education and Psychology (p. 76) 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 than do other degrees 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 foreign language study.**

The Bachelor of Business Administration degree consists of a four-year program with concentrations available in accounting, entrepreneurship and small business management, finance, management, and marketing. For specific requirements, see the School of Business (p. 60) section of this bulletin.

The Bachelor of Education degree consists of a four-year program in which students earn a secondary teaching certification. The degree must be combined with a major in an approved secondary content area, leading to endorsement in that major area. For specific requirements, see the School of Education and Psychology (p. 76) section of this bulletin.

The Bachelor of Fine Arts degree is a professional four-year program emphasizing practical experience in the student's discipline. Intensive study and practice in the major field of study is complemented by the general studies program. For specific requirements see the Department of Visual Arts section of this bulletin.

The Bachelor of Liberal Studies degree is an interdisciplinary four-year program that allows students to integrate concepts from across the disciplines while cultivating a broad array of skills. An area of emphasis must be selected. The BLS is open only to students who have already completed a minimum of 96 credit hours. For specific requirements see the nondepartmental (p. 120) section of this bulletin.

The Bachelor of Music degree consists of four years of course work primarily in the major field of study. The degree is offered with a choice of two majors, Music Production or Music with concentrations available in performance and preparation for secondary teaching certification through the B.Ed. or M.I.T.

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. It requires fewer general studies courses than does the Bachelor of Arts degree because no foreign language study is required, and no minor is required with the exception of Elementary Education.

The Bachelor of Science in Engineering degree is a four-year program accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org, requiring 200 quarter hours of

course work. It is designed to prepare students for entry into the profession of engineering and for lifelong learning including programs of advanced study in bioengineering, civil, computer, electrical, and mechanical engineering or associated fields. For specific requirements, see the School of Engineering (p. 87) section of this bulletin. For the modified general studies requirements, see the General Studies (p. 53) section of this bulletin.

The Bachelor of Social Work degree is a four-year program approved by the Council on Social Work Education, the accrediting body for all social work education programs. It prepares students for entry level positions in a variety of social service agencies. For specific requirements, see the School of Social Work and Sociology (p. 134) section of this bulletin.

BACCALAUREATE DEGREE REQUIREMENTS

Although general studies are stressed during the first two years of study, students should plan to include certain elementary and intermediate courses in the desired major during the freshman and sophomore years in order to successfully complete the major.

Students who are undecided as to a major field of study may, during the freshman year, explore several fields of knowledge without loss of credit if they plan their choices with an academic advisor. It is best for a major to 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 advisor.

Candidates are expected to be fully informed concerning degree requirements and are responsible for their fulfillment. Students 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 missing regular attendance for one full school year (except for Christian Service Volunteers) must meet the requirements of the current bulletin upon resuming attendance. Candidates for degree completion must submit an online Application for Degree three quarters prior to the expected degree completion date. Students who have submitted a formal Application for Degree and do not graduate will be allowed only one year after the last date of enrollment to complete all degree requirements under the bulletin specified on the approved Application for Degree; otherwise, the current bulletin requirements must be met.

Undergraduate students who marched, or were approved to march in the June Commencement, but have not completed degree requirements will be charged a fee each quarter, except summer, for up to two years after the proposed graduation date or until all requirements are met and the degree is posted. See Financial Bulletin.

Degrees are conferred and diplomas issued as of commencement and on the last Friday of each month. All course work must be completed, transcripts received, comprehensives taken, and acceptable grades received before the degree will be awarded.

COMMENCEMENT EXERCISES

Commencement exercises are held once a year in June. Students who have completed their requirements Summer, Autumn, Winter, or Spring quarter may participate in the following June commencement exercises.

By Thursday prior to the June graduation date, prospective summer degree candidates must have satisfied the following:

1. Approved degree application on file in the Academic Records office showing a completion date for summer.
2. Approved by Academic Records to participate in Commencement with deferred courses.
3. Financial clearance for the completion of summer course work.
4. Registered for all remaining WWU coursework.
5. All transfer transcripts on file in the Academic Records office.
6. A minimum cumulative GPA of 2.00 for university work.
7. No more than twelve (12) credits to complete after spring quarter, including summer courses and outstanding "I"s and "IP"s.
8. Remaining credits must meet residency requirements.

Any exceptions to the above requirements must be approved by Academic Standards Committee.

GRADUATION IN ABSENTIA

Degree candidates are expected to participate in the yearly graduation ceremonies. Those wishing not to participate should submit a Graduating in Absentia form.

RESIDENCY REQUIREMENTS

1. A minimum of 25% of the credits in each major and minor must be Walla Walla University credits.
2. A minimum of 9 upper-division credits in the major and 3 upper-division credits in the minor must be Walla Walla University credits.
3. At least 40 of the last 45 credits before degree completion must be Walla Walla University credits.

GENERAL REQUIREMENTS

1. **Credits required.** Successful completion of a minimum of 192 quarter hours (200 quarter hours, Bachelor of Science in Engineering), including 60 quarter hours in courses numbered 300 or above, and a cumulative grade-point average of 2.00 or above in the major, minor, and overall.
2. **Major.** The completion of a major field of departmental specialization (minimum of 45 quarter hours and a cumulative grade-point average of 2.00). 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. Unless otherwise specified all electives applied to the major must be courses offered by the major department. A course may fulfill requirements for more than one major unless otherwise stated. A course may satisfy a cognate requirement of a major while simultaneously being counted toward the credit requirement of another major, minor, or concentration.
3. **Double Majors.** Students taking double majors must meet all the degree requirements for each major, including the general studies programs. Majors must be completed within the degrees under which they are described in this bulletin. (BA majors can serve as second majors only under a BA degree, BS majors can serve as second majors only under a BS degree; the BBA, BLS, BMus, BSE, and BSW degrees cannot have second majors.
4. **Minor.** Bachelor of Arts degrees require the completion of a minor of at least 27 quarter hours and a minimum cumulative grade-point average of 2.00, or the completion of an Associate of Science degree, provided it is in an area distinct from the major. Three quarter hours must be courses numbered 300 or above. A grade lower than C- will not apply toward a minor. A course may satisfy content requirements for several majors or minors but credit will apply to only one. Unless otherwise specified all electives applied to the minor must be courses offered by the minor department. A cognate course may satisfy the cognate requirements of a major while simultaneously being counted toward the credit requirement of another major, minor, or concentration. A second major or degree will satisfy the minor requirement.
5. **General Studies Requirements.** The completion of the general studies requirements as specified for the type of degree sought detailed in the General Studies (p. 48) section.
6. **Candidacy for Degree.** Degree candidates must file a formal Application for Degree (Senior Outline), showing the proposed schedule of courses for the final year, no later than one week after the beginning of the first quarter of the final year. The appropriate form may be submitted online through myWWU. Students are not considered candidates for degrees or eligible for senior class membership until officially notified by the Registrar that their degree application has been approved.
7. **Senior Class Fee. T**he fee is fixed by the class and approved by the President of the University.
8. **Comprehensive Examinations.** A comprehensive examination is required for each major before a degree may be conferred. For some majors, the Major Field Test (MFT) is used, and for others, the Graduate Record General and/or Subject Exam is used as the comprehensive. Elementary Education majors are required to pass the Washington Educator Skills Test-Endorsement for Elementary Education: Content Knowledge (WEST-E Elementary). There are also some departments/schools who provide a comprehensive exam and/or project. The bulletin details those requirements under the appropriate department.

The General Graduate Record Exam (GRE) is available only by computer, usually at Sylvan Technology centers in metropolitan areas. Information regarding registration for the General GRE is available at the testing center.

9. **Transcripts and Out-of-Residence Work.** Seniors must have all transfer transcripts on file in the Academic Records Office by the 10th day of Spring quarter to be eligible to participate in June commencement exercises.
10. **Second Baccalaureate Degree.** Two baccalaureate degrees with majors from different disciplines may be conferred concurrently or sequentially if the candidate has met the requirements of both degrees and has spent a minimum of of 40 of their last 45 credits in residence. See requirements 2 and 3 regarding majors. Students earning a Post Baccalaureate degree are eligible to participate in commencement.
11. **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.
12. **Post Baccalaureate Minor and Concentration Additions.** Students who already hold a degree from Walla Walla University may build onto that degree by adding an additional concentration or minor. All coursework must meet the current bulletin requirements and policies. Minors and concentrations will be listed on the academic

transcript; however, they will not be linked directly to the previous degree and a new diploma will not be issued. Students earning additional minors and concentrations are not eligible to participate in commencement.

ASSOCIATE DEGREE REQUIREMENTS

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.

Candidates are expected to be fully informed concerning degree requirements and are responsible for their fulfillment. Students 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 missing regular attendance for one full school year (except for Student Missionaries and Task Force workers) must meet the requirements of the current bulletin upon resuming attendance.

CERTIFICATE REQUIREMENTS

The certificate programs are intended to provide additional credentialing for students wanting to highlight a specific set of skills.

1. Certificates are open only to undergraduate degree-seeking students and must be declared by the time the student submits the Application for Degree.
2. Certificate programs must be a minimum of 18 quarter hours.
3. A grade lower than C- will not apply to the certificate.
4. A course may satisfy a certificate requirement while simultaneously counting toward the credit requirement of a major or concentration.
5. Unless otherwise specified, all electives applied to the certificate must be courses offered by the certificate department.

Certificates will not be part of the commencement program nor be included on the diploma. A separate paper certificate will be given in addition to the diploma upon degree completion. The certificate will appear on the official transcript. This policy only applies to credit-bearing certificates and does not apply the non-credit Professional Work Development certificates offered through CORE.

GRADUATION REQUIREMENTS FOR THE ASSOCIATE DEGREE

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

Residency Requirements:

1. A minimum of 24 credits must be Walla Walla University credits.
2. A minimum of 25% of the credits in the concentration must be Walla Walla University credits.
3. At least 19 of the last 24 credits before degree completion must be Walla Walla University credits.

General Requirements:

1. A minimum of 96 quarter hours must be completed.
2. A cumulative grade-point average of 2.00 (C) is required. A grade lower than C- will not apply toward the concentration.
3. The associate degree concentration as outlined under the respective departments of instruction of this bulletin must be completed.
4. The general studies requirements as outlined below must be completed. For a listing of the courses which may apply to the requirements, see Specific Courses for General Studies section of this Bulletin.
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 transfer credit on file in the Academic Records Office two weeks prior to graduation. **All out-of-residence work must be completed prior to the beginning of the last quarter in residence.**
7. Degree candidates must file a formal Application for Degree (Senior Outline), showing the proposed schedule of courses for the final year, by the deadline given in the University Calendar. The appropriate form may be submitted online through myWWU. Students are not considered candidates for degrees or eligible for senior class membership until officially notified by the Registrar that their degree application has been approved.

STUDENT RESPONSIBILITY FOR MEETING DEGREE REQUIREMENTS

While your advisor may assist you in planning a program, degree candidates are expected to be fully informed concerning degree requirements and are responsible for their fulfillment. The following checklist will help you in meeting graduation requirements at WWU. You may use this page to check the requirements off as you meet them. Please see the Academic Programs and Graduation Requirements section and the departmental sections of the university bulletin for further explanations of these requirements.

Checklist for Meeting Degree Requirements

___ General studies requirements:
See General Studies (p. 48) section of bulletin for specifics.

___ Total hours required:
192 quarter hours for bachelor's degrees (exception: 200 for the B.S.E. degree)
96 quarter hours must be from four-year colleges or universities
96 quarter hours for associate degrees

___ Upper-division credits:
60 quarter hours required for bachelor's degrees including:
a minimum of 21 quarter hours in the major
a minimum of 3 quarter hours in the minor

___ Transfer credits:
Transcripts for all off-campus credits need to be on file in the Records Office. Before taking courses off-campus, submit a Transfer Course Approval Request to be sure the credits satisfy requirements needed.

___ Residency requirements:
At least 40 of last 45 credits must be on campus
25% of major credits (including 9 upper-division) must be on campus
25% of minor credits (including 3 upper-division) must be on campus

___ Foreign language requirement:
The B.A. degree requires 8-12 credits of one foreign language

___ Minimum acceptable grade in major or minor:
No grade lower than a C- (1.70) is acceptable in a major or minor
Exceptions:
Nursing and Education major minimum = C (2.00)
Engineering (see B.S.E. section of the bulletin)

___ GPA requirements:
Major or minor GPA: minimum of 2.00 in each major/minor
Cumulative GPA: minimum of 2.00
Exceptions: Education majors, 2.75; Nursing majors, 3.0

___ Comprehensive exams:
A comprehensive exam is required for most majors. See departmental advisor or the testing center for specific requirement.

___ Application for Degree (Senior Outline):
File form via myWWU three quarters before graduation.
Form must be approved by the Records Office before you are eligible to graduate.

GENERAL STUDIES MISSION

The purpose of the general studies program is to provide a balanced education that supports WWU's core themes: excellence in thought, generosity in service, beauty in expression, and faith in God. The general studies curriculum is broad in scope, exploring ways of knowing and engaging across various disciplines. In addition, the program seeks to prepare students for "responsible citizenship, generous service, a deep respect for the beauty in God's creation, and the promise of re-creation through Jesus Christ" (WWU mission).

GENERAL STUDIES REQUIREMENTS

These are the general studies requirements for the B.B.A., B.S., B.Ed., B.L.S., B.Mus., and B.S.W. degrees (66-70 hours) and the B.A. degree (74-82 hours including the foreign language requirement). Modified requirements for the A.S. and B.S.E. degrees as well as the Honors General Studies Program can be found below. Each GS course can fulfill only one GS requirement.

SECTION I: FOUNDATIONAL SKILLS

Courses in this section ensure that students have the foundation necessary to fulfill the following core GS objectives:

- Communicate effectively and responsibly
- Demonstrate critical and reflective thinking
- Find, evaluate, and integrate sources
- Exhibit logical and quantitative reasoning
- Understand how the redemptive activity of God as revealed in Scripture calls us to a life of service
- Develop a holistic understanding of the principles of health and wellness

Written Communication and Information Literacy

ENGL 121	Introduction to Analytical Writing	3
ENGL 122	Introduction to Research Writing	3

Writing in the Disciplines (WD): In addition to these two foundational writing courses, all students must also fulfill a discipline-specific writing requirement as specified by either a core or cognate course designated within their major.

Oral Communications (4)

Choose one of the following:

SPCH 101	Fundamentals of Speech Communication	4
SPCH 207	Small Group Communication	4

Quantitative Reasoning (4)

Choose one of the following:

MATH 105	Math for the Liberal Arts	4
MATH 106	Introduction to Statistics	4
MATH 121	Precalculus I	4

MATH 171	Calculus I	4

These courses apply only to those majoring in elementary education:

MATH 112	Mathematics for Elementary Teachers I	3
MATH 113	Mathematics for Elementary Teachers II	3

Foundations of Faith (4)

Choose one of the following:

RELB 104	The Ministry of Jesus	4
RELB 111	Messages of the Old Testament	4
RELB 231	Exploring the New Testament	4

Physical Health

Choose two of the following:

PEAC 113-190	Physical Activity Courses	1, 1

SECTION II: WAYS OF KNOWING

Courses in this section impart a broad knowledge of the arts and sciences through the traditional liberal arts disciplines.

Humanities (4)

Courses in the fine arts, literature, and philosophy introduce students to human aesthetic and intellectual achievements. Fine arts and literature courses concentrate on artistic movements and genres in cultural context; philosophy courses foster an understanding of and appreciation for philosophy as a distinct mode of inquiry.

Choose one of the following:

ART 251	Introduction to Art	4
ENGL 204	Introduction to Literature	4
ENGL 210	Survey of British and American Literature	4
ENGL 211	Survey of British and American Literature	4
ENGL 212	Survey of British and American Literature	4
ENGL 274	Study Tour: British Literature in Context	4
FILM 215	Introduction to Film Literature	4
MUHL 124	Introduction to Music	4
PHIL 204	Essentials of Critical Reasoning	4
PHIL 205	Introduction to Philosophy	4

History (4)

History survey courses help students understand the forces that shape cultures and societies, and provide a foundation for interpreting the validity and relevance of historical texts.

Choose one of the following:

HIST 121	The West and the World	4
HIST 122	The West and the World	4
HIST 221	History of the United States	4
HIST 222	History of the United States	4
HIST 240	Cities and Cultures in Middle Eastern History	4
HIST 274	Study Tour: English History in Context	4
HIST 275	History of England	4
HIST 283	Latin America	4

Social Science (4)

Social science courses help students understand the scientific study of human relations.

Choose one of the following:

ANTH 225	Cultural Anthropology	4
PSYC 130	General Psychology	4
PSYC 140	Introduction to Psychology: Social Foundations	4
PSYC 141	Introduction to Psychology: Biological Foundations	4
PSYC 217	Psychology of Learning and Development	4
SOCI 204	General Sociology	4

Natural Science (4)

Natural science courses emphasize methods of measurement and discovery of the natural world and help students to understand through theory and practice how scientific hypotheses are developed, tested, and applied.

Choose one of the following:

BIOL 105	Contemporary Biology	4
BIOL 106	Contemporary Biology	4
BIOL 121	Anatomy and Physiology	4
BIOL 141	General Biology	4
CHEM 105	Survey of Chemistry	5
CHEM 141	General Chemistry	3
	and	
CHEM 144	General Chemistry Laboratory	1
PHYS 201	Conceptual Physics	3
	and	
PHYS 204	Conceptual Physics Laboratory	1
PHYS 211	General Physics	3
	and	
PHYS 214	General Physics Laboratory	1
PHYS 251	Principles of Physics	3
	and	
PHYS 254	Principles of Physics Laboratory	1

Religion and Theology (7-8)

Choose one from each of the following categories. Courses in these two categories emphasize Biblical knowledge and theological inquiry.

Exploring Scripture

RELB 302	Pentateuch	4
RELB 304	Hebrew Prophets	4
RELB 312	Daniel and Jeremiah	4
RELB 313	Revelation	4
RELB 337	Jesus and The Gospels	4
RELB 340	Acts & New Testament Letters	4
RELB 362	Paul and The Gospel	4
RELB 408	The Bible and the Human Condition	4

Exploring SDA Life and Thought

RELH 457	History of Adventism	3
RELT 110	Introduction to Seventh-day Adventist Belief and Practice	4
RELT 202	Christian Beliefs	4
RELT 417	Prophetic Inspiration	3

SECTION III: WAYS OF ENGAGING

Courses in this section allow students to apply "ways of knowing" to in-depth explorations of various cultural themes and social issues in order to help translate academic achievement into engaged citizenship.

Engaging the Arts (2-4)

Courses in this section allow students to further their appreciation of Beauty in Expression by exploring one of the arts in a focused thematic or historical context.

Choose one of the following:

ART 324	History of World Art	3
ART 325	History of World Art	3
ART 326	History of World Art	3
DRMA 101	Introduction to Theatre	3
DRMA 363/ENGL 363	History of Theatre	4
ENGL 214	Themes in Literature	4
ENGL 358	Classical Literature	4
ENGL 359	World Literature	4
ENGL 360	Shakespeare Festival	2
ENGL 454/RELB 354	Literature of the Bible	4
ENGL 474	Study Tour: Topics in British Literature	4
MUHL 310	Great Composers	3; 6
WRIT 324	Creative Nonfiction Writing	4
WRIT 334	Poetry Writing	4

This course applies only to those majoring in elementary education or secondary education:

ENGL 374	Literature for Children and Young Adults	4

Engaging History and Philosophy (4)

Courses in this section allow students to explore the relevance of historical and philosophical thinking through an in-depth exploration of a particular historical, cultural, or philosophical perspective.

Choose one of the following:

HIST 242	Modern East Asian History	4
HIST 254	History of Christianity	4
HIST 257	Voices in African History	4
HIST 305	Ancient Near Eastern Empires	4
HIST 306	Classical Greece and Rome	4
HIST 307	Reform and Revolt	4
HIST 320	Archaeology and Empire	4
HIST 354	American History and Visual Culture	4
HIST 355	The Atlantic World: Liberty, Bondage, and Revolution	4
HIST 359/ECON 359	The American Economy	4
HIST 434	Women in the Ancient World	4
HIST 437	Medieval and Renaissance Europe	4
HIST 448	Becoming America: Citizenship and Exceptionalism from 1877-1941	4
HIST 450	United States Foreign Policy	4
HIST 463	Women and Society in Early Modern Europe	4
HIST 474	Study Tour: English Reformation	4
PHIL 305	Moral Philosophy	4

This course applies only to those majoring in elementary education or secondary education:

HIST 386	Cultures of the Pacific Northwest	4

Engaging Faith (6-7)

For their remaining religion electives students can choose from a variety of courses that provide opportunities for further exploration of biblical and theological issues, foster continued spiritual growth, and provide a framework of faith to guide their personal and professional lives. In addition to the classes in the list below, students may also select classes not previously taken from the Exploring Scripture and Exploring SDA Life and Thought categories listed under Ways of Knowing.

Select 6-7 hours (for a total of 18 religion credits):

RELB 105	The Sermon on the Mount	2
RELB 106	The Parables of Jesus	2
RELB 274	Study Tour: The Holy Lands and Its People	4
RELB 303	Old Testament Psalms, Stories, and Wisdom	3
RELB 306	The Bible and Its Translations	2
RELB 307	Creation in the Bible	2
RELB 333	Biblical Perspectives on Healing	4
RELB 339	Luke-Acts	4
RELB 345	Biblical Narratives	4
RELB 354/ENGL 454	Literature of the Bible	4
RELB 382P	New Testament Biographies	3
RELT 408	Compassion	4
RELB 410	Women in the Bible	2
RELB 421P	Interpreting the Bible	4
RELB 474	Study Tour: The Holy Lands and Its Peoples	4
RELH 205	Biblical Archaeology	4
RELH 303	World Religions	4
RELH 425/PSYC 425	Psychology of Religion	3
RELH 455	Heresy, Orthodoxy & the Early Church	3
RELM 233	Introduction to Cross-Cultural Ministry	3
RELT 326	Spirituality and Discipleship	4
RELT 340	Spiritual Care and Nursing	3-4
RELT 348	Christian Ethics	4
RELT 402	Human Forgiveness	2
RELT 408	Compassion	4
RELT 412/PHIL 412	Philosophy of Religion	4

Engaging Science and Data (4)

Courses in this section allow students to examine how empirical data and the scientific method should inform their understanding of current issues. Students will gain this understanding either through continued study in a lab science sequence or through a course focused on the general tools and processes used to gain insight from scientific inquiry.

Choose one of the following:

MATH 215	Data Analysis	4
CPTR 230	Computing for Insight	4
ENVI 385	Environmental Stewardship	4
PHIL 407	Philosophy of Science	4
	Second Quarter of any Lab Science Sequence	4

Engaging Society (2-4)

Courses in this section help students gain the skills and perspectives necessary for civic engagement, generous service, and personal well-being.

Choose one of the following:

COMM 145	Media and Culture	4
CPTR 130	Introduction to Data Science	4
CPTR 308/CIS 308	Social, Legal, and Ethical Issues for Computing Technology	4
ECON 210	Principles of Microeconomics	4
ECON 220	Principles of Global Development	4
ECON 359/HIST 359	The American Economy	4
FINA 101	Personal Finance	4
FINA 325	Investments	4
GBUS 270	Business Communication	4
GBUS 361	Business Law I	4
HLTH 110	Wellness for Living	3
HLTH 220	Human Nutrition	4
LANG 406	Language and Culture	3
MGMT 463	Business Ethics	4
PHIL 440/HIST 440	History of Social and Political Philosophy	4
PLSC 224	American Government	4
PSYC 344	Social Psychology	4
SOCI 225/PSYC 225	Marriage and Family Life	2
SOCI 234	Current Social Problems	4
SOCI 236	Privilege and Oppression	4
SOCI 420	Immigration and Identity	4
SOWK 260	Human Behavior and The Social Environment I	4
SOWK 261	Human Behavior and The Social Environment II	4
SPCH 341	Argumentation	4
SPCH 443	Persuasion	4
TECH 321	Technology and Society	4
	Foreign Language (See Below)	4

This course applies only to those majoring in elementary education or secondary education:

EDUC 444	Cultural Diversity in Education	3

Language Requirement for BA Students

All BA students are required to demonstrate elementary-level proficiency in a language other than English. This requirement can be fulfilled either by taking a 12-credit elementary language sequence, completing a minimum of 9 hours of language

instruction in the context of an immersive cultural experience (generally through Adventist Colleges Abroad), or earning a score of 61 or above on a CLEP exam in a language other than English:

Note that this requirement does not fulfill the Engaging Society requirement for BA students since GS courses are not allowed to count toward multiple categories.

FREN 101	Elementary French	4
FREN 102	Elementary French	4
FREN 103	Elementary French	4
GREK 231	Greek I	4
GREK 232	Greek I	4
GREK 331	Greek II	4
SPAN 101	Elementary Spanish	4
SPAN 102	Elementary Spanish	4
SPAN 103	Elementary Spanish	4

TRANSFER STUDENT GENERAL STUDIES

General Studies requirements for transfer students may vary from the above outline based on the number and type of credits transferred.

STUDENTS TRANSFERRING CREDITS FROM NON-SEVENTH-DAY ADVENTIST, REGIONALLY ACCREDITED COLLEGE/UNIVERSITY:

Students transferring **45-89 credits** must complete:

- 12 credits of religion/theology at a regionally accredited Adventist college/university. Credits should fulfill the following GS categories:
  - Exploring Scripture (4)
  - Exploring SDA Life/Thought (3-4)
  - Engaging Faith (4-5)

Students transferring **90-135 credits** must complete:

- 10 credits of religion/theology at a regionally accredited Adventist college/university. Credits should fulfill the following GS categories:
  - Exploring Scripture (4)
  - Exploring SDA Life/Thought (3-4)
  - Engaging Faith (2-3)

Students transferring **more than 135 credits** must complete:

- 6 credits of religion/theology at a regionally accredited Adventist college/university (Any courses from Exploring Scripture, Exploring SDA Life/Thought, and/or Engaging Faith)

DIRECT TRANSFER AGREEMENT

A student who has completed a DTA associate degree from a Washington State community or technical college with a 2.0 GPA will have completed the general studies (general education) requirements for a four-year degree at WWU except for the following:

- Must have 4 credits of college-level mathematics (a course with a Mathematics prefix numbered above 099). This could be completed at the CC or WWU
- Must complete 10 credits of general studies religion courses at WWU as outlined in the standard transfer policy for students from a non-Seventh-day Adventist, regionally accredited college/university

A student who has completed an Associate of Arts Oregon Transfer (AAOT) associate degree from an Oregon State community or technical college with and a 2.0 GPA will have completed the general studies (general education) requirements for a four-year degree at WWU except the following:

- Must complete 10 credits of general studies religion courses at WWU as outlined the standard transfer policy for students from a non-Seventh-day Adventist, regionally accredited college/university

GENERAL STUDIES REQUIREMENTS FOR STUDENTS WHO HAVE EARNED A PREVIOUS BACCALAUREATE DEGREE AT AN ACCREDITED COLLEGE OR UNIVERSITY:

1. If the student has a prior degree from WWU, general studies bulletin requirements are complete. However, if the previous degree was not a BA degree and the student is now seeking a BA degree, then the language requirement must be completed.
2. If the student has a degree from an accredited institution other than WWU, the student must meet the general studies requirements as listed below.

- One physical education activity course (1 credit minimum).
- One general studies history course (4 credits minimum).
- One of the required general studies social science courses (4 credits minimum).
- Two general studies humanities courses (8 credits minimum).
- Students from a university/college with non-English instruction must successfully complete an English competency exam administered by the English department or have taken courses equivalent to the College Writing sequence, regardless of the courses on their transcript.
- One general studies mathematics course (4 credits minimum).
- One general studies lab science courses (4 credits minimum).
- Bulletin requirements for general studies religion credits for transfer students.

ENGINEERING GENERAL STUDIES REQUIREMENTS

The general studies content within the engineering curriculum is similar to the standard General Studies requirements for the baccalaureate degree at Walla Walla University, with some important differences. Credits must be distributed as follows:

FOUNDATIONAL SKILLS (15)

Courses in this section ensure that students have the foundation necessary to fulfill the following core GS objectives:

- Communicate effectively and responsibly
- Demonstrate critical and reflective thinking
- Find, evaluate, and integrate sources
- Develop a holistic understanding of the principles of health and wellness

Written Communication and Information Literacy:

ENGL 121	Introduction to Analytical Writing	3
ENGL 122	Introduction to Research Writing	3
ENGL 223	Research Writing (WD)	3

Oral Communications

Choose one of the following:

SPCH 101	Fundamentals of Speech Communication	4
SPCH 207	Small Group Communication	4

Physical Health

Choose two of the following:

PEAC 113-190	Physical Activity Courses	1, 1

ETHICS AND BELIEF STUDIES (18)

Courses in this section provide opportunities for exploration of biblical and theological issues, foster spiritual growth, and provide a framework of faith to guide the students' personal and professional lives.

Foundations of Faith (4)

Choose one of the following:

RELB 104	The Ministry of Jesus	4
RELB 105	The Sermon on the Mount	2
	and	
RELB 106	The Parables of Jesus	2
RELB 111	Messages of the Old Testament	4
RELB 231	Exploring the New Testament	4

For their remaining religion electives students can choose from any other general studies Religion classes. Six credits must be upper division. Choose from any of the following categories (see General Studies (p. 48) section of the bulletin).

Additional Foundations of Faith courses
Section II: Ways of Knowing – Religion and Theology
Section III: Ways of Engaging – Engaging Faith

Students transferring at least 45 credits from a non-Seventh-day Adventist, regionally accredited college/university must complete the number of religion/theology credits as described in the Transfer Student General Studies (p. 52)section. However, they do not need to meet the subcategory minimums in that section. Engineering students must still complete 43 credits of total general studies even when the number of required Ethics and Belief Studies credits are reduced.

Ways of Knowing and Engaging (10)

Courses in this section impart a broad knowledge of the arts and sciences through the traditional liberal arts disciplines, and allow students to explore various cultural themes and social issues in order to translate academic achievement into engaged citizenship.

Engaging the Arts

Choose at least one course from either of the following categories (See General Studies (p. 48) section of the bulletin).

Section II: Ways of Knowing – Humanities (p. 49)
Section III: Ways of Engaging – Engaging the Arts (p. 50)

Engaging History & Philosophy

Choose at least one course from either of the following categories (see General Studies (p. 48) section of the bulletin).

Section II: Ways of Knowing – History (p. 49) Section III: Ways of Engaging – Engaging History & Philosophy (p. 50)

Engaging Society

Choose at least one course from either of the following categories (see General Studies (p. 48) section of the bulletin).

Section II: Ways of Knowing – Social Science
Section III: Ways of Engaging – Engaging Society or ENVI 385: Environmental Stewardship
or MGMT 371: Principles of Management

GENERAL STUDIES REQUIREMENTS FOR THE ASSOCIATE DEGREE

Foundational Skills (11)

ENGL 121	3
ENGL 122	3

Oral Communication (SPCH 101 or SPCH 207)	4
Health and Physical Education	1
Ways of Knowing (20)	
Humanities	4
History/Social Science	4
Quantitative Reasoning/Natural Science	4
Religion and Theology (RELB, RELH, RELT	8 (including 4 hours of RELB)

HONORS GENERAL STUDIES PROGRAM

The Honors General Studies Program offers an alternate general studies experience designed to inspire curious, highly motivated students to serve as leaders of thought and agents of change.

This program is a separate track of general studies and not a major or a minor in itself. Honors core 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. Many Honors courses follow an interdisciplinary approach that stresses the unity of knowledge; some courses are team taught. The classes are more personalized and typically smaller than other general studies classes.

Students in the Honors Program are awarded an annual scholarship dependent on successful completion of specific courses and a minimum GPA. See the Honors webpage for specific details and scholarship amounts. At graduation, students who complete the Honors Program requirements with at least a 3.25 cumulative GPA and a 3.0 GPA in honors core courses and honors core cognates will be designated as "Honors General Studies Graduates."

Admission Requirements. The Honors Admissions Committee considers high school GPA, standardized test scores, and recommendations from teachers. Students already enrolled in the University may apply to the program or petition the Honors Program director to enroll in a specific Honors course.

HONORS GENERAL STUDIES REQUIREMENTS

These are the general studies requirements for the B.B.A., B.S., B.Ed., B.L.S., B.Mus., and B.S.W. degrees (60-63 hours) and the B.A. degree (72-75, hours including the foreign language requirement).

BSE students complete all of the requirements for Sections I and II + the Engaging Faith and one elective from Section III (54-55 hours).

Each GS course can fulfill only one GS requirement.

Section I. Foundational Skills

Honors students are expected to already have stronger than average foundational skills so will take fewer credits in this area than traditional GS students. HONR 141 fulfills the requirement for both ENGL 121 and 122; HONR 243 fulfills the requirement for both research writing and oral communication. (17 credits)

Foundations of Faith (4)

HONR 281	The Bible and Its Environments	4

Physical Health

Choose two of the following:

PEAC 113-190	Physical Activity Courses	1, 1

Quantitative Reasoning (4)

Choose one of the following:

MATH 106	Introduction to Statistics	4
MATH 121	Precalculus I	4
MATH 171	Calculus I	4

Written Communication and Information Literacy (7)

HONR 141	Writing Seminar: Identity, Responsibility, and Citizenship	3
HONR 243	Honors Research Writing	3
HONR 392	Honors Portfolio	1

Section II: Ways of Knowing

Honors students experience an integrated approach to the liberal arts through a team-taught Western Thought sequence, interdisciplinary religion courses that explore religion in a social context, and a lab science sequence. (27 credits)

Ways of Knowing: Natural Science (8)

Select one of the following sequences (8 credits):

BIOL 141	General Biology	4
BIOL 141L	General Biology Lab	0
BIOL 142	General Biology	4
BIOL 142L	General Biology Lab	0
CHEM 141	General Chemistry	3
CHEM 142	General Chemistry	3
CHEM 144	General Chemistry Laboratory	1
CHEM 145	General Chemistry Laboratory	1
PHYS 211	General Physics	3
PHYS 212	General Physics	3
PHYS 214	General Physics Laboratory	1
PHYS 215	General Physics Laboratory	1
PHYS 251	Principles of Physics	3
PHYS 252	Principles of Physics	3
PHYS 254	Principles of Physics Laboratory	1
PHYS 255	Principles of Physics	1

	Laboratory	

Ways of Knowing: Religion (7)

HONR 349	Religion in a Social Context	4
HONR 496	Honors Seminar: Faith and Learning	1
HONR 497	Honors Seminar: Faith and Learning	1
HONR 498	Honors Seminar: Faith and Learning	1

Ways of Knowing: Humanities, History, and Social Science (12)

HONR 131	Western Thought	4
HONR 132	Western Thought	4
HONR 133	Western Thought	4

Section III: Ways of Engaging

Honors students will select electives from enriched interdisciplinary elective options that encourage high-impact learning experiences, graduate school preparation, and alignment with career goals. (BSE students are required to complete the Engaging Faith requirements, plus one additional course chosen from the other three elective categories).

Engaging Faith

Select at least 7 hours from the following courses:

RELB 333	Biblical Perspectives on Healing	4
RELB 354/ENGL 454	Literature of the Bible	4
RELB 410	Women in the Bible	2
RELB 474	Study Tour: The Holy Lands and Its Peoples	4
RELH 205	Biblical Archaeology	4
RELH 303	World Religions	4
RELH 457	History of Adventism	3
RELT 342	Issues of God and Faith	3
RELT 348	Christian Ethics	4
RELT 412/PHIL 412	Philosophy of Religion	4

Global Understanding:

Select one of the following courses:

COMM 325	Multicultural Communication	3
ENGL 359	World Literature	4
HIST 240	Cities and Cultures in Middle Eastern History	4
HIST 242	Modern East Asian History	4
HIST 257	Voices in African History	4
HIST 274	Study Tour: English History in Context	4
HIST 283	Latin America	4
HIST 474	Study Tour: English Reformation	4
SOCI 236	Privilege and Oppression	4
SOCI 420	Immigration and Identity	4

Responsible Citizenship:

Select one of the following courses:

COMM 357	Communication Law and Ethics	4
CPTR 230	Computing for Insight	4
CPTR 308/CIS 308	Social, Legal, and Ethical Issues for Computing Technology	4
ENVI 385	Environmental Stewardship	4
HIST 360/HMNT 360	Science and The Enlightenment	4
MGMT 476	Foundations of Leadership	4
PHIL 204	Essentials of Critical Reasoning	4
PHIL 305	Moral Philosophy	4
PHIL 440/HIST 440	History of Social and Political Philosophy	4
PLSC 224	American Government	4
TECH 321	Technology and Society	4

Aesthetic Appreciation:

Select one of the following courses:

ART 324	History of World Art	3
ART 325	History of World Art	3
ART 326	History of World Art	3
ENGL 214	Themes in Literature	4;12
ENGL 274	Study Tour: British Literature in Context	4
ENGL 360	Shakespeare Festival	2
ENGL 474	Study Tour: Topics in British Literature	4
FILM 318	Film Studies	4
WRIT 324	Creative Nonfiction Writing	4
WRIT 334	Poetry Writing	4
WRIT 337	Stylistics	4

Requests for substitutions for credit earned through directed study or study abroad opportunities may be submitted to the Honors Program director for consideration. In addition to Adventist Colleges Abroad, WWU has specific affiliations with Middlebury College's Oxford Humanities Program, The Council of Christian Colleges and Universities Best Semester Program, and the Balua Regional Archaeological Project. Dual Credit, AP Credit, and required cognates not fulfilled by honors courses may also be allowed to count toward fulfilling honors electives, as determined through a petition to the honors director.

Foreign Language

All BA students are required to complete a foreign language sequence of 12 quarter hours at the elementary level or 8 quarter hours at the intermediate

level. (The Greek I sequence plus GREK 331 satisfies this requirement).

FREN 101	Elementary French	4
FREN 102	Elementary French	4
FREN 103	Elementary French	4
GREK 231	Greek I	4
GREK 232	Greek I	4
SPAN 101	Elementary Spanish	4
SPAN 102	Elementary Spanish	4
SPAN 103	Elementary Spanish	4

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:

001-100 Remedial and Experiential courses (credits do not apply toward graduation, but do apply to financial aid minimums.)
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

Courses in which the third numeral is 1, 2, or 3, must be taken in sequence. In sequences, the earlier courses are prerequisites to the later courses and must be successfully completed prior to enrolling in a subsequent course.

The credit indicated in connection with a 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 University will make every effort consistently to 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 or teacher staffing so dictate. The *Class Schedule* should be consulted for personal planning of course loads and schedules.

The University 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 for seniors or graduate students.

Some courses specify that they are offered odd or even years only. A school year (Fall to Summer) is designated "odd" or "even" by the beginning year of Fall Quarter.

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 departments. The prefix assigned to the number designates the discipline. The following are courses that carry uniform numbers throughout this bulletin:

001-100 REMEDIAL COURSES (1-4)

Courses for students needing to improve basic skills in preparation for university-level work. Credit will not apply toward graduation, but will apply to financial aid minimums and for deferment of educational loans.

100 EXPERIENTIAL PROGRAM (6; 18)

Program with qualified supervision and structured experience including Christian Service Volunteer, Task Force and Cooperative Education. Credit will not apply toward graduation or class level requirements, but will apply for deferment of educational loans. Graded S or NC.

198, 398 TRANSFER CREDITS

Numbering used for the articulation of lower and upper division transfer courses that do not have a WWU equivalent, but can be used to meet general studies requirements. These numbers will be used only within the Academic Records Office.

199, 399 TRANSFER CREDITS

Numbering used for the articulation of lower and upper division transfer courses that do not have a WWU equivalent, but can be used as electives in the major or minor. These numbers will be used only within the Academic Records Office.

200; 400 TOPICS (1-5; 10)

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 by the Curriculum Committee as a one-time offering. See the Class Schedule for all approved topics courses.

259; 459 SUPPLEMENTAL STUDIES (1-3; 3)

Previous course work supplemented when portions of a course required in the student's program have been omitted. Ordinarily supplementation will occur only with transfer students or within a program that has undergone a major curriculum change. A study proposal is to be outlined in consultation with the instructor of the course being supplemented and

approved by the department and the Academic Standards Committee. May not be substituted for existing courses.

274; 474 WORKSHOPS/STUDY TOURS (1-4)
Short-term, concentrated experiences which require a minimum of out-of-class assignments and are usually conducted in large blocks of time. See the class schedule for all approved workshop/study tour courses.

280; 370; 490 DIRECTED FIELD WORK/PRACTICUM/ EXPERIENCE (2-16)

394 DIRECTED READING (1-3)
Independent reading for students who wish to broaden their knowledge in a particular discipline.

395; 396 DEPARTMENTAL METHODS COURSES (3)

469 ADVANCED STUDY (1-3; 3)
Advanced directed study by which students may enhance the major or minor in breadth or depth in topics not covered by the department curriculum. The study proposal must be approved by the department faculty and the Academic Standards Committee and should indicate the methods of evaluation. May not be substituted for existing courses in the major or minor.

478 APPLIED RESEARCH (1-3; 4)
Students will work with a departmental advisor on research activities such as literature search, preliminary experiments, data collection, data transcription, or data analysis. Graded S/NC.

479 DIRECTED RESEARCH/PROJECT (1-3; 6)
Individual research, and/or laboratory work, or technical project in the major. (Some departments may allow this course on the minor.) A project proposal is required to define the scope of the work and the method of reporting. Requires permission of the department faculty with a copy of the proposal sent to the Registrar in the Academic Records office. See individual departments for specific course description.

490 INTERNSHIP (0-12; 12)
Individual contract arrangement involving students, faculty, cooperative businesses and organizations to gain experience in a work environment. Allows the student to apply advanced classroom learning. A minimum of 30 hours of approved activity/experience must be completed for each credit earned. See individual departments for specific course description and Internship Program in the Nondepartmental section of the Bulletin for other details. Prerequisite: Approval by department. Graded S or NC. (Course fees apply for students enrolled for 0 credit.)

495 COLLOQUIUM (0)
Series of lectures, programs, discussions or other activities designed to explore specific issues in a given field of study. For each quarter that a student fails to complete the colloquium requirement as stated for the major, there will be a fee to be paid before an alternative colloquium will be approved. Graded S or NC.

496; 497; 498 SEMINAR (1-4)

PROGRAMS OF STUDY

BIOLOGICAL SCIENCES

David Lindsey, Chair; Cecilia Brothers, David Cowles, Jim Nestler, Kirt Onthank, Joan Redd, Jeremy Wiggins.

The objectives of the department are to develop an understanding of the principles of biology that will better acquaint students with the world in which they live; to create an atmosphere 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 departments of chemistry, engineering, and physics, a Bachelor of Science degree with majors in biochemistry, bioengineering, and biophysics respectively. A minor in biology is also available. Students have exceptional opportunities for study in the biological sciences during the summer at the Rosario Beach Marine Laboratory, adjoining Deception Pass State Park, Anacortes, Washington. For further information visit the Rosario website at rosario.wallawalla.edu.

For a description of the graduate program leading to the Master of Science degree in biology, see the Graduate Bulletin.

BIOLOGY MAJOR (BACHELOR OF SCIENCE)

A student majoring in biology 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. One summer term (10 credits) at the WWU Rosario Beach Marine Laboratory is required during which at least one upper-division, marine-oriented course must be taken. Senior students are required to take the Major Field Test (MFT) examination in biology.

Required Courses:

BIOL 141	General Biology	4
BIOL 142	General Biology	4
BIOL 143	General Biology	4
BIOL 216	Introduction to Biological Research I (WD)	3
BIOL 250	Biostatistics	4
BIOL 305	General Ecology	4
BIOL 326	Journal Club:	1
BIOL 381	Cell Biology I: Structure and Bioenergetics	4
BIOL 382	Cell Biology II: Genetics and Molecular Biology	4
BIOL 483	Philosophy of Origins and Speciation	3
BIOL 495	Colloquium	0
BIOL 496	Senior Seminar	2
	Electives	26
		Total: 63

BIOL 495: 6 quarters required

Ten upper-division credits are required to be taken at the WWU Rosario Beach Marine Laboratory during one summer term.

Cognates:

CHEM 141	General Chemistry	3
CHEM 142	General Chemistry	3
CHEM 143	General Chemistry	3
CHEM 144	General Chemistry Laboratory	1
CHEM 145	General Chemistry Laboratory	1
CHEM 146	General Chemistry Laboratory	1
CHEM 321	Organic Chemistry	4
CHEM 322	Organic Chemistry	4
CHEM 324	Organic Chemistry Laboratory	1
CHEM 325	Organic Chemistry Laboratory	1
MATH 121	Precalculus I	4
	and	
MATH 122	Precalculus II	4
PHYS 211	General Physics	3
PHYS 212	General Physics	3
PHYS 213	General Physics	3
PHYS 214	General Physics Laboratory	1
PHYS 215	General Physics Laboratory	1
PHYS 216	General Physics Laboratory	1

MARINE BIOLOGY MAJOR (BACHELOR OF SCIENCE)

A student majoring in marine biology must complete 67 quarter hours in the major, the required cognates, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin. Two summer terms (20 credits) at the WWU Rosario Beach Marine Laboratory is required. All twenty credits are required to be upper-division marine-oriented courses. Senior students are required to take the Major Field Test (MFT) examination in biology.

Required Courses:

BIOL 141	General Biology	4
BIOL 142	General Biology	4
BIOL 143	General Biology	4
BIOL 150	Introduction to the Marine Sciences	4

BIOL 216	Introduction to Biological Research I (WD)	3
BIOL 250	Biostatistics	4
BIOL 305	General Ecology	4
BIOL 326	Journal Club:	1
BIOL 381	Cell Biology I: Structure and Bioenergetics	4
BIOL 382	Cell Biology II: Genetics and Molecular Biology	4
BIOL 483	Philosophy of Origins and Speciation	3
BIOL 495	Colloquium	0
	Upper Division Electives in Biology	8
	Rosario Marine Biology Electives (20)	20
	Total: 67	

Marine Biology Electives (Must be taken at Rosario):

- Marine Biology (BIOL 458)
- Marine Ecology (BIOL 460)
- Marine Ecotoxicology (BIOL 400)
- Marine Phycology (BIOL 463)
- Topics in Marine Biology

Highly Recommended Courses:

MOTC 350	Motorboat Operation	3
SCDI 441	Scientific Diving I	2
SCDI 442	Scientific Diving II	2

Cognates:

CHEM 141	General Chemistry	3
CHEM 142	General Chemistry	3
CHEM 143	General Chemistry	3
CHEM 144	General Chemistry Laboratory	1
CHEM 145	General Chemistry Laboratory	1
CHEM 146	General Chemistry Laboratory	1
CPTR 141	Fundamentals of Programming I	4
CPTR 142	Fundamentals of Programming II	4
ENGR 235	Engineering for the Life Sciences	4
MATH 121	Precalculus I	4
MATH 122	Precalculus II	4
PHYS 211	General Physics	3
PHYS 212	General Physics	3
PHYS 213	General Physics	3
PHYS 214	General Physics Laboratory	1
PHYS 215	General Physics Laboratory	1
PHYS 216	General Physics Laboratory	1

BIOCHEMISTRY MAJOR (BACHELOR OF SCIENCE)

The biochemistry (p. 108) major is a joint program offered by the Department of Biological Sciences and the Department of Chemistry. See the Interdisciplinary Programs section (p. 106) of this bulletin.

BIOENGINEERING SCIENCE MAJOR (BACHELOR OF SCIENCE)

The bioengineering science (p. 110) major is a joint program offered by the Department of Biological Sciences and the School of Engineering. See the Interdisciplinary Programs section (p. 106) of this bulletin.

BIOPHYSICS MAJOR (BACHELOR OF SCIENCE)

The biophysics (p. 111) major is a joint program offered by the Department of Biological Sciences and the Department of Physics. See the Interdisciplinary Programs section (p. 106) of this bulletin.

BIOLOGY MINOR

A student minoring in biology must complete a minimum of 27 quarter hours.

Required Courses:

BIOL 141	General Biology	4
BIOL 142	General Biology	4
BIOL 143	General Biology	4
	Biology Electives	15
	Total: 27	

Biology Electives: At least 8 credits must be upper division. Approval of biology advisor required.

SCHOOL OF BUSINESS

Bruce Toews, Dean; Johanna Attoh, Conna Bond, Steven Forbis, George Perez, Stephen Pilgrim, Brian Schaffner.

Within the context of Walla Walla University's mission, the School of Business provides a high-quality business education in which graduates are prepared for successful careers and advanced studies.

The Bachelor of Business Administration, Bachelor of Science in Business Administration, and Bachelor of Arts in Business Administration degrees are accredited by the Accreditation Council for Business Schools and Programs (ACBSP), a leading international accreditation association for business schools with a focus on mission-based standards, including teaching excellence.

Degrees Offered

Bachelor of Business Administration (BBA) (p. 60) is a professional degree designed for students planning to enter the job market or graduate programs. Concentrations include accounting, entrepreneurship and small business management, finance, management, and marketing. No minor is required.

Bachelor of Arts (BA) in Business Administration (p. 62) is available to students who wish a broader liberal arts reparation than that provided by the BBA. A minor in an area distinct from the major and foreign language study are required.

Bachelor of Science (BS) in Business Administration (p. 62)provides more flexibility than is provided by a BBA degree. This degree serves students who plan to enter graduate school, medical school, dental school, law school, etc. or who desire broad flexibility. No minor is required.

Bachelor of Science (BS) in Automotive Management (p. 106)**,** jointly offered with the Department of Technology, combines automotive technology and business to prepare students for managing automotive businesses. No minor is required.

Bachelor of Science (BS) in Aviation Management (p. 107)**,** jointly offered with the Department of Technology, combines aviation technology and business to prepare students for managing aviation businesses. No minor is required.

Bachelor of Science (BS) in Information Systems (p. 113)**,** jointly offered with the Department of Computer Science, combines computer technology and business to prepare students for positions as programmers, systems analysts, network administrators, and other careers in information systems. No minor is required.

Associate of Science (AS) (p. 63) **in Business** provides students an opportunity to gain the basic knowledge and skills required for initial job placement.

Minors are available in accounting, business administration, economics, global development, marketing, and leadership.

Students planning on graduate study should check the specific graduate school admission requirements. Graduate programs may have admission requirements in addition to a WWU baccalaureate degree in business.

BACHELOR OF BUSINESS ADMINISTRATION (BBA)

Students seeking the BBA degree must complete 66 quarter hours of core requirements and a minimum 36-quarter hour concentration. In addition, students must complete the required cognates, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin. Senior students are required to take the Major Field Test in Business.

A maximum of 12 credit hours applied to one concentration may also be applied to a second concentration.

CORE REQUIREMENTS:

Lower Division Courses:		
ACCT 201	Principles of Financial Accounting	4
ACCT 202	Principles of Financial Accounting	3
ACCT 203	Principles of Managerial Accounting	3
CIS 140	Business Analytics with Microsoft Excel	4
CIS 240	Business Analytics and Data Visualization	4
ECON 210	Principles of Microeconomics	4
ECON 211	Principles of Macroeconomics	4
GBUS 270	Business Communication	4
Upper Division Courses:		
CIS 301	Information Systems and Business Intelligence	4
FINA 351	Managerial Finance	4
GBUS 361	Business Law I	4
GBUS 362	Business Law II	4
GBUS 495	Colloquium*	0
MGMT 366	Operations Management	4
MGMT 371	Principles of Management	4
MGMT 463	Business Ethics	4
MGMT 489	Strategic Management	4
MKTG 381	Principles of Marketing (WD)	4
		Total: 66

**Twelve quarters required or number of quarters in residence as a declared business major at WWU, whichever is less.*

COGNATE REQUIREMENTS:

Math:

MATH 106	Introduction to Statistics	4

Choose one of the following social science courses:

PSYC 130	General Psychology	4
SOCI 204	General Sociology	4

ACCOUNTING CONCENTRATION (BBA)

REQUIRED COURSES:

ACCT 321	Intermediate Accounting	4
ACCT 322	Intermediate Accounting	4
ACCT 323	Intermediate Accounting	4
ACCT 331	Managerial Cost Accounting	4
ACCT 335	Personal Income Tax	4
ACCT 430	Auditing	4
ACCT 490	Internship*	0-4

SELECT 12 CREDITS FROM THE FOLLOWING:

ACCT 341	Accounting Information Systems	4
ACCT 350	Not-for-Profit and Government Accounting	4
ACCT 421	Advanced Accounting	4
ACCT 435	Business Taxation	4

Total: 36-40

*Or any of the following: CIS 490, FINA 490, GBUS 490, LAW 490, MGMT 490, and MKTG 490.

Certified Public Accountant (CPA) Examination

In many states, 225 quarter (150 semester) college credits are required to write the Uniform CPA Examination. The effect of this requirement is to add 33 quarter credits above the Walla Walla University degree of 192 credits. The specific education requirements to write the CPA Examination differ from state to state, so careful planning is needed to ensure that the requirements are fully met. You may generally satisfy the 225-credit requirement by completing a BBA degree with an accounting concentration and one of the following:

- Various courses such as accounting, finance, writing, etc.,
- A second BBA concentration,
- An M.B.A. degree from WWU,
- Graduate study in accountancy, taxation, computer information systems, business administration, etc.

ENTREPRENEURSHIP AND SMALL BUSINESS MANAGEMENT CONCENTRATION (BBA)

REQUIRED COURSES:

ACCT 321	Intermediate Accounting	4
ACCT 335	Personal Income Tax	4
ACCT 341	Accounting Information Systems	4
GBUS 490	Internship*	0-4
MGMT 375/MKTG 375	Foundations of Entrepreneurship	4
MGMT 376	Human Resource Management	4
	Business Electives	12-16

Total: 36

*Or any of the following: ACCT 490, CIS 490, FINA 490, LAW 490, MGMT 490, and MKTG 490.

Business electives may be chosen from courses with prefixes ACCT, CIS, ECON, FINA, GBUS, MGMT, or MKTG.

FINANCE CONCENTRATION (BBA)

REQUIRED COURSES:

ACCT 321	Intermediate Accounting	4
ACCT 322	Intermediate Accounting	4
FINA 441/ECON 441	Financial Markets and Institutions	4
FINA 325	Investments	4
FINA 488/ECON 488	International Trade and Finance	4
FINA 490	Internship*	0-4
	ACCT Electives	4
	FINA or ECON Electives	4
	Business Electives	4-8

Total: 36

*Or any of the following: ACCT 490, CIS 490, GBUS 490, LAW 490, MGMT 490, and MKTG 490.

Business electives may be chosen from courses with prefixes ACCT, CIS, ECON, FINA, GBUS, MGMT, or MKTG.

MANAGEMENT CONCENTRATION (BBA)

REQUIRED COURSES:

MGMT 373/PSYC 373	Organizational Behavior	4
MGMT 476	Foundations of Leadership	4
MGMT 488/MKTG 488	Global Management and Marketing	4
MGMT 490	Internship*	0-4
	MGMT Electives	8

	Business Electives	12-16
		Total: 36

*Or any of the following: ACCT 490, CIS 490, FINA 490, GBUS 490, LAW 490, and MKTG 490.

Business electives may be chosen from courses with prefixes ACCT, CIS, ECON, FINA, GBUS, MGMT, or MKTG.

MARKETING CONCENTRATION (BBA)

REQUIRED COURSES:

MKTG 383	Principles of Advertising	4
MKTG 384	Consumer Behavior	4
MKTG 451	Market Research Methods	4
MKTG 490	Internship*	0-4
	MKTG Elective	4
	Business Electives	8
	Electives	8-12
		Total: 36

**Or any of the following: ACCT 490, CIS 490, FINA 490, GBUS 490, LAW 490, and MGMT 490.*

Business electives may be chosen from courses with prefixes ACCT, CIS, ECON, FINA, GBUS, MGMT, or MKTG.

Electives must be approved by the School of Business advisor and may be chosen from courses offered by the following academic departments: Visual Arts, Business, Communications, and English and Modern Languages.

BUSINESS ADMINISTRATION MAJOR (BACHELOR OF ARTS)

A student majoring in business administration must complete 62 quarter hours in the major, the required cognates, a minor in an area distinct from the major, the general studies program, which includes a foreign language, and all baccalaureate degree requirements as outlined in this bulletin. Senior students are required to take the Major Field Test in Business.

CORE REQUIREMENTS:

Lower Division Courses:

ACCT 201	Principles of Financial Accounting	4
ACCT 202	Principles of Financial Accounting	3
ACCT 203	Principles of Managerial Accounting	3
CIS 140	Business Analytics with Microsoft Excel	4
CIS 240	Business Analytics and Data Visualization	4
ECON 210	Principles of Microeconomics	4
ECON 211	Principles of Macroeconomics	4
GBUS 270	Business Communication	4

Upper Division Courses:

FINA 351	Managerial Finance	4
GBUS 361	Business Law I	4
GBUS 490	Internship*	0-4
GBUS 495	Colloquium**	0
MGMT 371	Principles of Management	4
MGMT 463	Business Ethics	4
MGMT 489	Strategic Management	4
MKTG 381	Principles of Marketing (WD)	4
	Business Electives***	4-8
		Total: 62

**Or any of the following: ACCT 490, CIS 490, FINA 490, LAW 490, MGMT 490, and MKTG 490*

***Twelve quarters required or number of quarters in residence as a declared business major at WWU, whichever is less.*

****Business electives may be chosen from courses with prefixes ACCT, CIS, ECON, FINA, GBUS, MGMT, or MKTG.*

COGNATE REQUIREMENTS:

Math:

MATH 106	Introduction to Statistics	4

Choose one of the following social science courses:

PSYC 130	General Psychology	4
SOCI 204	General Sociology	4

BUSINESS ADMINISTRATION MAJOR (BACHELOR OF SCIENCE)

A student majoring in business administration must complete 76 quarter hours in the major, the required cognates, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin. Senior students are required to take the Major Field Test in Business.

CORE REQUIREMENTS:

Lower Division Courses:

ACCT 201	Principles of Financial Accounting	4
ACCT 202	Principles of Financial Accounting	3
ACCT 203	Principles of Managerial Accounting	3
CIS 140	Business Analytics with Microsoft Excel	4
CIS 240	Business Analytics and Data Visualization	4
ECON 210	Principles of Microeconomics	4
ECON 211	Principles of Macroeconomics	4
GBUS 270	Business Communication	4

Upper Division Courses:

CIS 301	Information Systems and Business Intelligence	4

FINA 351	Managerial Finance	4
GBUS 361	Business Law I	4
GBUS 362	Business Law II	4
GBUS 490	Internship*	0-4
GBUS 495	Colloquium**	0
MGMT 366	Operations Management	4
MGMT 371	Principles of Management	4
MGMT 463	Business Ethics	4
MGMT 489	Strategic Management	4
MKTG 381	Principles of Marketing (WD)	4
	Business Electives***	6-10

Total: 76

**Or any of the following: ACCT 490, CIS 490, FINA 490, LAW 490, MGMT 490, and MKTG 490*
***Twelve quarters required or number of quarters in residence as a declared business major at WWU, whichever is less.*
****Business electives may be chosen from courses with prefixes ACCT, CIS, ECON, FINA, GBUS, MGMT, or MKTG.*

COGNATES REQUIREMENTS:

Math:

MATH 106	Introduction to Statistics	4

Choose one of the following social science courses:

PSYC 130	General Psychology	4
SOCI 204	General Sociology	4

AUTOMOTIVE MANAGEMENT MAJOR (BACHELOR OF SCIENCE)

The automotive management (p. 106) major is a joint program offered by the School of Business and the Department of Technology. See the Interdisciplinary Programs section (p. 106) of this bulletin.

AVIATION MANAGEMENT MAJOR (BACHELOR OF SCIENCE)

The aviation management (p. 106) major is a joint program offered by the School of Business and the Department of Technology. See the Interdisciplinary Programs section (p. 106) of this bulletin.

INFORMATION SYSTEMS MAJOR (BACHELOR OF SCIENCE)

The information systems (p. 113) major is a joint program offered by the School of Business and the Computer Science Department. See the Interdisciplinary Programs section (p. 106) of this bulletin.

BUSINESS (ASSOCIATE OF SCIENCE)

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

CORE REQUIREMENTS:

ACCT 201	Principles of Financial Accounting	4
ACCT 202	Principles of Financial Accounting	3
ACCT 203	Principles of Managerial Accounting	3
CIS 140	Business Analytics with Microsoft Excel	4
ECON 210	Principles of Microeconomics	4
ECON 211	Principles of Macroeconomics	4
FINA 101	Personal Finance	4
GBUS 270	Business Communication	4
GBUS 361	Business Law I	4
GBUS 495	Colloquium*	0
	MGMT Elective (MGMT 371 Recommended)	4
	MKTG Elective (MKTG 381 Recommended)	4
	Business Electives	4

Total: 46

**Six quarters required or number of quarters in residence as a declared business degree candidate at WWU, whichever is less.*
***Business electives may be chosen from courses with prefixes ACCT, CIS, ECON, FINA, GBUS, MGMT, or MKTG.*

COGNATES:

Choose one of the following MATH courses (4 credits):

MATH 105	Math for the Liberal Arts	4
MATH 106	Introduction to Statistics	4
MATH 121	Precalculus I	4

ACCOUNTING MINOR

REQUIRED COURSES:

ACCT 201	Principles of Financial Accounting	4
ACCT 202	Principles of Financial Accounting	3
ACCT 203	Principles of Managerial Accounting	3
	ACCT Electives	12
	Business Electives	8

Total: 30

*Business electives may be chosen from courses with prefixes ACCT, CIS, ECON, FINA, GBUS, MGMT, or MKTG.

BUSINESS ADMINISTRATION MINOR

REQUIRED COURSES:

ACCT 201	Principles of Financial Accounting	4
FINA 101	Personal Finance	4
	ECON Elective (ECON 210 or ECON 211 Recommended)	4
	FINA Elective (FINA 351 Recommended)	4
	MGMT Elective (MGMT 371 Recommended)	4
	MKTG Elective (MKTG 381 Recommended)	4
	Business Electives	6
	Total: 30	

*Business electives may be chosen from courses with prefixes ACCT, CIS, ECON, FINA, GBUS, MGMT, or MKTG.

Because of the close relationship between computer science and computer information systems, CPTR 141 and CPTR 142 are considered business electives for purposes of the business administration minor. Due to the unique nature of the professional curriculum of the engineering degree, CPTR 141 and CPTR 142 taken to meet the requirements of the BSE degree are considered cognates and therefore can simultaneously be counted toward the credit requirements of a business administration minor.

ECONOMICS MINOR

REQUIRED COURSES:

ECON 210	Principles of Microeconomics	4
ECON 211	Principles of Macroeconomics	4
	ECON or FINA Electives	12
	Business Electives*	10
	Total: 30	

*Business electives may be chosen from courses with prefixes ACCT, CIS, ECON, FINA, GBUS, MGMT, or MKTG.

GLOBAL DEVELOPMENT MINOR

REQUIRED COURSES

ECON 211	Principles of Macroeconomics	4
ECON 220	Principles of Global Development	4
MGMT 470/MKTG 470	Principles of Project Management	4
MGMT 488/MKTG 488	Global Management and Marketing	4
	Business Electives	8
	Electives	6
	Total: 30	

*Business electives may be chosen from courses with prefixes ACCT, CIS, ECON, FINA, GBUS, MGMT, or MKTG.

**Electives must be approved by an advisor and chosen from any course offered by the School of Business or any one of the following courses: ANTH 225, COMM 145, COMM 325, GEOG 252, HIST 240, HIST 242, HIST 257, HIST 283, HIST 305, RELM 233, RELH 303, SOCI 204, or SOCI 236.

LEADERSHIP MINOR

REQUIRED COURSES:

MGMT 371	Principles of Management	4
MGMT 373/PSYC 373	Organizational Behavior	4
MGMT 463	Business Ethics	4
MGMT 476	Foundations of Leadership	4
	MGMT Elective	4
	Business Electives*	10
	Total: 30	

**Business electives may be chosen from courses with prefixes ACCT, CIS, ECON, FINA, GBUS, MGMT, or MKTG.*

MARKETING MINOR

REQUIRED COURSES:

FINA 101	Personal Finance	4
MKTG 381	Principles of Marketing (WD)	4
MKTG 383	Principles of Advertising	4
MKTG 384	Consumer Behavior	4
	MKTG Elective	4
	Electives (8 credits must be business electives)*	10
	Total: 30	

**Business electives may be chosen from courses with prefixes ACCT, CIS, ECON, FINA, GBUS, MGMT, or MKTG. Other electives must be approved by the School of Business advisor and may be chosen from courses offered by the following academic departments: Visual Arts, Business, Communications, English and Modern Languages, and Technology.*

SOCIAL MEDIA AND DIGITAL MARKETING CERTIFICATE

The social media and digital marketing certificate (p. 72) is a joint program offered by the Department of Communications and the School of Business and is described in the Department of Communications section of the bulletin.

COMMUNITY IMPACT CERTIFICATE

The Community Impact Certificate is an interdisciplinary program described in the Nondepartmental section (p. 120) of the bulletin.

CHEMISTRY

Kyle Craig, Chair; Joseph Brannaka, Melvin Roberts.

The department seeks to introduce students to a basic science in a Christian environment and to acquaint majors with the principal chemical disciplines: analytical, biochemistry, 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 programs leading to the Bachelor of Science degree.

CHEMISTRY MAJOR (BACHELOR OF SCIENCE)

A student majoring in chemistry must complete 65-66 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. Senior students are required to take the Major Field Test (MFT) examination in chemistry. Transfer credit accepted towards the chemistry major must be from major's courses at the institution originating the credit.

Required Courses:

CHEM 141	General Chemistry	3
CHEM 142	General Chemistry	3
CHEM 143	General Chemistry	3
CHEM 144	General Chemistry Laboratory	1
CHEM 145	General Chemistry Laboratory	1
CHEM 146	General Chemistry Laboratory	1
CHEM 301	Chemical Equilibrium and Analysis	3
CHEM 303	Analytical Instrumental Methods	3
CHEM 305	Chemical Laboratory Techniques	1
CHEM 321	Organic Chemistry	4
CHEM 322	Organic Chemistry	4
CHEM 324	Organic Chemistry Laboratory	1
CHEM 325	Organic Chemistry Laboratory	1
CHEM 350/PHYS 310	Quantum Chemistry	4
CHEM 352/PHYS 313	Physical Chemistry I	4
CHEM 353	Physical Chemistry II	3
CHEM 383	Intermediate Organic Chemistry	3
CHEM 386	Intermediate Organic Chemistry Laboratory	1
CHEM 390	Career Preparation Seminar	0
CHEM 405	Integrated Chemistry Laboratory	6
CHEM 427	Organometallics	4
	or	
CHEM 442	Inorganic Chemistry	4
CHEM 429	Organic Structural Problems	4
	or	
CHEM 432	Foundations of Biochemistry	3
CHEM 431	Foundations of Biochemistry	4
CHEM 479	Directed Research/Project	2
CHEM 497	Communicating Chemistry (WD)	2

Total: 65-66

Cognates:

MATH 171	Calculus I	4
MATH 172	Calculus II	4
MATH 273	Calculus III	4
MATH 274	Calculus IV	4
MATH 106	Introduction to Statistics	4
	or	
MATH 315	Probability and Statistics	4
PHYS 211	General Physics	3
PHYS 212	General Physics	3
PHYS 213	General Physics	3
PHYS 214	General Physics Laboratory	1
PHYS 215	General Physics Laboratory	1
PHYS 216	General Physics Laboratory	1
	or	
PHYS 251	Principles of Physics	3
PHYS 252	Principles of Physics	3
PHYS 253	Principles of Physics	3
PHYS 254	Principles of Physics Laboratory	1
PHYS 255	Principles of Physics Laboratory	1
PHYS 256	Principles of Physics Laboratory	1

BIOCHEMISTRY MAJOR (BACHELOR OF SCIENCE)

The biochemistry (p. 108) major is a joint program offered by the Department of Biological Sciences and the Department of Chemistry. See the Interdisciplinary Programs (p. 106) section of this bulletin.

CHEMISTRY MINOR

A student minoring in chemistry must complete 28 quarter hours; 3 must be upper division. Transfer credit accepted towards the chemistry minor must be

from major's courses at the institution originating the credit.

The following courses are required:

CHEM 141	General Chemistry	3
CHEM 142	General Chemistry	3
CHEM 143	General Chemistry	3
CHEM 144	General Chemistry Laboratory	1
CHEM 145	General Chemistry Laboratory	1
CHEM 146	General Chemistry Laboratory	1
CHEM 321	Organic Chemistry	4
CHEM 322	Organic Chemistry	4
CHEM 324	Organic Chemistry Laboratory	1
CHEM 325	Organic Chemistry Laboratory	1
	Electives	6
		Total: 28

Electives: Approval of department chair required.

COMMUNICATION

Nancy Semotiuk, Chair, Linda Potter Crumley, Lynelle Ellis.

At its foundation, communication is about how we use messages to create meaning in different situations. The discipline studies how people interact, communicate, and influence each other in society, and it explores the artistic and creative aspects of communication. It's a field that looks at how we communicate across multiple media platforms—whether that's through speech, writing, or creating digital media content—and examines the impact it has.

The Department of Communication ensures that students possess the technical, analytical and critical thinking skills necessary to succeed in the highly competitive and dynamic field of professional communication, becoming effective and articulate Christian communicators. Students are prepared for both successful careers and graduate school.

For students interested in treating communication disorders, we offer an AS degree in Pre-Speech Language Pathology that prepares students to seek admission to a professional program in Speech Language Pathology.

Degrees Offered:

Bachelor of Arts (BA) in Digital Communication provides students with the skills and knowledge needed to create various forms of digital media content. This field includes a wide range of media types including video, audio, and interactive media for broadcast, streaming, online content, and corporate communication. Potential career paths for graduates with a BA in Digital Communication include video production, broadcast television, corporate communication, and content creation for online platforms. Graduates of this program are prepared for graduate study as well.

Bachelor of Arts (BA) in International Communication integrates knowledge of communication with language study abroad, an international internship, and a minor. With experience in international communication, graduates are prepared for careers in communication in international and intercultural organizations such as global business, governments, non-governmental organizations (NGOs), charitable or religious organizations, foundations, media outlets, and international missions, making them an essential asset in an ever-connected world. They are prepared for graduate study as well.

Bachelor of Arts (BA) in Strategic Communication opens the door to a wide variety of employment opportunities in corporate, government, and nonprofit organizations. Strategic Communication is an umbrella term to describe a discipline that includes media management, public relations, and advertising. A minor is required. Graduates often take positions as public relations practitioners, brand strategists, communication specialists, or social media managers, fundraisers, editors, and writers. They are prepared for graduate study as well.

Bachelor of Music (BMus) in Music Production is an interdisciplinary major between the Music and Communication departments. It prepares students for jobs within music production and related media industries including music production recording, mixing, mastering, sound design, and scoring.

Associate of Science (AS) in Pre-Speech Language Pathology prepares students for admission to Speech Language Pathology at Loma Linda University and may also apply to other professional programs. A selective program involving sciences, general education courses, and communication-specific coursework offers graduation with an AS degree before entering BS professional training elsewhere.

Department minors are available in drama, media and production ministry, international communication, journalism, and speech.

DIGITAL COMMUNICATION MAJOR (BACHELOR OF ARTS)

A student majoring in digital communication must complete the major core requirements for a total of 60 hours (plus cognates), the general studies program, and all baccalaureate degree requirements as outlined in this bulletin.

Core Requirements:

COMM 135/VISF 135	Essentials of Filmmaking	4
COMM 145	Media and Culture	4
COMM 148	Creativity and Innovation	3
COMM 248	On-Camera Performance	3
COMM 320	Multi-Camera Streaming and Broadcast	4
COMM 333	Audio Production	4
COMM 357	Communication Law and Ethics	4
COMM 360	Social and Spiritual Influence through Media	3
COMM 475	Communication Theory	3
COMM 487	Senior Project	1
COMM 490	Internship	0-4; 4
COMM 495	Communication Colloquium	0
COMM 496	Communication Research I	3
COMM 497	Communication Research II	1
JOUR 245	Media Writing	4

PREL 349	Social Media Strategies	3
	Electives	16
	Total: 60	

Electives must be chosen in consultation with and approved by the academic advisor assigned by the department chair and must be chosen from COMM, DRMA, JOUR, PREL, SPCH, VISD, and VISF. At least three credits must be upper division.

Choose eight credits from the following

COMM 480	Redemptive Cinema	3
DRMA 242	Acting	4
DRMA 364	Directing I	3
VIS 111	Core I: Visual Storytelling	4
VISD 156	Principles of Photography	4
VISD 263	Web Design Studio	4
VISF 425	Interactive and VR Storytelling	4

Cognates:

ENGL 223	Research Writing (WD)	3
VISF 205	Screenwriting	4
VISF 240	Cinematography and Post-production	4

STRATEGIC COMMUNICATION MAJOR (BACHELOR OF ARTS)

A student majoring in strategic communication must complete the major core requirements for a total of 60 hours (plus cognates), the general studies program, and all baccalaureate degree requirements as outlined in this bulletin.

Core Requirements:

COMM 135/VISF 135	Essentials of Filmmaking	4
COMM 145	Media and Culture	4
COMM 148	Creativity and Innovation	3
COMM 357	Communication Law and Ethics	4
COMM 360	Social and Spiritual Influence through Media	3
COMM 475	Communication Theory	3
COMM 487	Senior Project	1
COMM 490	Internship	0-4; 4
COMM 495	Communication Colloquium	0
COMM 496	Communication Research I	3
COMM 497	Communication Research II	1
JOUR 245	Media Writing	4
JOUR 247	Copy Editing	3
JOUR 315	Digital Writing	4
PREL 349	Social Media Strategies	3
PREL 451	Publication Design and Editing	4
PREL 481/MKTG 481	Public Relations	4
	Electives	12
	Total: 60	

COMM 490: Minimum 120 clock hours

COMM 495: six colloquia required

Electives must be chosen in consultation with and approved by the academic advisor assigned by the department chair and must be chosen from COMM, DRMA, JOUR, PREL, or SPCH, and either MKTG 381 or MKTG 383. Six hours of electives must be PREL or JOUR writing classes.

Cognates:

ENGL 223	Research Writing (WD)	3
VIS 102	Creative Foundations II: Design	4
VISD 156	Principles of Photography	4

INTERNATIONAL COMMUNICATION MAJOR (BACHELOR OF ARTS)

A student majoring in international communication must complete the major core requirements for a total of 66 hours (plus cognates), the general studies program, and all baccalaureate degree requirements as outlined in this bulletin.

Core Requirements:

COMM 135/VISF 135	Essentials of Filmmaking	4
COMM 145	Media and Culture	4
COMM 325	Multicultural Communication	3
COMM 475	Communication Theory	3
COMM 487	Senior Project	1
COMM 490	Internship	0-4; 4
COMM 495	Communication Colloquium	0
COMM 496	Communication Research I	3
COMM 497	Communication Research II	1
JOUR 245	Media Writing	4
PREL 349	Social Media Strategies	3
PREL 333/MKTG 333	Strategies for Fundraising	4
PREL 481/MKTG 481	Public Relations	4
SPCH 101	Fundamentals of Speech Communication	4
SPCH 207	Small Group Communication	4
	or	
SPCH 407	Advanced Small Group Communication	4

	ACA Requirements	24
	Total: 66	

COMM 495: four colloquia required

ACA Requirements: ACA language and culture classes. (Three continuous quarters abroad are required. Students may take one academic year abroad or one summer plus two quarters.) Check the articulations assessments for what courses at each international ACA school will apply toward WWU requirements/electives here: wallawalla.edu/adventist-colleges-abroad. Some courses will not count toward your major. Ask your advisor or the Records Office for help.

Cognates:

ANTH 225	Cultural Anthropology	4
	or	
SOCI 236	Privilege and Oppression	4
ENGL 223	Research Writing (WD)	3
LANG 406	Language and Culture	3
RELH 303	World Religions	4

Choose one of the following ECON courses:

ECON 211	Principles of Macroeconomics	4
ECON 220	Principles of Global Development	4
ECON 488/FINA 488	International Trade and Finance	4

Choose one of the following MGMT/MKTG courses:

MGMT 371	Principles of Management	4
MKTG 381	Principles of Marketing (WD)	4
MGMT 470/MKTG 470	Principles of Project Management	4
MGMT 488/MKTG 488	Global Management and Marketing	4

Recommended:

COMM 148	Creativity and Innovation	3
COMM 357	Communication Law and Ethics	4
COMM 360	Social and Spiritual Influence through Media	3

MUSIC PRODUCTION MAJOR (BACHELOR OF MUSIC)

The music production (p. 114) major is a joint program offered by the Department of Communication and the Department of Music. See the Interdisciplinary Programs (p. 106) section of this bulletin.

PRE-SPEECH-LANGUAGE PATHOLOGY (ASSOCIATE OF SCIENCE)

Students completing the following core curriculum and the A.S. general studies requirements will be awarded an A.S. degree in Pre-Speech-Language Pathology. This degree will help prepare the student for admission to Speech-Language Pathology at Loma Linda University and may also apply to other professional programs. A cumulative grade point average of 3.0 is required before entering B.S. professional training (at LLU or elsewhere) and a M.S. is required for entry into the profession. Consult specific requirements for the program that interests you.

Core Requirements:

Scientific Inquiry and Quantitative Reasoning (minimum 12 qtr units)

BIOL 121	Anatomy and Physiology	4
	or	
BIOL 141	General Biology	4
	or	
BIOL 222	Microbiology	5
CHEM 105	Survey of Chemistry	5
	or	
PHYS 201	Conceptual Physics	3
PHYS 204	Conceptual Physics Laboratory	1
MATH 106	Introduction to Statistics	4
COMM 495	Communication Colloquium	0

Three colloquia required.

Written and Oral Communication (9-13 qtr units)

ENGL 121	Introduction to Analytical Writing	3
ENGL 122	Introduction to Research Writing	3
ENGL 223	Research Writing (WD)	3
SPCH 101	Fundamentals of Speech Communication	4
	or	
PHIL 204	Essentials of Critical Reasoning	4

Health and Wellness (2-6 qtr units)

One course required in Health or Nutrition.

HLTH 110	Wellness for Living	3
	or	
HLTH 220	Human Nutrition	4
PEAC	Physical Education Activity Courses	2

PEAC Courses: Any two, separate PEAC activity courses (or military discharge papers)

Social Sciences (minimum 12 qtr units)

Select courses from 2 of the following content areas. Include at least one course (or components integrated

into several courses) in human (cultural) diversity:
- Anthropology
- Economics
- Geography
- Political Sciences
- Psychology
- Sociology

Art and Humanities Electives (minimum of 16 qtr units)

Select from at least 3 of the following content areas. A minimum of 3 quarter units in an area are required to meet a content area:
- Civilization/History
- Art
- Literature
- Language
- Philosophy
- Religion
- General Humanities Electives

Electives:

Any other transferable courses needed to bring total up to 96 credits. All courses must be 100 level or above. (SPCH 210 or SPCH 310 Interpersonal and Nonverbal Communication, recommended. SPPA 210, Survey of Speech-Language Pathology and Audiology, recommended.)

Course grades below C are not accepted by most professional programs. Please consult with your academic advisor concerning any course with a grade below C.

Total: 96

DRAMA MINOR

A student minoring in drama must complete 30 quarter hours.

Required Courses:

DRMA 101	Introduction to Theatre	3
DRMA 242	Acting	4
DRMA 252	Performance	2
DRMA 253	Technical Production	2
DRMA 363/ENGL 363	History of Theatre	4
DRMA 364	Directing I	3
DRMA 365	Directing II	3
	Electives	12

Total: 30

A minimum of 2 credits required for DRMA 252 and DRMA 253. Additional hours may apply as electives.

Electives must be chosen from the following:

COMM 205/VISF 205	Screen Writing	4
COMM 320	Multi-Camera Streaming and Broadcast	4
DRMA 211/SPCH 211	Oral Interpretation	4
DRMA 260/DRMA 460	Professional Theatre Conference Participation	1; 2
DRMA 336	Drama Writing	3
DRMA 394	Directed Drama Reading	1-2; 3
DRMA 442	Advanced Acting	4
DRMA 445	Directed Drama Writing	1-2; 3
DRMA 452	Advanced Performance	0-2; 4
DRMA 453	Advanced Technical Production	0-2; 4
ENGL 358	Classical Literature	4
ENGL 360	Shakespeare Festival	2
FILM 215	Introduction to Film Literature	4

At least 4 credits must be upper division. Approval of drama advisor required.

INTERNATIONAL COMMUNICATION MINOR

A student minoring in international communication must complete 30 quarter hours. A minimum of one quarter of study must be taken abroad at an Adventist College Abroad affiliate school.

Required Courses (taken at WWU campus):

COMM 145	Media and Culture	4
COMM 325	Multicultural Communication	3
LANG 406	Language and Culture	3
	Electives	20

Total: 30

Electives may be taken at an ACA school abroad. If any electives are taken on the College Place campus, they must be chosen from COMM, DRMA, JOUR, LANG, PREL, SPCH, FREN, SPAN, MKTG 375, MKTG 381, MKTG 486, MKTG 488, MGMT 371, SOCI 420; 8 credits must be upper division. Approval of international communication advisor required.

JOURNALISM MINOR

A student minoring in journalism must complete 30 quarter hours.

Required Courses:

JOUR 245	Media Writing	4
JOUR 247	Copy Editing	3
JOUR 341	Feature Writing	4
PREL 349	Social Media Strategies	3
PREL 481/MKTG 481	Public Relations	4

	Electives	12
		Total: 30

Electives: must be chosen from COMM, JOUR, PREL, or SPCH. Approval of strategic communication advisor required.

MEDIA AND PRODUCTION MINISTRY MINOR

A student minoring in media and production ministry must complete 30 quarter hours.

Required Courses:

COMM 135/VISF 135	Essentials of Filmmaking	4
COMM 145	Media and Culture	4
COMM 248	On-Camera Performance	3
COMM 320	Multi-Camera Streaming and Broadcast	4
COMM 360	Social and Spiritual Influence through Media	3
COMM 480	Redemptive Cinema	3
RELM 233	Introduction to Cross-Cultural Ministry	3
RELT 202	Christian Beliefs	4
		Total: 30

Electives: must be chosen from COMM, JOUR, PREL, or SPCH. Approval of strategic communication advisor required.

SPEECH COMMUNICATION MINOR

A student minoring in speech communication must complete 30 quarter hours:

Required Courses:

SPCH 101	Fundamentals of Speech Communication	4
SPCH 207	Small Group Communication	4
	or	
SPCH 407	Advanced Small Group Communication	4
SPCH 310	Advanced Interpersonal and Nonverbal Communication	3
SPCH 341	Argumentation	4
	or	
SPCH 443	Persuasion	4
	Electives	16
		Total: 30

Electives must be chosen from COMM, DRMA, JOUR, LANG, PREL, SPCH; 9 credits must be upper division. Approval of communication advisor required.

PROFESSIONAL WRITING CERTIFICATE

Students seeking this certificate will gain practical skills to write successfully and effectively at a professional level across industries, in both print and digital formats. Courses must be completed with a minimum GPA of 3.0.

Required Courses:

COMM 148	Creativity and Innovation	3
JOUR 245	Media Writing	4
JOUR 247	Copy Editing	3
	Electives	10
		Total: 20

Electives must be chosen from:

ENGL 284	English Grammar	4
JOUR 244	Technical Writing	3
JOUR 257	Introduction to Photojournalism	2
JOUR 315	Digital Writing	4
JOUR 341	Feature Writing	4
JOUR 345	Specialized Writing	3
JOUR 346	Reporting Methods	3
PREL 337	Advertising Copywriting	3
PREL 349	Social Media Strategies	3
PREL 350	Writing for Public Relations	3
WRIT 324	Creative Nonfiction Writing	4
	or	
WRIT 334	Poetry Writing	4

SOCIAL MEDIA AND DIGITAL MARKETING CERTIFICATE

Students seeking this certificate will gain a practical understanding of how to use social media professionally and of how to conduct digital marketing campaigns.

Required Courses

Complete the following courses with a minimum grade of C-:

JOUR 245	Media Writing	4
MKTG 381	Principles of Marketing (WD)	4
MKTG 415	Digital Marketing	4
PREL 349	Social Media Strategies	3
VISD 263	Web Design Studio	4
	Elective	4
		Total: 23

Elective must be approved by the academic advisor.

COMPUTER SCIENCE

Benjamin Jackson, Chair; Preston Carman, James Foster.

Computer science is the study of the representation, storage, and manipulation of information. The Department of Computer Science prepares its students for both graduate study and careers in computer science, system analysis and design, software engineering, and networking. The department offers programs leading to the Bachelor of Arts and Bachelor of Science degrees. The department cooperates with the School of Engineering in offering a computer engineering concentration in the Bachelor of Science in Engineering Degree. The School of Business and the Department of Computer Science jointly offer a major in information systems (B.S.).

The computer science curriculum consists of a core set of required courses that are designed to introduce the fundamental theoretical ideas of the discipline and help students develop the practical programming and software design skills necessary in the field. Department electives are organized into strands which encourage students to focus more deeply on one or more sub-fields of computer science. These strands include applied computer science, web and information management, computational science and intelligent systems, programming methods and tools, theoretical computer science, and computer architecture and organization. Students are encouraged to discuss their career goals with their academic advisors as they choose electives.

COMPUTER SCIENCE MAJOR (BACHELOR OF ARTS)

A student majoring in computer science must complete 51 quarter hours in the major, the required cognates, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin. Senior students are required to take the Major Field Test (MFT) in computer science.

Core Requirements:

CPTR 108	The Art and Practice of Computer Science	3
CPTR 141	Fundamentals of Programming I	4
CPTR 142	Fundamentals of Programming II	4
CPTR 242	Sequential and Parallel Data Structures and Algorithms	4
CPTR 245	DevOps	4
CPTR 280	Computer Organization and Assembly Language	3
CPTR 308/CIS 308	Social, Legal, and Ethical Issues for Computing Technology	4
CPTR 352	Operating Systems	4
CPTR 354	Compilers and Languages	4
CPTR 396	Internship and Career Readiness Seminar	1
CPTR 450	Software Engineering	3
CPTR 454	Design and Analysis of Algorithms	4
CPTR 496	Senior Project I	1
CPTR 497	Senior Project II	2
CPTR 498	Senior Project III	2
	Electives	4
	Total: 51	

Electives: 4 must be upper-division CPTR. Electives must be chosen in consultation with and approved by the academic advisor and will typically have one of the following prefixes: CIS, CYBS, CPTR, ENGR, GDEV, or MATH.

Cognates:

ENGL 223	Research Writing (WD)	3
	or	
JOUR 244	Technical Writing (WD)	3
MATH 171	Calculus I	4
MATH 215	Data Analysis	4
MATH 250	Discrete Mathematics	4

COMPUTER SCIENCE MAJOR (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 outlined in this bulletin. Senior students are required to take the Major Field Test (MFT).

Core Requirements:

CPTR 108	The Art and Practice of Computer Science	3
CPTR 141	Fundamentals of Programming I	4
CPTR 142	Fundamentals of Programming II	4
CPTR 242	Sequential and Parallel Data Structures and Algorithms	4
CPTR 245	DevOps	4
CPTR 280	Computer Organization and Assembly Language	3
CPTR 308/CIS 308	Social, Legal, and Ethical Issues for Computing Technology	4
CPTR 352	Operating Systems	4
CPTR 354	Compilers and Languages	4
CPTR 396	Internship and Career Readiness Seminar	1
CPTR 450	Software Engineering	3
CPTR 454	Design and Analysis of Algorithms	4

CPTR 496	Senior Project I	1
CPTR 497	Senior Project II	2
CPTR 498	Senior Project III	2
	Electives (8 credits must be upper-division)	15
		Total: 62

Electives must be chosen in consultation with and approved by the academic advisor and will typically have one of the following prefixes: CIS, CYBS, CPTR, ENGR, GDEV, or MATH.

Cognates:

ENGL 223	Research Writing (WD)	3
	or	
JOUR 244	Technical Writing (WD)	3
ENGR 354	Digital Logic	3
MATH 171	Calculus I	4
MATH 172	Calculus II	4
MATH 273	Calculus III	4
MATH 215	Data Analysis	4
MATH 250	Discrete Mathematics	4
MATH 239	Introduction to Linear Algebra	4

CYBERSECURITY (BACHELOR OF SCIENCE)

A student majoring in cybersecurity must complete 60 quarter hours in the major, the required cognates, the general studies program, and all baccalaureate degree requirements outlined in this bulletin. Senior students are required to take the Certified Computer Forensics Examiner (CCFE) exam.

Core Requirements:

CIS 301	Information Systems and Business Intelligence	4
CIS 490	Internship	0-4
CPTR 108	The Art and Practice of Computer Science	3
CPTR 141	Fundamentals of Programming I	4
CPTR 142	Fundamentals of Programming II	4
CPTR 211	Linux and Windows System Administration	3
CPTR 242	Sequential and Parallel Data Structures and Algorithms	4
CPTR 308/CIS 308	Social, Legal, and Ethical Issues for Computing Technology	4
CPTR 396	Internship and Career Readiness Seminar	1
CYBS 122	Introduction to Cybersecurity	4.5
CYBS 223	Modern Cybersecurity	4.5
CYBS 224	Cybercrime and Governance	4.5
CYBS 325	Cyber Forensics	4.5
CYBS 326	Network and System Security	4.5
CYBS 497	Ethical Hacking	4.5
	Electives	6
		Total: 60

Electives must be chosen in consultation with and approved by the academic advisor and will typically have one of the following prefixes: CIS, CPTR, GDEV, ENGR, or MATH.

Cognates:

ENGL 223	Research Writing (WD)	3
	or	
JOUR 244	Technical Writing (WD)	3
MATH 171	Calculus I	4
MATH 215	Data Analysis	4
MATH 250	Discrete Mathematics	4
MGMT 470/MKTG 470	Principles of Project Management	4

GAME DEVELOPMENT (BACHELOR OF SCIENCE)

A student majoring in game development must complete 63 quarter hours in the major, the required cognates, the general studies program, and all baccalaureate degree requirements outlined in this bulletin. Senior students are required to take the Unity Certified Associate: Programmer Certification exam.

Core Requirements:

CPTR 108	The Art and Practice of Computer Science	3
CPTR 141	Fundamentals of Programming I	4
CPTR 142	Fundamentals of Programming II	4
CPTR 242	Sequential and Parallel Data Structures and Algorithms	4
CPTR 245	DevOps	4
CPTR 280	Computer Organization and Assembly Language	3
CPTR 308/CIS 308	Social, Legal, and Ethical Issues for Computing Technology	4
CPTR 396	Internship and Career Readiness Seminar	1
CPTR 450	Software Engineering	3
CPTR 496	Senior Project I	1
CPTR 497	Senior Project II	2
CPTR 498	Senior Project III	2
GDEV 122	Introduction to Games	4.5
GDEV 223	Content and Systems Design	4.5
GDEV 324	Unity I, Working with Unity	4.5
GDEV 325	C# Programming	4.5

GDEV 426	Unity II, Advanced Unity Programming	4.5
	Electives	5.5
		Total: 63

Electives must be chosen in consultation with and approved by the academic advisor and will typically have one of the following prefixes: CIS, CPTR, CYBS, ENGR, or MATH.

Cognates:

COMM 135/VISF 135	Essentials of Filmmaking	4
ENGL 223	Research Writing (WD)	3
	or	
JOUR 244	Technical Writing (WD)	3
MATH 171	Calculus I	4
MATH 215	Data Analysis	4
MATH 250	Discrete Mathematics	4
PHYS 211	General Physics	3
PHYS 214	General Physics Laboratory	1
VISF 425	Interactive and VR Storytelling	4

Students interested in the story and film side of game development are encouraged to take VISF 205 and VISF 333. Students interested in the graphics side of game development should consult with their academic advisor.

COMPUTER ENGINEERING (BACHELOR OF SCIENCE IN ENGINEERING)

See the computer engineering concentration (p. 91) in the School of Engineering section of this bulletin.

INFORMATION SYSTEMS MAJOR (BACHELOR OF SCIENCE)

The information systems (p. 113) major is a joint program offered by the School of Business and the Computer Science Department. See the Interdisciplinary Programs (p. 106) of this bulletin.

COMPUTER SCIENCE MINOR

A student minoring in computer science must complete 30 quarter hours of CPTR courses chosen in consultation with and approved by the academic advisor. Six credits must be upper division. Up to eight of the 30 quarter credits can be replaced by classes with a GDEV or CYBS prefix.

Because of the unique nature of the professional curriculum of the engineering degree, any computer science course taken to meet any requirement for the BSE degree in all concentrations except Computer Engineering is considered a cognate and therefore can be simultaneously counted toward the credit requirements for a computer science minor.

CYBERSECURITY MINOR

A student minoring in cybersecurity must complete a minimum of 31 quarter hours.

Required Courses:

CPTR 141	Fundamentals of Programming I	4
	or	
CPTR 230	Computing for Insight	4
CYBS 122	Introduction to Cybersecurity	4.5
CYBS 223	Modern Cybersecurity	4.5
CYBS 224	Cybercrime and Governance	4.5
CYBS 325	Cyber Forensics	4.5
CYBS 326	Network and System Security	4.5
CYBS 497	Ethical Hacking	4.5
		Total: 31

SCHOOL OF EDUCATION AND PSYCHOLOGY

Maria Bastien Valenca, Dean; Melody Ezpeleta, Brian Hartman, Linda Ivy, Amanda Ramoutar.

Mission: The School of Education and Psychology commits to teaching excellence and fostering equity and diversity, with the aim of promoting the development of Christ-like character and skills for success in all areas of life.

Undergraduate Degrees Majors

- B.S. Elementary Education
- B.S. Science Education
- B.Ed. Secondary Education – double degree
- B.A. Psychology
- B.S. Psychology
- B.S. Forensic Psychology

Minors

- Education
- Special Education
- Psychology

Graduate Degrees

- Master of Education (M.Ed.)
- Master of Initial Teaching (M.I.T.)

For a description of programs leading to a master's degree in Education, see the Graduate Bulletin.

Accreditation:

- Northwest Association of Schools and Colleges
- Accrediting Association of Seventh-day Adventist Schools, Colleges, and Universities
- Undergraduate programs leading to initial licensure in elementary and secondary education with majors and minors in endorsable content areas are approved by the Washington State Professional Educator Standards Board (PESB).

TEACHER CERTIFICATION REQUIREMENTS

The Teacher Certification Program consists of required pre-candidacy courses, certification core courses, endorsement courses, cognates, and clinical practice all divided up into 3 Phases.

A minimum grade point average (GPA) of 2.75 is required in all pre-candidacy, certification, endorsement, and cognate courses that apply to these requirements. Any course graded lower than a C cannot apply. A total of two repeats are permitted in the Teacher Certification Program before the department must be consulted.

Field experiences and clinical practice require an eCertification Pre-Residency formal application, law enforcement background check (fingerprinting), and moral character clearance. Contact the School of Education and Psychology for details.

Washington State Assessments:

- American College Testing (ACT)
- National Evaluation Series (NES)
- Scholastic Assessment Test (SAT)
- Washington Educator Skills Test-Basic (WEST-B) or equivalent national and out-of-state basic skills assessments.
- Washington Educator Skills Test-Endorsement (WEST-E)

Washington State Assessment Instructions:

Deadline	Assessment	Requirement	Outcome
Before / During Phase 1	WEST-B or ACT or SAT or combination	Official scores for reading, math, & writing	Apply for Phase 2
During Phase 2	WEST-E or NES	At least one attempt required	Completion of Phase 3 application and student teaching
During Phase 3	WEST-E or NES	Optional Retake(s), if necessary, with State required acceptance scores	Apply for Certification
During Phase 3	Program Assessment	Program passing scores	Apply for Certification

Candidates who do not pass the WEST-E/NES assessment required for endorsement may apply for a case-by-case review. Should the review not result in endorsement, the candidate may submit a signed statement of understanding (available from certification officer) that the B.S. Elementary Education and/or B.Ed. Secondary degree will be granted without recommendation for Washington state teacher certification.

Program of Study Phases:

Phase 1: Pre-Candidacy course requirements:

- Pre-candidacy courses must be completed with a minimum GPA of 2.75 before proceeding to the TCP Phase 2.
- Any course graded lower than a C cannot apply
- All sections (reading, math, writing) of the WEST-B/ACT/SAT, or a combination thereof, must be taken and officially documented with the certification officer.
- Application for full admission to the TCP Phase 2 is required during the last quarter of pre-candidacy courses.

Phase 2: Certification Courses

To be admitted into Phase 2 of the Teacher Certification Program (TCP), candidates must complete all Phase 1 classes, have a Phase 1 GPA of 2.75, and submit a completed application packet. (The application packet is available upon request in the School of Education and Psychology.) Candidates must demonstrate excellence in knowledge representative of scholarship, skills of professionalism and dispositions, and personal fitness appropriate for the teaching profession. These terms are defined and explained in the Minimum Competencies document distributed in EDUC 211 Introduction to and Foundations of Education. The document is also available upon request from the certification officer in the School of Education and Psychology.

Candidates applying for full admission to the TCP Phase 2 are required by state law to take all sections of the Washington Educator Skills Test-Basic (WEST-B) and/or submit official documentation of scores for all sections on the ACT/SATs, or a combination thereof, prior to full admission into the program. Test dates and locations are available at the following website, www.west.nesinc.com.

Phase 3: Clinical Practice

Student teaching (Phase 3) is combined part-time and full-time clinical practice in an elementary, middle school, SPED, or designated discipline-specific secondary classroom under the supervision of an experienced certificated teacher. The candidate must document 450+ hours, according to current Washington state requirements, in supervised clinical practice over the course of their student teaching experience. Check with the certification officer for possible changes. School of Education and Psychology requirements across three quarters may exceed Washington state requirements.

Phase 3 requires formal application to the School of Education and Psychology. Student teaching application packets, available from the Education and Psychology office, are due by the first Friday of December, prior to the year in which the candidate plans to enroll for the experience. Teacher candidate placement is done in cooperation with school districts/principals and because it is a shared decision, placement is not guaranteed. Placement decisions are based on the applicant's academic preparation, interpersonal relationship abilities, classroom management skills, and other factors outlined in Minimum Competencies for Teacher Candidates, available from the School of Education and Psychology.

Note: The School of Education and Psychology will contact all potential placements; however, placements cannot be guaranteed. Placements are generally made in the Walla Walla Valley region; while all efforts are made to take candidate needs into consideration, we cannot guarantee that placements will be within walking distance of Walla Walla University campus.

According to Washington State Certification guidelines, candidates seeking student teaching placement are required to take the Washington Educator Skills Test-Endorsement (WEST-E) and/or National Evaluation Series (NES) in their primary certifiable content area prior to entering the clinical practice classroom and scores must be received by the certification officer prior to August 1 of the student teaching year. Teacher candidates are required to have current fingerprints and pre-residency clearance. Teacher candidates will not be allowed to enter the clinical practice classroom without this documentation. Candidates are required to pass the WEST-E/NES – in all their content areas – and the current Washington State assessment instrument in order to obtain Washington State certification. Candidates who do not pass the WEST-E/NES assessment required for endorsement may apply for a case-by-case review.

For a complete description of the teacher preparation program, see http://www.wallawalla.edu/TCP

Notes on Washington State Certification

The school attempts to provide current information on certification requirements in this bulletin. Because of frequent changes in state requirements, however, the candidate must consult with the School of Education and Psychology certification officer periodically for updated information that might affect certification status.

Meeting graduation requirements as specified in this bulletin does not guarantee state certification. An application process, including fingerprint clearance and a Dean's Affidavit regarding the candidate's fitness, and passing of the current Washington State assessment instrument is required.

Notes on Adventist Education Certification

Adventist Education Certification requires the completion of either the Elementary Education major or the Bachelor of Education in Secondary Education plus 18 credits of religion (8 credits of RELB, RELH 457, RELT 202, and RELT 417). In addition, Elementary Education majors must take EDUC 381 and Secondary Education majors must take either HLTH 110 or HLTH 205.

Any candidate completing either Elementary or Secondary teacher certification and Adventist Education Certification who wants an additional Adventist Education Certification endorsement(s) has the option of completing 27(+) credits in an endorsable content area for full endorsement or 18(+) credits for a junior academy endorsement. Successful completion of credits plus the approved methods course(s) is required to be recommended for

additional Adventist Education Certification endorsements. For any science content area, the candidate will take EDUC 396. English, Math and Physical Education have a departmental methods course. Music has two required departmental methods courses. Art, Religion, and History will take K-12 methods courses through the School of Education and Psychology. (Note: a junior academy endorsement is valid for subjects in grades 6-10 in a union-approved junior academy or middle school).

Any Elementary Education major fulfilling the requirements for a second endorsement will add that endorsement to their K-8 certification. In order for an Elementary Education major to obtain an endorsement in a secondary content area, they must also complete EDUC 395 and EDUC 475.

ELEMENTARY EDUCATION MAJOR (BACHELOR OF SCIENCE)

A candidate majoring in elementary education must satisfactorily complete the general studies program, baccalaureate degree requirements as listed in this bulletin, and the Teacher Certification Program (TCP): Phase 1, Phase 2, and Phase 3. No grade lower than a C applies in any major, minor, or endorsement class.

Because of the unique nature of the certification requirements for the elementary education degree, Biology, Health, History, Math, Physical Education, and Physics courses taken to meet any requirements for the BS Elementary Education degree are considered cognates and therefore can be simultaneously counted toward major or minor requirements in other areas.

Phase 1: TCP Pre-Candidacy, Provisional Admittance Status

Pre-Candidacy Courses:

EDUC 211	Introduction to and Foundations of Education	4
PSYC 217	Psychology of Learning and Development	4
SPED 210	Introduction to Special Education and Inclusive Classrooms	4
	Total:	**12**

Pre-Candidacy Cognates:

ENGL 121	Introduction to Analytical Writing	3
ENGL 122	Introduction to Research Writing	3
MATH 112	Mathematics for Elementary Teachers I	3
MATH 113	Mathematics for Elementary Teachers II	3
	Total:	**12**

Phase 2: TCP Core Certification Courses

Formal (full) acceptance into the Teacher Certification Program Phase 2 is required before registering for the courses listed below.

Teacher Certification Courses:

EDUC 360	Teaching and Learning: Inclusive Literacy I	4
EDUC 361	Teaching and Learning: Inclusive Literacy II	4
EDUC 373	Teaching and Learning: Mathematics	4
EDUC 382	Methods of Teaching K-12 Social Studies and History	4
EDUC 383	Teaching and Learning: Science and Engineering	4
EDUC 405	Elementary Classroom Organization and Management	4
	Total:	**24**

Elementary Education Endorsement Requirements:

EDUC 223/PSYC 223	Research and Writing in Education and Psychology (WD)	3
EDUC 250	Introduction to Teaching Practices and Technology	2
EDUC 350	Language Development in Young Children	3
EDUC 386	Seminar in Washington State Social Sciences Resources	1
EDUC 390	Measurement and Evaluation in Education	3
EDUC 392	Methods of Teaching K-12 Art	3
EDUC 410	Philosophy of Education	3
EDUC 425	Legal and Ethical Aspects of Education	2
EDUC 444	Cultural Diversity in Education	3
EDUC 495	Colloquium: Child Abuse	0
EDUC 497	Multigrade and Rural Education	2
MUED 394	Music in the Elementary School	3
PETH 396	Methods of Teaching K-12 Physical Education and Health	4
	Total:	**32**

Teacher Certification Cognates

BIOL 105	Contemporary Biology	4
BIOL 105L	Contemporary Biology Lab	0
BIOL 106	Contemporary Biology	4
BIOL 106L	Contemporary Biology Lab	0
ENGL 374	Literature for Children and Young Adults	4
GEOG 252	World Geography	4
HIST 221	History of the United States	4

	or	
HIST 222	History of the United States	4
HIST 386	Cultures of the Pacific Northwest	4
HLTH 110	Wellness for Living	3
PHYS 201	Conceptual Physics	3
PHYS 204	Conceptual Physics Laboratory	1
SPCH 101	Fundamentals of Speech Communication	4

Total: 35

Note: Phase 1 Pre-candidacy courses, cognates, and Teacher Certification Program Phase 2 courses also partially fulfill the endorsement requirements.

Phase 3: TCP Student Teaching Clinical Practice

Taking both sections of the National Evaluation Series (NES) in Elementary Education is a prerequisite for Phase 3.

EDUC 450	Introduction to Student Teaching: Clinical Practice	1
EDUC 451	Program Assessment Part 1	1
EDUC 452	Program Assessment Part 2	1
EDUC 453	Program Assessment Part 3	1
EDUC 460	Elementary Student Teaching Part I	2
EDUC 470	Elementary Student Teaching Part II	2
EDUC 480	Elementary Student Teaching Part III	2-12; 12

Total: 20

MINOR IN AN APPROVED CONTENT AREA (STATE AND/OR DENOMINATIONAL):

According to Washington State Certification guidelines, elementary education majors must complete 30 credit hours from a state-approved minor or non-minor area. If the chosen minor does not have 30 quarter hours, additional courses must be taken to reach at least 30 quarter hours in the area of the minor. Alternatively, they may complete a minimum of 30 quarter hours in one of the three non-minor content areas listed below. Requirements for completion of middle-level endorsements frequently exceed minor requirements. See the certification officer in the School of Education and Psychology for a current endorsement check sheet.

Approved Minor Content Areas

Art
Biology
Chemistry
English/Language Arts
French
German
Health/Fitness
History
Mathematics
Middle Level Mathematics
Music
Physics
Religion* (not state-approved)
Spanish
Special Education

*A religion minor is available as a second minor.

Approved Non-Minor Content Areas

Humanities
Science
Social Studies

Humanities (Completion of 32 credits)

Select 20 credits of Language Arts from the following in consultation with your advisor.

Language Arts:

Choose one of the following:

ENGL 210	Survey of British and American Literature	4
ENGL 211	Survey of British and American Literature	4
ENGL 212	Survey of British and American Literature	4

Choose one of the following:

ECON 211	Principles of Macroeconomics	4
HIST 359/ECON 359	The American Economy	4
HIST	History Elective	4

Choose one of the following Writing courses:

WRIT 324	Creative Nonfiction Writing	4
WRIT 333	Poetics	4

Choose one of the following:

ENGL 204	Introduction to Literature	4
ENGL 210	Survey of British and American Literature	4
ENGL 211	Survey of British and American Literature	4
ENGL 212	Survey of British and American Literature	4
ENGL 214	Themes in Literature	4;12
ENGL 234	Literary Analysis	4

Complete the following language art courses:

ENGL 284	English Grammar	4
WRIT 389	Writing Theory	4

Complete the following social studies courses:

HIST 254	History of Christianity	4

PLSC 224	American Government	4

Total: 32

*Note: Other humanities content and competencies included in Elementary Education required cognates such as ENGL 374, HIST 221, GEOG 252, and HIST 386.

Science (Completion of 32 credits)

Select 8-12 credits from each of the following sciences in consultation with your advisor.

Biology

BIOL 105	Contemporary Biology	4
BIOL 105L	Contemporary Biology Lab	0
BIOL 106	Contemporary Biology	4
BIOL 106L	Contemporary Biology Lab	0
	or	
BIOL 141	General Biology	4
BIOL 141L	General Biology Lab	0
BIOL 142	General Biology	4
BIOL 142L	General Biology Lab	0
BIOL 143	General Biology	4
BIOL 143L	General Biology Lab	0

Chemistry

CHEM 141	General Chemistry	3
CHEM 142	General Chemistry	3
CHEM 143	General Chemistry	3
CHEM 144	General Chemistry Laboratory	1
CHEM 145	General Chemistry Laboratory	1
CHEM 146	General Chemistry Laboratory	1

Physics

PHYS 201	Conceptual Physics	3
PHYS 202	Conceptual Physics	3
PHYS 204	Conceptual Physics Laboratory	1
PHYS 205	Conceptual Physics Laboratory	1
	or	
PHYS 211	General Physics	3
PHYS 212	General Physics	3
PHYS 213	General Physics	3
PHYS 214	General Physics Laboratory	1
PHYS 215	General Physics Laboratory	1
PHYS 216	General Physics Laboratory	1

Total: 32

Social Studies (Completion of 32 credits)

Select from the following courses in consultation with your advisor.

History - minimum of 16 credits (sequence not required):

HIST 254	History of Christianity	4
HIST 386	Cultures of the Pacific Northwest	4
	Upper Division Electives	8

Social Studies Electives - minimum of 16 credits (4 upper-division credits required):

ANTH 225	Cultural Anthropology	4
HIST 359/ECON 359	The American Economy	4
PLSC 224	American Government	4
SOCI 204	General Sociology	4

Total: 32

*Note: Other social studies content and competencies included in Elementary Education required cognates such as HIST 221 and GEOG 252.

Additional Requirements for Adventist Education Certification

EDUC 381	Methods of Teaching K-12 Religion	3

18 Religion credits are required for certification and must include:

RELB	(Selected from courses with RELB prefix)	8
RELH 457	History of Adventism	3
RELT 202	Christian Beliefs	4
RELT 417	Prophetic Inspiration	3

Eighteen Religion credits are required for Junior Academy Religion Endorsement.

Religious studies (Bible) is not an approved Washington state endorsement. However, a religion major or minor, plus a methods course in religion, remains essential for those desiring an Adventist Education endorsement in Bible.

SCIENCE EDUCATION MAJOR (BACHELOR OF SCIENCE)

This major is recommended for students pursuing careers in any of the secondary science teaching disciplines. A student majoring in science education must complete 40 quarter hours in the major. In addition, the student must complete the required cognates, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin. To pursue a career in education, this major is to be paired with the BEd Secondary Education.

Basic Core:

BIOL 141	General Biology	4
BIOL 141L	General Biology Lab	0
BIOL 142	General Biology	4
BIOL 142L	General Biology Lab	0
BIOL 143	General Biology	4
BIOL 143L	General Biology Lab	0

CHEM 141	General Chemistry	3
CHEM 142	General Chemistry	3
CHEM 143	General Chemistry	3
CHEM 144	General Chemistry Laboratory	1
CHEM 145	General Chemistry Laboratory	1
CHEM 146	General Chemistry Laboratory	1
PHYS 211	General Physics	3
PHYS 212	General Physics	3
PHYS 213	General Physics	3
PHYS 214	General Physics Laboratory	1
PHYS 215	General Physics Laboratory	1
PHYS 216	General Physics Laboratory	1
	or	
PHYS 251	Principles of Physics	3
PHYS 252	Principles of Physics	3
PHYS 253	Principles of Physics	3
PHYS 254	Principles of Physics Laboratory	1
PHYS 255	Principles of Physics Laboratory	1
PHYS 256	Principles of Physics Laboratory	1
MATH 171	Calculus I	4
		Total: 40

Biology Concentration

BIOL 216	Introduction to Biological Research I (WD)	3
BIOL 250	Biostatistics	4
BIOL 305	General Ecology	4
BIOL 326	Journal Club:	1; 3
BIOL 381	Cell Biology I: Structure and Bioenergetics	4
BIOL 382	Cell Biology II: Genetics and Molecular Biology	4
BIOL 383	Cell Biology III: Genomics and Regulation	4
BIOL 483	Philosophy of Origins and Speciation	3
BIOL 496	Senior Seminar	2
CHEM 321	Organic Chemistry	4
CHEM 324	Organic Chemistry Laboratory	1
	Biology Electives	8
		Total: 38

Chemistry Concentration

CHEM 301	Chemical Equilibrium and Analysis	3
CHEM 303	Analytical Instrumental Methods	3
CHEM 305	Chemical Laboratory Techniques	1
CHEM 321	Organic Chemistry	4
CHEM 322	Organic Chemistry	4
CHEM 324	Organic Chemistry Laboratory	1
CHEM 352/PHYS 313	Physical Chemistry I	4
CHEM 353	Physical Chemistry II	3
CHEM 405	Integrated Chemistry Laboratory	1; 6
CHEM 431	Foundations of Biochemistry	4
CHEM 432	Foundations of Biochemistry	3
MATH 215	Data Analysis	4
	or	
MATH 106	Introduction to Statistics	4
MATH 172	Calculus II	4
		Total: 38

Physics Concentration

MATH 172	Calculus II	4
MATH 273	Calculus III	4
PHYS 310	Modern Physics I	3
PHYS 311	Modern Physics II	3
PHYS 313	Thermodynamics	4
PHYS 314	Modern Physics Laboratory I	1
PHYS 315/ENGR 315	Physical Electronics Laboratory	1
PHYS 316	Modern Physics Laboratory II	1
PHYS 323	Modern Optics	3
PHYS 331	Introduction to Nanotechnology	3
PHYS 332	Introduction to Nanotechnology Laboratory	1
PHYS 420	Classical Mechanics	3
PHYS 421	Classical Mechanics	3
		Total: 34

SECONDARY EDUCATION DOUBLE MAJOR (BACHELOR OF EDUCATION)

DOUBLE DEGREE REQUIREMENTS:

A candidate majoring in secondary education must also complete either a bachelor's degree in an approved secondary endorsement content area, listed below, as well as any additional secondary content area competency requirements.

Approved Secondary Endorsement Content Areas (State and/or Denominational):

Art
Biology
Chemistry
English

Health/Fitness
History
Mathematics
Music Education
Physics
Religion
Science

Phase 1: TCP Pre-Candidacy, Provisional Admittance Status

Pre-Candidacy Courses:

EDUC 211	Introduction to and Foundations of Education	4
PSYC 217	Psychology of Learning and Development	4
SPED 210	Introduction to Special Education and Inclusive Classrooms	4

Total: 12

Pre-Candidacy Cognates:

ENGL 121	Introduction to Analytical Writing	3
ENGL 122	Introduction to Research Writing	3
MATH 105	Math for the Liberal Arts	4

Total: 10

Note: MATH 105 or an approved math course

Phase 2: TCP Core Certification Courses

Formal (full) acceptance into the Teacher Certification Program Phase 2 is required before registering for the courses listed below.

Teacher Certification Courses:

EDUC 365	Secondary Classroom Management	4
EDUC 395	Secondary Methods of Instruction I	2
	Secondary Methods course, major or minor academic field (see list below)	2-6
EDUC 475	Teaching Reading Skills in the Content Areas	3

Total: 11-16

Secondary Methods Courses

EDUC 381	Methods of Teaching K-12 Religion	3
EDUC 382	Methods of Teaching K-12 Social Studies and History	4
EDUC 392	Methods of Teaching K-12 Art	3
EDUC 396	Secondary Methods of Instruction II	3
ENGL 395	Methods of Teaching Secondary English	3
MEDU 395	Methods of Teaching Secondary Mathematics	3
MUED 395	Elementary School Music Methods and Materials	3
MUED 396	Secondary Music Methods	3
PETH 396	Methods of Teaching K-12 Physical Education and Health	4

Secondary Education Endorsement Requirements:

EDUC 223/PSYC 223	Research and Writing in Education and Psychology (WD)	3
EDUC 250	Introduction to Teaching Practices and Technology	2
EDUC 386	Seminar in Washington State Social Sciences Resources	1
EDUC 390	Measurement and Evaluation in Education	3
EDUC 410/PHIL 410	Philosophy of Education	3
EDUC 425	Legal and Ethical Aspects of Education	2
EDUC 444	Cultural Diversity in Education	3
EDUC 495	Colloquium: Child Abuse	0
EDUC 497	Multigrade and Rural Education	2
HIST 386	Cultures of the Pacific Northwest	4
SPCH 101	Fundamentals of Speech Communication	4

Total: 27

Phase 3: TCP Student Teaching Clinical Practice

Taking all sections of the WEST-E and/or NES in area of endorsement is a prerequisite for Phase 3 (student teaching).

EDUC 450	Introduction to Student Teaching: Clinical Practice	1
EDUC 451	Program Assessment Part 1	1
EDUC 452	Program Assessment Part 2	1
EDUC 453	Program Assessment Part 3	1
EDUC 461	Secondary Student Teaching I	2
EDUC 471	Secondary Student Teaching II	2
EDUC 481	Secondary Student Teaching Part III	2-12; 12

Total: 20

One-Year Master of Initial Teaching (MIT) Prerequisites

Students must complete the following courses in addition to the content-area requirements below to be accepted into the one-year Masters of Initial Teaching program (see graduate bulletin).

EDUC 211	Introduction to and	4

	Foundations of Education	
EDUC 250	Introduction to Teaching Practices and Technology	2
EDUC 365	Secondary Classroom Management	4
EDUC 386	Seminar in Washington State Social Sciences Resources	1
EDUC 395	Secondary Methods of Instruction I	2
	Secondary Methods course, major or minor academic field (see list below)	2-6
EDUC 450	Introduction to Student Teaching: Clinical Practice	1
ENGL 121	Introduction to Analytical Writing	3
ENGL 122	Introduction to Research Writing	3
ENGL 223	Research Writing (WD)	3
HIST 386	Cultures of the Pacific Northwest	4
MATH 105	Math for the Liberal Arts	4
PSYC 130	General Psychology	4
SPCH 101	Fundamentals of Speech Communication	4

Total: 44-48

Secondary Methods Courses

EDUC 381	Methods of Teaching K-12 Religion	3
EDUC 382	Methods of Teaching K-12 Social Studies and History	4
EDUC 392	Methods of Teaching K-12 Art	3
EDUC 396	Secondary Methods of Instruction II	3
ENGL 395	Methods of Teaching Secondary English	3
LANG 395	Methods of Teaching Languages	3
MEDU 395	Methods of Teaching Secondary Mathematics	3
MUED 395	Elementary School Music Methods and Materials	3
MUED 396	Secondary Music Methods	3
PETH 396	Methods of Teaching K-12 Physical Education and Health	4

Additional Content Area Competency Requirements:

Endorsement requirements frequently exceed graduation requirements. For example, endorsements typically require a methods class appropriate for secondary teaching (grades 5-12) and other courses covering Washington State required competencies. See the certification officer or secondary education advisor in the School of Education and Psychology for a current certification check sheet.

Additional Content Area Competency Requirements - Art (BFA) Fine Arts Major

EDUC 392	Methods of Teaching K-12 Art	3

Total: 3

All elective and choice courses must be selected in consultation with the School of Education and Psychology advisor and certification officer.

Additional Content Area Competency Requirements - Biology (BS)

BIOL	One botany course (elective)	4 or 5
BIOL	One zoology course (elective)	4 or 5

Total: 8-10

Additional Content Area Competency Requirements - Chemistry (BS)

All covered in major.

Additional Content Area Competency Requirements - English with Emphasis in Secondary Teaching (BA)

All covered in major.

Additional Content Area Competency Requirements - Health/Fitness Prep for Secondary Teaching Concentration (BS)

All covered in major.

Additional Content Area Competency Requirements - History (BA)

EDUC 382	Methods of Teaching K-12 Social Studies and History	4
GEOG 252	World Geography	4
HIST 122	The West and the World	4
HIST 254	History of Christianity	4
PLSC 224	American Government	4

Total: 20

Additional Content Area Competency Requirements - Math - Prep for Secondary Teaching Concentration (BS)

All covered in major.

Additional Content Area Competency Requirements - Music - Choral or Instrumental (BMus)

All covered in major.

Additional Content Area Competency Requirements - Physics (BS)

All covered in major.

Additional Content Area Competency Requirements - Religion (BA)

EDUC 381	Methods of Teaching K-12 Religion	3

Total: 3

Additional Requirements for Adventist Education Certification

Choose one course from the following:

HLTH 110	Wellness for Living	3
HLTH 205	Survey of Health	2

18 religion credits are required for certification and must include:

RELB	(Selected from courses with RELB prefix)	8
RELH 457	History of Adventism	3
RELT 202	Christian Beliefs	4
RELT 417	Prophetic Inspiration	3

Religious studies (Bible) is not an approved Washington state endorsement. However, a religion minor, plus a methods course in religion, is required for those desiring an Adventist Education endorsement in Bible. Eighteen religion credits and EDUC 381 are required for the Junior Academy Religion Endorsement.

EDUCATION MINOR

A candidate minoring in education must complete 30 quarter hours. Candidates who wish to enroll in EDUC or PSYC courses that list acceptance to the Teacher Certification Program Phase 2 as a prerequisite should apply for special acceptance with the administrative staff of the School of Education and Psychology.

Required Courses:

EDUC 211	Introduction to and Foundations of Education	4
EDUC 410	Philosophy of Education	3
PSYC 217	Psychology of Learning and Development	4
SPED 210	Introduction to Special Education and Inclusive Classrooms	4
	Electives	15
	Total: 30	

Electives must be chosen from EDUC/SPED courses in consultation with an advisor; 8 must be upper division.

SPECIAL EDUCATION MINOR

A candidate minoring in special education must complete 28-32 quarter hours.

Required Courses:

PSYC 430	Psychological Testing	3
SPED 210	Introduction to Special Education and Inclusive Classrooms	4
SPED 220	Early Childhood Through Adolescent Special Education	4
SPED 222	Methods of Teaching and Learning in Inclusive Classrooms	4
SPED 326	Behavioral Interventions: Theory, Principles, and Techniques	4
SPED 327	Academic Interventions: Mild, Moderate, and Sever Disabilities	4
SPED 334	Methodological Applications in Special Education	2
SPED 430	Professional Skills in Special Education	4
SPED 445	Service Delivery Methods	3
	Total: 28-32	

Non-education majors pursuing a SPED minor required to complete SPED 210 as part of minor.

Additional Course for Secondary Endorsement

EDUC 360	Teaching and Learning: Inclusive Literacy I	4

PSYCHOLOGY MAJOR (BACHELOR OF ARTS)

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. Primary emphasis is placed on the applied dynamics of human behavior and relationships rather 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 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 advisors very early in their university careers.

A student majoring in psychology 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. Senior students are required to take the Major Field Test (MFT) in psychology.

Required Courses:

PSYC 120	Introduction to The Psychology Major	0

PSYC 140	Introduction to Psychology: Social Foundations	4
PSYC 141	Introduction to Psychology: Biological Foundations	4
PSYC 215	Developmental Psychology	4
PSYC 271	Research Methods and Statistics I	4
PSYC 272	Research Methods and Statistics II	4
PSYC 344	Social Psychology	4
PSYC 366	Theories of Personality	4
PSYC 390	Cognitive Psychology	4
PSYC 455	History and Systems of Psychology	4
PSYC 466	Biological Psychology	4
PSYC 492	Abnormal Psychology	4
PSYC 495	Colloquium: Orientation to Degree Completion	0
	Electives (6 credits must be upper division)	9

Total: 53

Electives must be chosen in consultation with the student's advisor.

Cognates:

Choose one science sequence with accompanying labs (12 credits):

BIOL 121	Anatomy and Physiology	4
BIOL 121L	Anatomy and Physiology Lab	0
BIOL 122	Anatomy and Physiology	4
BIOL 122L	Anatomy and Physiology Lab	0
BIOL 123	Anatomy and Physiology	4
BIOL 123L	Anatomy and Physiology Lab	0
	or	
BIOL 141	General Biology	4
BIOL 141L	General Biology Lab	0
BIOL 142	General Biology	4
BIOL 142L	General Biology Lab	0
BIOL 143	General Biology	4
BIOL 143L	General Biology Lab	0

Advanced courses may be substituted.

Choose one philosophy (4 credits):

PHIL 204	Essentials of Critical Reasoning	4
	or	
PHIL 205	Introduction to Philosophy	4

PSYCHOLOGY MAJOR (BACHELOR OF SCIENCE)

This major is recommended for students who plan to pursue graduate studies in psychology. A student majoring in psychology must complete 62 quarter hours in the major, consisting of the core requirements and at least nine quarter hours of approved electives of which six must be upper division. In addition, the student must complete the required cognates, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin. Senior students are required to take the Major Field Test (MFT) in 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 this major, the student should realize that 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 advisors very early in their university careers.

Required Courses:

PSYC 120	Introduction to The Psychology Major	0
PSYC 140	Introduction to Psychology: Social Foundations	4
PSYC 141	Introduction to Psychology: Biological Foundations	4
PSYC 215	Developmental Psychology	4
PSYC 271	Research Methods and Statistics I	4
PSYC 272	Research Methods and Statistics II	4
PSYC 344	Social Psychology	4
PSYC 366	Theories of Personality	4
PSYC 390	Cognitive Psychology	4
PSYC 455	History and Systems of Psychology	4
PSYC 464	Introduction to Counseling	4
PSYC 466	Biological Psychology	4
PSYC 492	Abnormal Psychology	4
PSYC 493	Psychology Practicum	3
PSYC 495	Colloquium: Orientation to Degree Completion	0
PSYC 498	Senior Project in Psychology	2
	or	
PSYC 499	Senior Thesis in Psychology	2
	Electives (6 credits must be upper division)	9

Total: 62

Electives: Must be chosen in consultation with the student's advisor.

Cognates:

Choose one science sequence with accompanying labs (12 credits):

BIOL 121	Anatomy and Physiology	4
BIOL 121L	Anatomy and Physiology Lab	0
BIOL 122	Anatomy and Physiology	4
BIOL 122L	Anatomy and Physiology Lab	0
BIOL 123	Anatomy and Physiology	4
BIOL 123L	Anatomy and Physiology Lab	0
	or	
BIOL 141	General Biology	4
BIOL 141L	General Biology Lab	0
BIOL 142	General Biology	4
BIOL 142L	General Biology Lab	0
BIOL 143	General Biology	4
BIOL 143L	General Biology Lab	0

Advanced courses may be substituted.

Choose one philosophy (4 credits):

PHIL 204	Essentials of Critical Reasoning	4
	or	
PHIL 205	Introduction to Philosophy	4

FORENSIC PSYCHOLOGY MAJOR (BACHELOR OF SCIENCE)

This major is recommended for students pursuing careers in law enforcement, parole, and probation. A student majoring in forensic psychology must complete 65 quarter hours in the major. In addition, the student must complete the required cognates, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin. Senior students are required to take the Major Field Test (MFT) in psychology.

Required Courses:

ANTH 225	Cultural Anthropology	4
CORR 285	Introduction to Criminal Justice	4
CORR 385	Criminology	4
CORR 387	Juvenile Delinquency	3
PSYC 120	Introduction to The Psychology Major	0
PSYC 140	Introduction to Psychology: Social Foundations	4
PSYC 141	Introduction to Psychology: Biological Foundations	4
PSYC 215	Developmental Psychology	4
PSYC 247	Introduction to Forensic Psychology	4
PSYC 271	Research Methods and Statistics I	4
PSYC 272	Research Methods and Statistics II	4
PSYC 344	Social Psychology	4
PSYC 366	Theories of Personality	4
PSYC 430	Psychological Testing	3
PSYC 447	Advanced Forensic Psychology	4
PSYC 492	Abnormal Psychology	4
PSYC 493	Psychology Practicum	3
PSYC 495	Colloquium: Orientation to Degree Completion	0
SOCI 234	Current Social Problems	4

Total: 65

Cognates:

Choose one science sequence with accompanying labs (12 credits):

BIOL 121	Anatomy and Physiology	4
BIOL 121L	Anatomy and Physiology Lab	0
BIOL 122	Anatomy and Physiology	4
BIOL 122L	Anatomy and Physiology Lab	0
BIOL 123	Anatomy and Physiology	4
BIOL 123L	Anatomy and Physiology Lab	0
	or	
BIOL 141	General Biology	4
BIOL 141L	General Biology Lab	0
BIOL 142	General Biology	4
BIOL 142L	General Biology Lab	0
BIOL 143	General Biology	4
BIOL 143L	General Biology Lab	0

Advanced courses may be substituted.

Choose one philosophy (4 credits):

PHIL 204	Essentials of Critical Reasoning	4
	or	
PHIL 205	Introduction to Philosophy	4

PSYCHOLOGY MINOR

A student minoring in psychology must complete 30 quarter hours:

Required Courses:

PSYC 140	Introduction to Psychology: Social Foundations	4
PSYC 141	Introduction to Psychology: Biological Foundations	4
PSYC 215	Developmental Psychology	4
PSYC 344	Social Psychology	4
PSYC 455	History and Systems of Psychology	4
	Electives (6 credits must be upper division)	10

Total: 30

Approval of psychology advisor required.

SCHOOL OF ENGINEERING

Delvin Peterson, Dean; Bryce Cole, Associate Dean; Rob Frohne, Mark Haun, Qin Ma, Natalie Smith-Gray, Douglas Thomsen, Melodie Williams, Louie Yaw.

The engineering profession applies the principles of mathematics, science, economics, ethics, and social sciences to use the materials and forces of nature for the benefit of mankind. The faculty of the Edward F. Cross School of Engineering, in partnership with the institution, strives to provide students a high-quality, broad-based, and integrated engineering education that will empower them to achieve success in one or both of the following:

- The practice of engineering or associated endeavors in industry, private practice, or government.
- Advanced study in engineering or other professions*.

*Success is assessed approximately five years after graduation.

Degrees Offered. The Edward F. Cross 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 to provide undergraduate instruction that will serve as a strong foundation for graduate studies. The curriculum includes elective concentrations in bioengineering, civil, computer, electrical, and mechanical engineering. The B.S.E. program is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org.

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

Incoming engineering students must meet the WWU admission requirements. In addition, the School of Engineering expects that students are ready for Calculus I and College Writing I upon entrance. A fourth year of mathematics, a second year of laboratory science, and an introductory computer programming course are strongly recommended.

Engineering Phase Advancement Policy

In the interest of having students matched with majors in which they can succeed, and stewardship of financial aid resources, it is important for engineering students to have appropriate preparation at the beginning of the program and to make good academic progress. The School of Engineering has established three phases for students to advance through while completing a degree in engineering. Students will need to complete key courses from the freshmen sequence in Phase 1 before advancing to Phase 2. They will need to complete all required classes from the first two years before advancing to Phase 3. Students who present a transcript of previous successful studies in math and science from an accredited college or university may be admitted directly to Phase 2.

Phase 1 Courses

Courses Required for all Concentrations:

- ENGL 121 (College Writing I)
- ENGL 122 (College Writing II)
- MATH 171 (Calculus I)
- MATH 172 (Calculus II)
- Two of the following four courses
  - ENGR 120 (Introduction to Bioengineering)
  - ENGR 121 (Introduction to the Profession of Engineering)
  - ENGR 122 (Introduction to CAD)
  - ENGR 123 (Introduction to Engineering Design)

Additional Courses for Bioengineering

- Either of the following two sequences
  - BIOL 141 & BIOL 142
  - CHEM 141 & CHEM 142

Additional Courses for Civil or Mechanical Engineering

- CHEM 141
- CHEM 142

Additional Courses for Computer or Electrical Engineering

- CPTR 141
- CPTR 142

Engineering Advancement to Phase 2. Students must advance to Phase 2 in the Engineering program before proceeding to any engineering course numbered 221 or higher. To advance to Phase 2, students must complete all required Phase 1 courses with a C- or better grade, and maintain a cumulative GPA > 2.5. Advancement to Phase 2 normally occurs prior to the Fall quarter of the student's second year of taking courses at Walla Walla University as an Engineering major. Students who do not meet the requirements to advance to Phase 2 in their chosen concentration by the end of their first spring quarter as an engineering major must apply for continued enrollment in engineering. This application should include a detailed plan for completing the deficient courses. Students who do not advance to Phase 2 or successfully apply for continued enrollment in

engineering at the end of their first year must switch to a non-Engineering major.

Applications for continued enrollment in engineering into the third year without advancing to Phase 2 will not typically be accepted. Because of course sequencing, students should expect at least three years of additional study to complete the engineering degree after advancing to Phase 2.

Engineering Advancement to Phase 3. Students advance to Phase 3 after completing all the required courses in the first and second year of the four-year planner for their concentration, with no more than 8 credits less than C-. Occasionally, engineering courses may need to be repeated. However, multiple repetitions of courses inefficiently use student finances and can jeopardize degree completion. Students should expect to advance to Phase 3 before the end of the third year of studies. If this timeline is not met, students must switch to a non-engineering major. Alternatively, they may apply to remain in engineering with a detailed plan for addressing the deficient courses.

For transfer students, the timing of the threshold for Phase 3 depends on how many credits a student transfers in before beginning courses at Walla Walla University as an Engineering major.

Students with less than 45 college credits taken before beginning courses

- Advance to Phase 3 by the end of the ninth full time quarter in the engineering program (not counting summers).

Students with between 45 and 90 college credits taken before beginning courses

- Advance to Phase 3 by the end of the sixth full time quarter in the engineering program (not counting summers).

Students with more than 90 college credits taken before beginning courses

- Advance to Phase 3 by the end of the third full time quarter in the engineering program (not counting summers). If course sequencing justifies this, or if a substantial number of the transferred credits were not in STEM related areas, additional time may be granted.

Affiliation Program. North American Seventh-day Adventist colleges and universities are affiliated with Walla Walla University under a program that allows students to complete the first one or two years of engineering instruction at any participating institution and then complete degree requirements at Walla Walla University. There is also a cooperative dual degree program in which the student spends approximately three years at Oakwood University and approximately two years at WWU. Following the successful completion of all requirements, the student will be awarded a Bachelor of Science degree in Applied Mathematics from Oakwood University and a Bachelor of Science in Engineering degree from WWU. Each affiliated campus has an engineering coordinator appointed to provide the necessary guidance to insure a smooth transition from the affiliated campus to Walla Walla University. 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 emphasizes those subject areas that are common to the broad field of engineering while allowing for the development of professional competence within one of five 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 that emphasize fundamental knowledge, techniques, and processes. Specific professional competence is assured by the completion of a coherent group of courses chosen from bioengineering, civil, computer, 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 advisor 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, highway engineering, environmental 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 depends upon maintaining a 2.00 minimum grade point average. Students who fail to make satisfactory progress may be advised to register with a reduced course load or to consider other educational alternatives.

No course with a grade of D- may be counted toward graduation degree requirements. Including General Studies courses, a total of 8 credits of a D or D+ grade may be counted toward degree requirements.

Students enrolled in the professional curriculum must complete a total of 200 quarter hours, including the engineering general studies requirements, the engineering core requirements, the engineering

mathematics and science requirements, and one engineering concentration. Upper-division engineering courses must be taken in residence unless approved by the School of Engineering. Senior students are required to participate in the Senior Engineering Tour and the Fundamentals of Engineering Exam.

A student pursuing two concentrations within the BSE degree will be required to complete all the requirements of both concentrations and have a minimum of 224 credit hours in order to graduate. Each concentration must have a minimum of 24 credit hours that are applied only to that concentration.

Because of the unique nature of the professional curriculum of the engineering degree, non-ENGR courses taken to meet any requirements for a BSE degree are considered cognates and therefore can be simultaneously counted toward major or minor requirements in other areas.

ENGINEERING CORE REQUIREMENTS (117 CREDITS)

Core engineering classes emphasize development of engineering, science, and critical thinking skills common to the profession of engineering. Some flexibility is provided within the core, allowing students, in consultation with their academic advisors, to select the best courses to achieve their professional goals.

All students are required to present 73 credits of core courses. In addition, the indicated minimum requirements must be satisfied within each individual section of the core.

ENGINEERING GENERAL STUDIES (44 CREDITS)

See the Engineering General Studies Requirement (p. 53) section.

MATH AND SCIENCE FUNDAMENTALS (39 CREDITS)

Mathematics: (27)

MATH 171	Calculus I	4
MATH 172	Calculus II	4
MATH 273	Calculus III	4
MATH 274	Calculus IV	4
MATH 239	Introduction to Linear Algebra	4
MATH 286	Ordinary Differential Equations	3
MATH 315	Probability and Statistics	4

Science: (12)

CHEM 141	General Chemistry	3
CHEM 142	General Chemistry	3
CHEM 144	General Chemistry Laboratory	1
CHEM 145	General Chemistry Laboratory	1
PHYS 251	Principles of Physics	3
PHYS 254	Principles of Physics Laboratory	1

Additional Science Coursework is listed within each concentration's requirements.

ENGINEERING TOOLS AND METHODS (22 CREDITS)

Engineering Introduction and Tools: (12)

CPTR 141	Fundamentals of Programming I	4
ENGR 120	Introduction to Bioengineering	2
	or	
ENGR 121	Introduction to the Profession of Engineering	2
ENGR 122	Introduction to CAD	2
ENGR 326	Engineering Economy	4

Problem Formulation and Solution: (10)

ENGR 221	Engineering Mechanics I	3
ENGR 222	Engineering Mechanics II	3
ENGR 228	Circuit Analysis	4

MATERIALS AND EXPERIMENTATION (4 CREDITS)

ENGR 321	Mechanics of Materials	4
	or	
ENGR 386	Bioengineering Materials	4
	or	
ENGR 312/PHYS 312	Physical Electronics	3
	and	
ENGR 315/PHYS 315	Physical Electronics Laboratory	1

ENGINEERING PROJECT EXPERIENCE (8 CREDITS)

ENGR 123	Introduction to Engineering Design	2
	or	
ENGR 197	Freshman Seminar	1
	and	
ENGR 297	Sophomore Seminar	1
ENGR 396	Junior Seminar	1
ENGR 397	Junior Seminar	0
ENGR 295	Sophomore Colloquium	0
ENGR 495	Colloquium	0
ENGR 496	Capstone Engineering Project	1
	and either	
ENGR 497	Capstone Engineering Project	2
	and	
ENGR 498	Capstone Engineering Project	2
	or	
	Additional Engineering Design Elective*	3

	and	
ENGR 499	Capstone Project Completion	1

*Engineering design elective must be approved by the instructor for ENGR 497.
ENGR 295/495: 3 quarters of Colloquium are required. ENGR 295 may count at most once.

BIOENGINEERING CONCENTRATION (83 CREDITS)

Required Courses:

BIOL 141	General Biology	4
BIOL 142	General Biology	4
BIOL 143	General Biology	4
BIOL 381	Cell Biology I: Structure and Bioenergetics	4
BIOL 382	Cell Biology II: Genetics and Molecular Biology	4
CHEM 143	General Chemistry	3
CHEM 146	General Chemistry Laboratory	1
CHEM 321	Organic Chemistry	4
CHEM 324	Organic Chemistry Laboratory	1
ENGR 214	Aseptic Cell Culture Laboratory	1
ENGR 223	Engineering Mechanics III	3
ENGR 325	Instrumentation	3
ENGR 331	Fluid Mechanics	4
ENGR 332	Thermodynamics	3
ENGR 350	Linear Systems Analysis	4
ENGR 486/BIOL 486	Tissue Engineering	4
PHYS 331	Introduction to Nanotechnology	3
PHYS 332	Introduction to Nanotechnology Laboratory	1
PHYS 252	Principles of Physics	3
PHYS 255	Principles of Physics Laboratory	1
	Depth Electives	8
	Breadth Electives	16
		Total: 83

Depth Electives (8)

Track A

ENGR 485	Biological and Chemical Reactor Design	4
PHYS 470/BIOL 470	Biophysics	4

Track B

ENGR 455	Signals and Systems	4
ENGR 487	Imaging Systems	4

Other courses may be selected with approval of the academic advisor.

Breadth Electives (16)

Engineering and Computer Science Electives (8-12)

	Computer Science Electives	0-8
	Engineering Electives	0-8

Management (0-4)

ENGR 390/GBUS 390	Engineering in a Global Context	4
ENGR 391	Thriving in an Engineering Business	2
MGMT 470/MKTG 470	Principles of Project Management	4

Math and Science Electives (4-8)

BIOL 121	Anatomy and Physiology	4
BIOL 383	Cell Biology III: Genomics and Regulation	4
BIOL 445	Advanced Microbiology	4
BIOL 464	Animal Physiology	4
BIOL 466	Immunology	4
BIOL 471	Computing for Biology and Bioinformatics	4
CHEM 322	Organic Chemistry	4
	and	
CHEM 325	Organic Chemistry Laboratory	1
CHEM 431	Foundations of Biochemistry	4
MATH 319/ENGR 419	Optimization	4
MATH 341	Numerical Analysis	4
MATH 389	Linear Algebra	4
MATH 413	Partial Differential Equations	4
PHYS 470/BIOL 470	Biophysics	4
PHYS 253	Principles of Physics	3
	and	
PHYS 256	Principles of Physics Laboratory	1

CIVIL ENGINEERING CONCENTRATION (83 CREDITS)

Required Courses:

CHEM 143	General Chemistry	3
CHEM 146	General Chemistry Laboratory	1
ENGR 323	Civil Engineering Materials	3
ENGR 331	Fluid Mechanics	4
ENGR 341	Geology and Soil Mechanics	4

ENGR 342	Hydrology	3
ENGR 343	Environmental Engineering Systems	4
ENGR 344	Civil Engineering Analysis	4
ENGR 345	Contracts and Specifications	2
ENGR 346	Surveying	4
ENGR 347	Structural Analysis I	3
ENGR 348	Structural Analysis II	3
ENGR 441	Steel Structural Design	3
ENGR 442	Reinforced Concrete Structural Design	4
ENGR 445	Water and Wastewater: Treatment and Transport I	4
ENGR 446	Water and Wastewater: Treatment and Transport II	4
ENGR 449	Transportation Engineering	4
ENGR	Depth Electives	6
ENGR	Breadth Electives	20
		Total: 83

Depth Electives (6)

ENGR 440	Groundwater Pollution Control	3
ENGR 443	Timber Structural Design	3
ENGR 444	Structural Design	3
ENGR 447	Receiving Water Analysis	3
ENGR 448	Advanced Water and Wastewater Design	3
ENGR 450	Geotechnical Engineering	3

Breadth Electives (20)

Interdisciplinary Engineering (3-6)

ENGR 223	Engineering Mechanics III	3
ENGR 325	Instrumentation	3
ENGR 366	Vibrations	3

Management (0-4)

ENGR 390/GBUS 390	Engineering in a Global Context	4
ENGR 391	Thriving in an Engineering Business	2
MGMT 470/MKTG 470	Principles of Project Management	4

Math and Science (4-14)

Math (0-8)

MATH 319/ENGR 419	Optimization	4
MATH 341	Numerical Analysis	4
MATH 413	Partial Differential Equations	4

Science (4 minimum; lower-division courses are limited to 8 credit hours.)

BIOL 141	General Biology	4
BIOL 142	General Biology	4
BIOL 143	General Biology	4
BIOL 222	Microbiology	5
BIOL 305	General Ecology	4
BIOL 410	Limnology	4-5
CHEM 301	Chemical Equilibrium and Analysis	3
CHEM 321	Organic Chemistry	4
and		
CHEM 324	Organic Chemistry Laboratory	1
CHEM 322	Organic Chemistry	4
and		
CHEM 325	Organic Chemistry Laboratory	1
CHEM 352/PHYS 313	Physical Chemistry I	4
CHEM 353	Physical Chemistry II	3
PHYS 252	Principles of Physics	3
and		
PHYS 255	Principles of Physics Laboratory	1
PHYS 253	Principles of Physics	3
and		
PHYS 256	Principles of Physics Laboratory	1

Transport Phenomena (3)

CHEM 352/PHYS 313	Physical Chemistry I	4
ENGR 332	Thermodynamics	3
ENGR 364	Fluid Mechanics Laboratory	1

Other Civil Depth Courses (0-6)

Up to two additional Depth Electives may be taken as Breadth Electives

Topics classes or other appropriate classes may be substituted for classes in the breadth elective category if approved by the School of Engineering.

COMPUTER ENGINEERING CONCENTRATION (83 CREDITS)

Required Courses:

CPTR 142	Fundamentals of Programming II	4
CPTR 242	Sequential and Parallel Data Structures and Algorithms	4
CPTR 280	Computer Organization and Assembly Language	3
CPTR 352	Operating Systems	4
CPTR 380	Computer Architecture	4
CPTR 450	Software Engineering	3
CPTR 456	Computer Networks	4

CPTR 480	Programming Embedded and Real Time Systems	4
ENGR 223	Engineering Mechanics III	3
ENGR 350	Linear Systems Analysis	4
ENGR 354	Digital Logic	3
ENGR 355	Embedded System Design	3
ENGR 356	Engineering Electronics I	4
ENGR 433	Digital Design	4
MATH 250	Discrete Mathematics	4
PHYS 252	Principles of Physics	3
PHYS 253	Principles of Physics	3
PHYS 255	Principles of Physics Laboratory	1
PHYS 256	Principles of Physics Laboratory	1
	Depth Electives	8-12
	Breadth Electives	12-16
		Total: 83

Depth Electives (8-12)

Computer Science Electives (4-8)
Electrical Engineering Electives (4-8)

Breadth Electives (8-12)

Management Elective (0-4)

ENGR 390/GBUS 390	Engineering in a Global Context	4
ENGR 391	Thriving in an Engineering Business	2
MGMT 470/MKTG 470	Principles of Project Management	4

Science Elective (0-4)

CHEM 143	General Chemistry	3
	and	
CHEM 146	General Chemistry Laboratory	1

Transport Phenomena Electives (7-8)

ENGR 331	Fluid Mechanics	4
ENGR 332	Thermodynamics	3
ENGR 465	Heat Transfer	4
ENGR 468	Engineering Finite Element Methods	4

Topics classes or other appropriate classes may be substituted for classes in the breadth elective category if approved by the School of Engineering.

Depth electives, approved by the School of Engineering, must be chosen in consultation with the academic advisor.

ELECTRICAL ENGINEERING CONCENTRATION (83 CREDITS)

Required Courses:

CPTR 142	Fundamentals of Programming II	4
CPTR 280	Computer Organization and Assembly Language	3
ENGR 223	Engineering Mechanics III	3
ENGR 332	Thermodynamics	3
ENGR 350	Linear Systems Analysis	4
ENGR 354	Digital Logic	3
ENGR 355	Embedded System Design	3
ENGR 356	Engineering Electronics I	4
ENGR 357	Engineering Electronics II	4
ENGR 430	Electric Power Engineering	4
ENGR 433	Digital Design	4
ENGR 451	Electromagnetic Fields	4
ENGR 455	Signals and Systems	4
PHYS 252	Principles of Physics	3
PHYS 253	Principles of Physics	3
PHYS 255	Principles of Physics Laboratory	1
PHYS 256	Principles of Physics Laboratory	1
	Depth Electives	12
	Breadth Electives	16
		Total: 83

Breadth Electives (16)

Engineering/Computer Science Electives (4-10)

Management Elective (0-4)

ENGR 390/GBUS 390	Engineering in a Global Context	4
ENGR 391	Thriving in an Engineering Business	2
MGMT 470/MKTG 470	Principles of Project Management	4

Math/Science Elective (3-4)

CHEM 143	General Chemistry	3
	and	
CHEM 146	General Chemistry Laboratory	1
MATH 319/ENGR 419	Optimization	4
MATH 341	Numerical Analysis	4
MATH 389	Linear Algebra	4
MATH 451	Real Analysis I	4
PHYS 310	Modern Physics I	3
	and	
PHYS 314	Modern Physics Laboratory I	1
PHYS 323	Modern Optics	3
	and	
PHYS 324	Modern Optics Laboratory	1
PHYS 420	Classical Mechanics	3

Topics classes or other appropriate classes may be substituted for classes in the breadth elective category if approved by the School of Engineering.

Engineering and computer science electives, approved by the School of Engineering, must be chosen in consultation with the academic advisor.

Transport Phenomena Elective (4)

ENGR 331	Fluid Mechanics	4
ENGR 465	Heat Transfer	4
ENGR 468	Engineering Finite Element Methods	4

Depth Electives (12)

CPTR 380	Computer Architecture	4
CPTR 480	Programming Embedded and Real Time Systems	4
ENGR 318	Electromechanical Energy Conversion	4
ENGR 435	Digital Design II	4
ENGR 454	Control Systems	4
ENGR 456	Communications Systems	4
ENGR 460	Power Electronics	4
ENGR 487	Imaging Systems	4

MECHANICAL ENGINEERING CONCENTRATION (83 CREDITS)

Required Courses:

ENGR 223	Engineering Mechanics III	3
ENGR 322	Engineering Materials	4
ENGR 324	Materials and Processes in Manufacturing	2
ENGR 325	Instrumentation	3
ENGR 331	Fluid Mechanics	4
ENGR 332	Thermodynamics	3
ENGR 333	Thermodynamics and Thermal Systems	3
ENGR 350	Linear Systems Analysis	4
ENGR 364	Fluid Mechanics Laboratory	1
ENGR 365	Machine Element Design Laboratory	1
ENGR 366	Vibrations	3
ENGR 374	Advanced CAD/MCAE	2
ENGR 461	Kinematics	4
ENGR 462	Machine Design	4
ENGR 465	Heat Transfer	4
ENGR 468	Engineering Finite Element Methods	4
PHYS 252	Principles of Physics	3
PHYS 253	Principles of Physics	3
PHYS 255	Principles of Physics Laboratory	1
PHYS 256	Principles of Physics Laboratory	1
	Depth Electives	12
	Breadth Electives	14
	Total: 83	

Breadth Electives (14)

Engineering/Computer Science Electives (3-8)

CPTR 142	Fundamentals of Programming II	4
CPTR 280	Computer Organization and Assembly Language	3
CPTR 355	Computer Graphics	4
ENGR 343	Environmental Engineering Systems	4
ENGR 345	Contracts and Specifications	2
ENGR 346	Surveying	4
ENGR 347	Structural Analysis I	3
ENGR 348	Structural Analysis II	3
ENGR 356	Engineering Electronics I	4
ENGR 455	Signals and Systems	4

Management Elective (0-4)

ENGR 390/GBUS 390	Engineering in a Global Context	4
ENGR 391	Thriving in an Engineering Business	2
MGMT 470/MKTG 470	Principles of Project Management	4

Math/Science Electives (3-10)

CHEM 143	General Chemistry	3
	and	
CHEM 146	General Chemistry Laboratory	1
MATH 319/ENGR 419	Optimization	4
MATH 341	Numerical Analysis	4
MATH 413	Partial Differential Equations	4
MATH 451	Real Analysis I	4
PHYS 310	Modern Physics I	3
	and	
PHYS 314	Modern Physics Laboratory I	1
PHYS 323	Modern Optics	3
	and	
PHYS 324	Modern Optics Laboratory	1
PHYS 331	Introduction to Nanotechnology	3
	and	
PHYS 332	Introduction to Nanotechnology Laboratory	1
PHYS 420	Classical Mechanics	3

Technology Electives (2)

TECH 137	Oxyacetylene Welding and Cutting	2
TECH 138	Shielded Metal Arc Welding	2

TECH 220	Introduction to Basic Woodworking	2
TECH 241	Fabrication and Machining I	2

Topics classes or other appropriate classes may be substituted for classes in the breadth elective category if approved by the School of Engineering.

Depth electives, approved by the School of Engineering, must be chosen in consultation with the academic advisor.

Depth Electives (12)

ENGR 318	Electromechanical Energy Conversion	4
ENGR 419/MATH 319	Optimization	4
ENGR 454	Control Systems	4
ENGR 466	Heating, Ventilating, and Air Conditioning Design	4
ENGR 467	Robotics	4
ENGR 470	Combustion	4
ENGR 471	Composite Materials	4
ENGR 475	Mechanics of Flight	4
ENGR 480	Manufacturing Systems Engineering	4

ENGLISH AND MODERN LANGUAGES

Cynthia Westerbeck, Chair; Kellie Bond, Sara Kakazu, Lauren Peterson.

The Department of English and Modern Languages offers a major in English with emphases in literature, creative writing, and secondary teaching; it also offers minors in literature and writing in addition to language minors in Arabic, French, Hebrew, Italian, Portuguese, and Spanish through our affiliation with Adventist Colleges Abroad. Both the major and minors provide a foundation for careers that emphasize critical thinking and skillful communication. English majors frequently work in non-profit and corporate communication, grant writing, education, journalism, digital and print publishing, library science, and government. The major is also a strong preparation for law, business, medicine, and the social and behavioral sciences. These and other professions place a high value on the ability to read critically, to write clearly, and to understand human experience.

In its general studies courses, the department aims to enhance the student's ability to use language and understand literature. The writing courses give instruction in clear, effective writing, and the literature courses address significant and enduring issues that lead to a broad understanding of human experience.

ENGLISH MAJOR (BACHELOR OF ARTS)

A student majoring in English must complete 62 hours of ENGL and WRIT courses—as well as the English cognates.

English majors will maintain an overall GPA of 2.75 in their major courses. In their final quarter, graduating students are required to take the Major Field Test (MFT): Literature in English. Students planning to attend graduate school are advised to take the Graduate Record Examination (GRE), general and subject (English) sections.

Core Requirements:

ENGL 210	Survey of British and American Literature	4
ENGL 211	Survey of British and American Literature	4
ENGL 212	Survey of British and American Literature	4
ENGL 234	Literary Analysis	4
ENGL 284	English Grammar	4
ENGL 470	Literary and Critical Theory	4
ENGL 495	English Colloquium	0

ENGL 284: also fulfilled with 9 hours of Greek, except for English majors with an emphasis in secondary teaching

ENGL 495: 12 quarters—or 1 each quarter while in residence

British literature before 1830 selected from the following courses (4):

ENGL 344	Medieval Literature	4
ENGL 345	Renaissance Literature	4
ENGL 346	Restoration and Enlightenment	4
ENGL 347	Romantic British Literature	4

British or American literature after 1830 selected from the following courses (4):

ENGL 355	Victorian Literature	4
ENGL 356	Twentieth-Century British Literature	4
ENGL 364	Nineteenth-Century American Literature	4
ENGL 366	Twentieth-Century American Literature	4

Total: 32

Cognates:

HIST 275	History of England	4
HIST 355	The Atlantic World: Liberty, Bondage, and Revolution	4
	or	
HIST 448	Becoming America: Citizenship and Exceptionalism from 1877-1941	4
	or	
HIST 450	United States Foreign Policy	4

Cognates also fulfilled with the completion of the Western Thought sequence (HONR 131, HONR 132, HONR 133).

ENGLISH MAJOR WITH EMPHASIS IN LITERATURE

The emphasis in literature focuses on the careful study of literary texts. The lower-division core requirements for the English major serve as a foundation for this study.

This emphasis culminates in Seminar in Literature, which requires the production of a major scholarly essay and a public presentation during the last quarter.

Take one of the following courses in British lit. before 1830*

ENGL 344	Medieval Literature	4
ENGL 345	Renaissance Literature	4
ENGL 346	Restoration and Enlightenment	4
ENGL 347	Romantic British Literature	4

Take one of the following courses in British or American lit. after 1830*

ENGL 355	Victorian Literature	4

ENGL 356	Twentieth-Century British Literature	4
ENGL 364	Nineteenth-Century American Literature	4
ENGL 366	Twentieth-Century American Literature	4

*These courses are required in addition to the literature courses required in the core.

Required Courses:

ENGL 496	Seminar in Literature	0
ENGL 497	Seminar in Literature	1
ENGL 498	Seminar in Literature (WD)	1
	Writing (WRIT 324-337)	4
	Upper-Division Literature Electives	8
	Upper-Division Electives (from ENGL, FILM, or WRIT)	8

Total: 30

ENGLISH MAJOR WITH EMPHASIS IN CREATIVE WRITING

The emphasis in creative writing focuses on writing in various genres and on the close study of literary texts as models for the student's creative work.

This emphasis culminates in Seminar in Creative Writing, which guides students in the preparation of their senior portfolio, a collection of fiction, poetry, and/or essays. Students will give a public reading of their creative work during the last quarter.

Required Courses:

WRIT 324	Creative Nonfiction Writing	4
WRIT 334	Poetry Writing	4
WRIT 496	Seminar in Creative Writing	0
WRIT 497	Seminar in Creative Writing	1
WRIT 498	Seminar in Creative Writing (WD)	1
	Upper-Division Electives (from ENGL, FILM, or WRIT)	8

*One of these electives may be taken from the following: JOUR 244, JOUR 247, JOUR 341.

Take two of the following writing theory courses (8):

WRIT 333	Poetics	4
WRIT 337	Stylistics	4
WRIT 389	Writing Theory	4

Electives

One elective may be taken from the following:

JOUR 244	Technical Writing (WD)	3
JOUR 247	Copy Editing	3
JOUR 315	Digital Writing	4
JOUR 341	Feature Writing	4

ENGLISH MAJOR WITH EMPHASIS IN SECONDARY TEACHING

The emphasis in secondary teaching is designed to be taken with the B.Ed. in Secondary Education to prepare students to teach English and language arts in middle school and high school.

This emphasis culminates in Seminar in Literature or Seminar in Creative Writing, course sequences that, respectively, require students to write a major scholarly paper or prepare a portfolio of their own creative work. During the last quarter of their Seminar sequence, students will give a public presentation of their scholarly or creative work.

Required Courses:

ENGL 359	World Literature	4
ENGL 374	Literature for Children and Young Adults	4
ENGL 395	Methods of Teaching Secondary English	3
WRIT 324	Creative Nonfiction Writing	4
	or	
WRIT 334	Poetry Writing	4
WRIT 389	Writing Theory	4
ENGL 496	Seminar in Literature	0
ENGL 497	Seminar in Literature	1
ENGL 498	Seminar in Literature (WD)	1
	or	
WRIT 496	Seminar in Creative Writing	0
WRIT 497	Seminar in Creative Writing	1
WRIT 498	Seminar in Creative Writing (WD)	1
	Upper-Division Electives (from ENGL, FILM, or WRIT)	8

Total: 29

Cognate:

DRMA 242	Acting	4
	or	
SPCH 207	Small Group Communication	4
	or	
SPCH 407	Advanced Small Group Communication	4

LITERATURE MINOR*

Required Courses:

ENGL 210	Survey of British and American Literature	4
ENGL 211	Survey of British and American Literature	4
ENGL 212	Survey of British and American Literature	4
ENGL 234	Literary Analysis	4
	British or American Literature	8

	(ENGL 344-356, 364-366)	
	Elective (from ENGL, FILM, or WRIT)	4

Total: 28

*Washington State requires elementary education majors to take 30 credit hours in an approved minor content area. A 2-credit option to complete these 30 hours is Shakespeare Festival, which is taught alternate summers.

WRITING MINOR

Required Courses:

ENGL 284	English Grammar	4
JOUR 244	Technical Writing (WD)	3
	or	
JOUR 247	Copy Editing	3
WRIT 324	Creative Nonfiction Writing	4
WRIT 334	Poetry Writing	4
WRIT 333	Poetics	4
	or	
WRIT 337	Stylistics	4
	Electives	9

Total: 28

Electives:

Electives are chosen from the following courses in consultation with the writing advisor.

COMM 205/VISF 205	Screen Writing	4
JOUR 244	Technical Writing (WD)	3
JOUR 245	Media Writing	4
JOUR 247	Copy Editing	3
JOUR 315	Digital Writing	4
JOUR 341	Feature Writing	4
PREL 337	Advertising Copywriting	3
PREL 349	Social Media Strategies	3
PREL 350	Writing for Public Relations	3
WRIT 333	Poetics	4
WRIT 334	Poetry Writing	4
WRIT 389	Writing Theory	4

MODERN LANGUAGES

The ability to communicate in a foreign language and the acquaintance with a foreign culture should be part of the background of educated persons, particularly those with a sense of world mission. The objective of the department is to develop competence and proficiency in the ability to understand, speak, read, and write a foreign language and to provide a deeper understanding and appreciation of the literature and culture of other people. With the expansion of the world trade as a core component of globalization, new horizons are opening in geopolitics, environmental issues, technology, and culture. Strong language and cross-cultural skills give students of language and culture a powerful advantage for meeting the opportunities this changing world offers.

Walla Walla University is a member of the Adventist Colleges Abroad (ACA) consortium. Language minors are offered through ACA. Applicants should consult with their academic advisors, the ACA Coordinator, and the Registrar prior to enrollment in the ACA program.

A student planning to teach Spanish should confer with their assigned academic advisor and with the School of Education and Psychology regarding certification and teaching credentials.

LANGUAGE MINORS

Students may minor in the following languages as available through Adventist Colleges Abroad affiliate programs (ACA): Arabic, French, German, Italian, Portuguese, and Spanish. For French and Spanish minors, the introductory sequence is available on the WWU campus.

Note: Without prior language experience, students should plan to spend an entire school year in residence at the ACA school to develop proficiency in the chosen language.

Required Courses

LANG 406	Language and Culture	3
	Electives	27

Total: 30

Electives: Must be taken in a single foreign language beyond the first elementary level course, or from COMM 325 Multicultural Communication or ENGL 359 World Literature. At least 16 credits must be taken abroad, typically through ACA. Elective courses taken through ACA must carry a language prefix (ARAB, FREN, GRMN, ITAL, PORT, or SPAN).

HEALTH AND PHYSICAL EDUCATION

Rodd Strobel, Chair; Michael Hellie, Gerry Larson.

Walla Walla University is one of the church's pioneers in the field of health and physical education. In 1949, this department was the first to graduate a physical education major from an Adventist institution. Since then, its graduates have made significant contributions as teachers, researchers, youth leaders, health educators, physicians, dentists and other health professionals.

The department offers majors in Exercise Science, Health Science and Sports Management and Coaching. Minors are available in Athletic Coaching, Health, and Physical Education. Associate of Science degrees are offered in Pre-Dental Hygiene, Pre-Nutrition & Dietetics, and Pre-Physical Therapy. The programs in the Health and Physical Education Department seek to develop the leadership and professional skills which will enable graduates to promote a healthy Christian lifestyle, and to prepare students for graduate study beyond Walla Walla University.

The major in Health Science provides a program for students wishing to pursue graduate studies and careers in research, medicine, dentistry, environmental health, nutrition, and other disciplines in the health sciences.

The major in Exercise Science provides a program for students wishing to pursue graduate studies in physical therapy, occupational therapy, exercise physiology, biomechanics, motor learning, and other exercise science disciplines.

The major in Sport Management and Coaching helps prepare professionals to teach health and physical education at the K-12 level. Sport Management and Coaching majors may complete a double major (Sport Management and Coaching and Secondary Education) in conjunction with the School of Education and Psychology that prepares them for state certification with an option for Seventh-day Adventist denominational certification.

The Associate of Science majors offered in the Health and Physical Education Department include Pre-Dental Hygiene, Pre-Nutrition and Dietetics, and Pre-Physical Therapy. The Associate of Science in Pre-Physical Therapy fulfills the requirements for the 3 + 3 Doctor of Physical Therapy (DPT) program at Andrews University. Loma Linda University requires a bachelor's degree to apply to their DPT program. Requirements for admission to professional programs vary among schools and are subject to change. Students should request information about current admission requirements for the professional school they plan to attend. All programs should be planned in consultation with and approved by the academic advisor. Completion of the Associate of Science degree does not assure acceptance into the professional school of your choice.

EXERCISE SCIENCE MAJOR (BACHELOR OF SCIENCE)

A student majoring in exercise science must complete 58 quarter hours of interdisciplinary courses as listed below, the required cognates, the general studies program, a comprehensive examination, and all baccalaureate degree requirements as outlined in this bulletin.

Core Requirements:

HLTH 110	Wellness for Living	3
HLTH 210	Ethics in the Health Sciences	2
HLTH 217	First Aid	2
HLTH 315	Etiology of Selected Diseases	3
HLTH 328	Basic Therapy	2
HLTH 331	Consumer Health	3
HLTH 370/PSYC 370	Health Psychology	3
PETH 107	Lifeguard Training	2
PEAC 122	Strength Training	1
PEAC 123	Circuit Weight Training	1
PEAC 133	Aerobic Rhythm	1
PETH 214	Introduction to Exercise Science and Physical Education	2
PETH 225	Care and Prevention of Injuries	3
PETH 324	Adapted Physical Education and Recreation	3
PETH 325	Biomechanics	4
PETH 353	Coaching Strength and Conditioning	2
PETH 425	Motor Learning	4
PETH 426	Physiology of Exercise	4
PETH 427	Fitness Evaluation Techniques	3
PETH 484	Administration of Health, Physical Education, and Recreation	2
PETH 490	Internship in Exercise Science	1-4; 4
HLTH 495	Colloquium	0
PETH 496/HLTH 496	Senior Seminar	3
	Electives	4
		Total: 58

HLTH 495 - Colloquium: Eight quarters required or two quarters for every year in residence as a declared Exercise Science Major at WWU, whichever is less.

Electives

Select at least 4 credits from the following courses or any HLTH or PETH course.

BIOL 141	General Biology	4
BIOL 142	General Biology	4
BIOL 143	General Biology	4
CHEM 141	General Chemistry	3
CHEM 142	General Chemistry	3
CHEM 143	General Chemistry	3
CHEM 144	General Chemistry Laboratory	1
CHEM 145	General Chemistry Laboratory	1
CHEM 146	General Chemistry Laboratory	1
MATH 121	Precalculus I	4
MATH 122	Precalculus II	4
MATH 171	Calculus I	4
PHYS 211	General Physics	3
PHYS 212	General Physics	3
PHYS 213	General Physics	3
PHYS 214	General Physics Laboratory	1
PHYS 215	General Physics Laboratory	1
PHYS 216	General Physics Laboratory	1

Cognates:

BIOL 121	Anatomy and Physiology	4
BIOL 122	Anatomy and Physiology	4
BIOL 123	Anatomy and Physiology	4
ENGL 223	Research Writing (WD)	3
MATH 106	Introduction to Statistics	4
NRSG 234	Medical Terminology	2
PSYC 130	General Psychology	4
PSYC 215	Developmental Psychology	4

HEALTH SCIENCE MAJOR (BACHELOR OF SCIENCE)

A student majoring in health science must complete 58 quarter hours of interdisciplinary courses as listed below, the required cognates, the general studies program, a comprehensive examination, and all baccalaureate degree requirements as outlined in this bulletin.

Core Requirements:

HLTH 110	Wellness for Living	3
HLTH 205	Survey of Health	2
HLTH 210	Ethics in the Health Sciences	2
HLTH 220	Human Nutrition	4
HLTH 315	Etiology of Selected Diseases	3
HLTH 331	Consumer Health	3
HLTH 370/PSYC 370	Health Psychology	3
HLTH 496/PETH 496	Senior Seminar	3
PETH 325	Biomechanics	4
PETH 425	Motor Learning	4
PETH 426	Physiology of Exercise	4
PETH 427	Fitness Evaluation Techniques	3
HLTH 495	Colloquium	0
	Electives	20
	Total: 58	

HLTH 495 - Colloquium: Eight quarters required or two quarters for every year in residence as a declared Health Science Major at WWU, whichever is less.

Electives

A total of 20 credits must be chosen from the following electives. Any HLTH course may apply.

ANTH 225	Cultural Anthropology	4
BIOL 121	Anatomy and Physiology	4
BIOL 122	Anatomy and Physiology	4
BIOL 123	Anatomy and Physiology	4
BIOL 222	Microbiology	5
BIOL 305	General Ecology	4
BIOL 381	Cell Biology I: Structure and Bioenergetics	4
BIOL 382	Cell Biology II: Genetics and Molecular Biology	4
BIOL 383	Cell Biology III: Genomics and Regulation	4
BIOL 464	Animal Physiology	4
BIOL 465	Ecological Physiology	3
BIOL 466	Immunology	4
CHEM 431	Foundations of Biochemistry	4
CHEM 432	Foundations of Biochemistry	3
CHEM 433	Foundations of Biochemistry	3
FINA 351	Managerial Finance	4
FINA 325	Investments	4
MGMT 375/MKTG 375	Foundations of Entrepreneurship	4
MGMT 470/MKTG 470	Principles of Project Management	4
NRSG 234	Medical Terminology	2
PETH 225	Care and Prevention of Injuries	3
PETH 324	Adapted Physical Education and Recreation	3
PSYC 215	Developmental Psychology	4
PSYC 217	Psychology of Learning and Development	4

PSYC 344	Social Psychology	4
PSYC 366	Theories of Personality	4
PSYC 373/MGMT 373	Organizational Behavior	4
PSYC 464	Introduction to Counseling	4
PSYC 466	Biological Psychology	4
PSYC 492	Abnormal Psychology	4
SOCI 236	Privilege and Oppression	4
SOCI 437/PSYC 437/SOWK 437	Death and Dying	3
SOWK 327	Substance Use Disorders and Recovery	3
SOWK 383	Topics in Geriatric Mental Health	2; 4

Cognates:

BIOL 141	General Biology	4
BIOL 142	General Biology	4
BIOL 143	General Biology	4
CHEM 141	General Chemistry	3
CHEM 142	General Chemistry	3
CHEM 143	General Chemistry	3
CHEM 144	General Chemistry Laboratory	1
CHEM 145	General Chemistry Laboratory	1
CHEM 146	General Chemistry Laboratory	1
ENGL 223	Research Writing (WD)	3
PSYC 130	General Psychology	4
PHYS 211	General Physics	3
PHYS 212	General Physics	3
PHYS 213	General Physics	3
	and	
PHYS 214	General Physics Laboratory	1
PHYS 215	General Physics Laboratory	1
PHYS 216	General Physics Laboratory	1
	or	
CHEM 321	Organic Chemistry	4
CHEM 322	Organic Chemistry	4
	and	
CHEM 324	Organic Chemistry Laboratory	1
CHEM 325	Organic Chemistry Laboratory	1

Select one of the following: (4)

BIOL 250	Biostatistics	4
MATH 106	Introduction to Statistics	4

Select one of the following: (4-8)

MATH 121	Precalculus I	4
	and	
MATH 122	Precalculus II	4
	or	
MATH 171	Calculus I	4

SPORTS MANAGEMENT AND COACHING MAJOR (BACHELOR OF SCIENCE)

A student majoring in sports management and coaching must complete 55 credits in the major core, the required cognates, the general studies program, a comprehensive examination, and all baccalaureate degree requirements as outlined in this bulletin. Washington State certification is available in Physical Education by also completing a Bachelor of Education. See School of Education and Psychology for certification requirements. The comprehensive examination requirement is waived for students with a double major in Education.

Core Requirements:

HLTH 110	Wellness for Living	3
HLTH 210	Ethics in the Health Sciences	2
HLTH 217	First Aid	2
HLTH 370/PSYC 370	Health Psychology	3
PEAC 120-190	Physical Activity Courses	4
PETH 145	Principles of Coaching	2
PETH 205	Water Safety Instructor	2
PETH 214	Introduction to Exercise Science and Physical Education	2
PETH 225	Care and Prevention of Injuries	3
PETH 253	Coaching Team Sports	2
PETH 254	Coaching Individual Sports	2
PETH 261	Officiating of Sports Activities	2
PETH 324	Adapted Physical Education and Recreation	3
PETH 325	Biomechanics	4
PETH 353	Coaching Strength and Conditioning	2
PETH 366	Coaching Practicum	1
PETH 396	Methods of Teaching K-12 Physical Education and Health	4
PETH 425	Motor Learning	4
PETH 426	Physiology of Exercise	4
PETH 484	Administration of Health, Physical Education, and Recreation	2
PETH 493	History and Philosophy of Physical Education	2
HLTH 495	Colloquium	0
PETH 496/HLTH 496	Senior Seminar	3

Total: 55

Physical Activity Courses: Select 4 activities classes. One from each of the following areas: Individual Sports, Team Sports, Racquet Sports, and Aerobic Activity.

Colloquium: Eight quarters required or two quarters for every year in residence as a declared Sports Management and Coaching Major at WWU, whichever is less.

PETH 496 Senior Seminar is waived for Sports Management and Coaching majors completing a dual degree with the Bachelor of Education. Those three credits may be fulfilled with any HLTH, PEAC, or PETH class.

Cognates:

BIOL 121	Anatomy and Physiology	4
BIOL 122	Anatomy and Physiology	4
BIOL 123	Anatomy and Physiology	4
ENGL 223	Research Writing (WD)	3
MATH 106	Introduction to Statistics	4

PRE-DENTAL HYGIENE (ASSOCIATE OF SCIENCE)

Students completing the following core curriculum and the AS general studies requirements as listed in this bulletin will be awarded an AS degree in Pre-Dental Hygiene. This degree will prepare the student for admission to the Bachelor of Science degree program in Dental Hygiene at Loma Linda University and may also apply to other dental hygiene programs. A cumulative grade point average of 3.00 or more is required before entering BS professional training.

CORE REQUIREMENTS:

Natural Science (26 hours)

BIOL 121	Anatomy and Physiology	4
BIOL 122	Anatomy and Physiology	4
BIOL 123	Anatomy and Physiology	4
BIOL 222	Microbiology	5
CHEM 105	Survey of Chemistry	5
	College Mathematics Course (100 level or above)	4

Communication Skills (13 hours)

ENGL 121	Introduction to Analytical Writing	3
ENGL 122	Introduction to Research Writing	3
ENGL 223	Research Writing (WD)	3
SPCH 101	Fundamentals of Speech Communication	4

Humanities (16 hours)

	Courses selected from the following (Must be in a minimum of three areas): history, fine arts (theory), literature, philosophy, foreign language.	16

Social Sciences (12 hours)

PSYC 130	General Psychology	4
SOCI 204	General Sociology	4
ANTH 225	Cultural Anthropology	4

Physical Education (5-6 hours)

PEAC 113-190	Physical Activity Courses	1, 1
HLTH 110	Wellness for Living	3
	or	
HLTH 220	Human Nutrition	4
		-
	Religion	8
	Electives	15-16
		Total: 96

PRE-NUTRITION AND DIETETICS (ASSOCIATE OF SCIENCE)

Students completing the following core curriculum and the AS general studies requirements will be awarded an AS degree in Pre-Nutrition and Dietetics. This degree will prepare the student for admission to Nutrition and Dietetics at Loma Linda University and may also apply to other professional programs. A cumulative grade point average of 3.0 or more is required before entering BS professional training.

Recommended Courses:

HLTH 110	Wellness for Living	3
HLTH 205	Survey of Health	2
HLTH 331	Consumer Health	3

Core Requirements:

BIOL 121	Anatomy and Physiology	4
BIOL 122	Anatomy and Physiology	4
BIOL 123	Anatomy and Physiology	4
BIOL 222	Microbiology	5
CHEM 141	General Chemistry	3
CHEM 142	General Chemistry	3
CHEM 143	General Chemistry	3
CHEM 144	General Chemistry Laboratory	1
CHEM 145	General Chemistry Laboratory	1
CHEM 146	General Chemistry Laboratory	1
ENGL 121	Introduction to Analytical Writing	3
ENGL 122	Introduction to Research Writing	3
ENGL 223	Research Writing (WD)	3
HLTH 220	Human Nutrition	4
MATH 121	Precalculus I	4
	and	
MATH 122	Precalculus II	4
	or	

MATH 171	Calculus I	4
NRSG 234	Medical Terminology	2
PEAC	Physical Education Activity Courses	2
PSYC 130	General Psychology	4
SOCI 204	General Sociology	4
SPCH 101	Fundamentals of Speech Communication	4
	Social Science Elective	4

**Social Science Electives can include classes in the following areas: Anthropology, Economics, Geography, Political Science, Psychology, or Sociology*

General Studies Requirements

	Humanities (Must be from 3 areas, may include foreign language)	12

Total: 96

Religion courses: All courses taken at Loma Linda University.

Please note that C minus (C-) grades are not transferable for credit.

PRE-PHYSICAL THERAPY (ASSOCIATE OF SCIENCE)

Students completing the following core curriculum and the AS general studies requirements as listed in this bulletin will be awarded an AS degree in Pre-Physical Therapy. This degree will prepare the student for admission to the 3 + 3 Doctor of Physical Therapy degree program at Andrews University and may also apply to other professional programs. For students entering the Loma Linda DPT Physical Therapy program, an earned bachelor's degree in any area is required.

Core Requirements:

BIOL 121	Anatomy and Physiology	4
BIOL 122	Anatomy and Physiology	4
BIOL 123	Anatomy and Physiology	4
CHEM 141	General Chemistry	3
CHEM 142	General Chemistry	3
CHEM 143	General Chemistry	3
CHEM 144	General Chemistry Laboratory	1
CHEM 145	General Chemistry Laboratory	1
CHEM 146	General Chemistry Laboratory	1
PHYS 211	General Physics	3
PHYS 212	General Physics	3
PHYS 213	General Physics	3
PHYS 214	General Physics Laboratory	1
PHYS 215	General Physics Laboratory	1
PHYS 216	General Physics Laboratory	1
HLTH 110	Wellness for Living	3
	or	
HLTH 220	Human Nutrition	4
MATH 106	Introduction to Statistics	4
NRSG 234	Medical Terminology	2
PETH 325	Biomechanics	4
	or	
PETH 426	Physiology of Exercise	4
PSYC 130	General Psychology	4
PSYC 215	Developmental Psychology	4

Select one course from the following:

ANTH 225	Cultural Anthropology	4
PLSC 224	American Government	4
PSYC 370/HLTH 370	Health Psychology	3
SOCI 204	General Sociology	4

Total: 61-62

Cognates:

ENGL 121	Introduction to Analytical Writing	3
ENGL 122	Introduction to Research Writing	3
ENGL 223	Research Writing (WD)	3
PEAC	Physical Education Activity Courses	2
	Religion General Studies Courses	12
SPCH 101	Fundamentals of Speech Communication	4
	Humanities	12
	Select from at least three subject areas: fine arts, foreign language, literature, philosophy, or history. One course must be upper division.	

Total: 39

Total Credit Hours: 138

Elective credits are required to bring the total to 138.

A documented minimum of 80 hours of volunteer or employee work experience with a physical therapist is required before acceptance.

18 quarter hours of upper division credit are required for application.

ATHLETIC COACHING MINOR

A student minoring in athletic coaching must complete 28 quarter hours.

Required Courses

HLTH 217	First Aid	2
PETH 145	Principles of Coaching	2
PETH 225	Care and Prevention of	3

	Injuries	
PETH 253	Coaching Team Sports	2
PETH 254	Coaching Individual Sports	2
PETH 325	Biomechanics	4
PETH 353	Coaching Strength and Conditioning	2
PETH 366	Coaching Practicum	1
PETH 425	Motor Learning	4
PETH 493	History and Philosophy of Physical Education	2
	Electives	4
		Total: 28

Electives must be chosen from PEAC and PETH courses and approved by the Physical Education advisor.

HEALTH MINOR

A student minoring in health must complete 30 quarter hours.

Required Courses

HLTH 110	Wellness for Living	3
HLTH 205	Survey of Health	2
HLTH 220	Human Nutrition	4
HLTH 315	Etiology of Selected Diseases	3
HLTH 331	Consumer Health	3
HLTH 370/PSYC 370	Health Psychology	3
	Electives	12
		Total: 30

Electives: 3 credits must be upper division. Electives may be selected from non-HLTH courses in the major requirements or electives listed for the Health Science major with no more than six hours being selected from any one discipline. Electives may also be selected from any other HLTH courses.

Approval of health advisor required.

PHYSICAL EDUCATION MINOR

A student minoring in physical education must complete 28 quarter hours.

Required Courses

HLTH 110	Wellness for Living	3
PETH 214	Introduction to Exercise Science and Physical Education	2
PETH 225	Care and Prevention of Injuries	3
PETH 261	Officiating of Sports Activities	2
PETH 324	Adapted Physical Education and Recreation	3
PETH 325	Biomechanics	4
PETH 396	Methods of Teaching K-12 Physical Education and Health	4
PETH 425	Motor Learning	4
PETH 484	Administration of Health, Physical Education, and Recreation	2
		Total: 28

HISTORY AND PHILOSOPHY

Gregory Dodds, Chair, Hilary Dickerson, Monique Roddy.

The department offers a major and minor in history as well as minors in philosophy and legal studies. These programs prepare students for a wide range of career opportunities, including teaching, graduate school, law school, civil service, and business, among many others. The department also places a strong emphasis on teaching research and presentation skills.

Students who study history not only acquire historical knowledge, but they also develop critical reading, thinking, and writing abilities. More broadly, and in support of the university's mission, the study of history is vital both to understanding the diversity and complexity of the present world and to participating actively in civil society. The history program at Walla Walla University supports the mission of the university and prepares students for a variety of career paths as they acquire knowledge and expertise in the discipline of history. To fulfill this mission, the department emphasizes:

1. Historical Knowledge
2. Information Literacy
3. Critical Thinking and Analytical Skills
4. Writing and Presentation Skills
5. Professional Readiness

The philosophy minor encourages students to think critically in both general and Christian contexts. Students studying philosophy hone their critical thinking skills, study major figures and schools in the history of philosophy, draw connections between philosophy and other disciplines, and analyze moral, spiritual, metaphysical, epistemological, and logical questions and issues.

The legal studies minor is designed for students with an interest in a career in the legal professions and related fields, such as criminal justice. It is a particularly useful minor for any student planning to attend law school. As part of their preparation, students will study constitutional law, philosophy of law, American government, and critical thinking, along with other legal, historical, and philosophical topics.

HISTORY MAJOR (BACHELOR OF ARTS)

A student majoring in history must complete 57 quarter hours in the major, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin. Students must complete and present a senior history thesis.

Core Requirements

HIST 221	History of the United States	4
HIST 222	History of the United States	4
HIST 121	The West and the World	4
	or	
HIST 254	History of Christianity	4

Select one of the following (4 credits):

HIST 122	The West and the World	4
HIST 242	Modern East Asian History	4
HIST 283	Latin America	4
HIST 495	Colloquium	0
	Electives	32
	Total: 57	

HIST 121 and HIST 122: HONR 131, HONR 132, HONR 133 will fulfill the Western Civilization requirement, but only 8 credits will apply to history. The other 4 credits are counted as literature.

Electives: Twenty credits must be upper-division. Eight in American history and eight in world history. PHIL 315 can be used one time as an upper division history elective.

HIST 495: Six quarters required; or number of quarters in residence at WWU, whichever is fewer.

Research Requirements:

HIST 391	Introduction to Scholarship (WD)	4
HIST 496	Seminar	2
HIST 497	Seminar	2
HIST 498	Seminar	1

Cognate:

PHIL 204	Essentials of Critical Reasoning	4
	or	
PHIL 205	Introduction to Philosophy	4

Emphasis: Preparation for Secondary Teaching in History

Students wishing Washington State teacher certification in history must:

- fulfill certification requirements listed by the School of Education & Psychology (B.Ed.)
- complete a History major
- complete courses in this emphasis

GEOG 252	World Geography	4
HIST 122	The West and the World	4
HIST 254	History of Christianity	4
PLSC 224	American Government	4

Please refer to the certification check sheet available from the School of Education & Psychology for additional information.

HISTORY MINOR

A student minoring in history must complete 28 quarter hours.

Required Courses:

HIST 121	The West and the World	4
	or	
HIST 254	History of Christianity	4
HIST 221	History of the United States	4
HIST 222	History of the United States	4

Select 4 credits from the following:

	Choose one:	
HIST 122	The West and the World	4
HIST 242	Modern East Asian History	4
HIST 283	Latin America	4
	Electives (8 must be upper division)	12
	Total: 28	

**HONR 131, HONR 132, HONR 133 will fulfill the Western Civilization requirement, but only 8 credits will apply to history.*

Electives: Approval of history advisor required.

LEGAL STUDIES MINOR

A student minoring in legal studies must complete 30 credit hours.

Required Courses:

HIST 448	Becoming America: Citizenship and Exceptionalism from 1877-1941	4
LAW 320	Legal Analysis	2
PHIL 204	Essentials of Critical Reasoning	4
PHIL 305	Moral Philosophy	4
HIST 440/PHIL 440	History of Social and Political Philosophy	4
PLSC 224	American Government	4
	Electives	8
	Total: 30	

Electives must be chosen from:

ACCT 335	Personal Income Tax	4
COMM 357	Communication Law and Ethics	4
CORR 285	Introduction to Criminal Justice	4
CORR 385	Criminology	4
CORR 387	Juvenile Delinquency	3
FINA 367	Real Estate Principles	4
GBUS 361	Business Law I	4
GBUS 362	Business Law II	4
HIST 359/ECON 359	The American Economy	4
HIST 448	Becoming America: Citizenship and Exceptionalism from 1877-1941	4
HIST 450	United States Foreign Policy	4
LAW 490	Internship	0-6; 6
SPCH 341	Argumentation	4

POLITICAL PHILOSOPHY MINOR

A student minoring in political philosophy must complete 28 credit hours:

Required Courses

PHIL 204	Essentials of Critical Reasoning	4
PHIL 205	Introduction to Philosophy	4
PHIL 305	Moral Philosophy	4
PHIL 440/HIST 440	History of Social and Political Philosophy	4
PLSC 224	American Government	4
	Electives	8
	Total: 28	

Electives must be chosen from:

HIST 305	Ancient Near Eastern Empires	4
HIST 306	Classical Greece and Rome	4
HIST 355	The Atlantic World: Liberty, Bondage, and Revolution	4
PHIL 412/RELT 412	Philosophy of Religion	4
HIST 434	Women in the Ancient World	4
HIST 450	United States Foreign Policy	4

INTERDISCIPLINARY PROGRAMS

AUTOMOTIVE MANAGEMENT

Bruce Toews (Business), Rob Holm (Technology), James Veverka (Technology), Academic Advisors.

The automotive management major is offered cooperatively by the School of Business and the Department of Technology.

AUTOMOTIVE MANAGEMENT MAJOR (BACHELOR OF SCIENCE)

A student majoring in Automotive Management must complete a minimum of 110 hours in the major, which consists of the core courses and the technical requirements. In addition, the student must complete the required cognates, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin.

Technology Core Requirements:

AUTO 134	Internal Combustion Engine Theory	2
AUTO 135	Internal Combustion Engine Laboratory	2
AUTO 145	Manual Drive Trains and Axles	2
AUTO 146	Manual Drive Trains and Axles Laboratory	2
AUTO 156	Electrical Systems	2
AUTO 157	Electrical Systems Laboratory	2
AUTO 280	Practicum	2
AUTO 214	Engine Performance	2
AUTO 215	Engine Performance Laboratory	2
AUTO 335	Suspension and Steering Systems	2
AUTO 336	Suspension and Steering Systems Laboratory	2
AUTO 337	Brake Systems and Traction Control	2
AUTO 338	Brake Systems and Traction Control Laboratory	2
AUTO 355	Climate Control Systems	2
AUTO 356	Climate Control Systems Laboratory	2
AUTO 357	Automatic Transmissions and Transaxles	2
AUTO 358	Automatic Transmissions and Transaxles Laboratory	2
AUTO 365	Diesel Engines	3
AUTO 414	Advanced Engine Performance	3
AUTO 434	High Performance Engine Tuning	3
AUTO 466	Body Electronics and Computer Systems	3
AUTO 473	Hybrid Vehicles and Alternative Fuels	3
AUTO 480	Advanced Practicum	2
AUTO 495	Colloquium	0
TECH 321	Technology and Society	4
TECH 499	Senior Project	1
	Electives	4

Total: 60

AUTO 495: Open only to students of junior standing or higher. Automotive degree candidates must satisfactorily complete two quarters, at least one of which must be during the senior year.

Electives must be chosen from TECH and/or AVIA in consultation with advisor.

Business Core Requirements:

ACCT 201	Principles of Financial Accounting	4
ACCT 202	Principles of Financial Accounting	3
ACCT 203	Principles of Managerial Accounting	3
CIS 140	Business Analytics with Microsoft Excel	4
ECON 210	Principles of Microeconomics	4
ECON 211	Principles of Macroeconomics	4
FINA 101	Personal Finance	4
FINA 351	Managerial Finance	4
GBUS 270	Business Communication	4
GBUS 361	Business Law I	4
GBUS 495	Colloquium*	0
MGMT 366	Operations Management	4
MGMT 371	Principles of Management	4
MKTG 381	Principles of Marketing (WD)	4

Total: 50

**Six quarters of colloquium required or the number of quarters at WWU as an automotive management major, whichever is less.*

Total: 110

Cognates:

ENGL 223	Research Writing (WD)	3
MATH 106	Introduction to Statistics	4
PHYS 201	Conceptual Physics	3
PHYS 202	Conceptual Physics	3
PHYS 204	Conceptual Physics Laboratory	1
PHYS 205	Conceptual Physics Laboratory	1

AVIATION MANAGEMENT

Bruce Toews (Business), Shawn Dietrich (Technology), Academic Advisors.

The aviation management major is offered cooperatively by the School of Business and the Department of Technology.

AVIATION MANAGEMENT MAJOR (BACHELOR OF SCIENCE)

A student majoring in Aviation Management must complete a minimum of 110 quarter hours in the major consisting of the core courses and the technical requirements. In addition, the student must complete the required cognates, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin.

The aviation program trains students using a Part 61 Federal Aviation Administration (FAA) training course outline. A specified level of mastery and progress is required to complete the academic courses, earn flight certificates and ratings, and continue in the program. To be successful in training and in the aviation industry students must demonstrate proficiency in learning, sound judgment, safety awareness, and good moral character. Students will be allowed to register for flight classes based on performance in prerequisite classes. Due to the demanding and unforgiving nature of aviation operations, the Chair of the Technology department in consultation with the aviation faculty may dismiss students from aviation classes at any time. Reasons for such action may include, but are not limited to, the following: reckless operations, safety concerns or violations, security concerns raised by foreign and domestic background information, excessive cancellations, or documented progress delays in training due to student's teach-ability, skill, or retention of knowledge.

WWU AVIATION PROCEDURES AND REGULATIONS POLICY

Walla Walla University Aviation Standard Operating Procedures are given to all aviation students. Students have the responsibility to acquaint themselves with the contents and are held accountable for all policies therein. Students found to be in violation of the WWU Aviation Standard Operating Procedures or judged to be unsafe will be removed from the flight schedule and will be subject to dismissal as aviation majors.

All flight courses require progress and a level of mastery for course completion, earning flight certificates and ratings, and continuation in the program. Students will be allowed to register for flight classes based on performance in prerequisite classes. To be successful in training an in the aviation industry students must demonstrate proficiency in learning, sound judgment, safety awareness, and good moral character. In the aviation industry character is evaluated based on an applicant's driving and/or criminal record. Excessive movement infractions, driving while under the influence, suspension or revocation of a driver's license, or a pattern of criminal activity are all viewed as terms of "moral character." The aviation program recognizes that people can change and these items are not immediately disqualifying, but future employers will consider them, and an applicant with a background must be prepared to work hard to show change.

Students are solely responsible for their own transportation to agencies used for educational experience. The use of ground transportation is essential for each student to reach the Walla Walla Regional Airport where the WWU flight center is located. Transportation costs, including auto insurance and liability, are the student's responsibility.

Once a student is enrolled at WWU in the Aviation Management Major program all subsequent flight training required as part of the student's course of study must be completed in residence at WWU in WWU aircraft unless otherwise approved by the Aviation Faculty. Flight training completed away from WWU will not be given credit for the corresponding WWU course.

Students that complete a Private Pilot Certificate or higher prior to enrollment at WWU will be required to take AVIA 225, Pilot Orientation, their first quarter.

All flight courses have additional expenses. Please see the current WWU financial bulletin for details.

Technology Core Requirements:

AVIA 125	Air Traffic Control & Airspace	2
AVIA 140	Survey of Aviation	1
AVIA 141	Private Pilot Lectures	4
AVIA 142	Private Pilot Flight Training I	2
AVIA 143	Private Pilot Flight Training II	2
AVIA 144	Private Pilot Flight Training III	2
AVIA 234	Aviation Weather	2
AVIA 256	Aircraft Systems and Basic Maintenance	4
AVIA 261	Instrument Pilot Lectures	4
AVIA 262	Instrument Flight Training	3
AVIA 263	Advanced Instrument Flight Training	3
AVIA 264	Cross Country Flight	2
AVIA 270	Aviation Human Factors	2
AVIA 325	Advanced Cross Country Flight	2
AVIA 334	Commercial Pilot Lectures	4
AVIA 335	Commercial Flight Training	3
AVIA 336	Advanced Commercial Flight Training	3

AVIA 340	Multi-Engine Flight Training	3
AVIA 355	Aviation Safety	2
AVIA 496	Senior Seminar	2
TECH 380	Space Planning and Design	3
TECH 499	Senior Project	1

Choose 6 credits from the following:

AVIA 280	Practicum	1-6; 6
AVIA 337	Mission/Humanitarian Flight Training	2
AVIA 356	Principles of Flight Instruction	2
AVIA 357	Flight Instructor Training	2
AVIA 358	Advanced Flight Instructor Training	3
AVIA 450	Aviation Law and Regulations	2
AVIA 455	Crew Resource Management	2
AVIA 458	Instrument Instructor Flight Training	2
AVIA 460	Multi-Engine Instructor Flight Training	2
AVIA 480	Advanced Practicum	1-6; 6

Total: 62

Business Core Requirements:

ACCT 201	Principles of Financial Accounting	4
ACCT 202	Principles of Financial Accounting	3
ACCT 203	Principles of Managerial Accounting	3
CIS 140	Business Analytics with Microsoft Excel	4
ECON 210	Principles of Microeconomics	4
ECON 211	Principles of Macroeconomics	4
FINA 101	Personal Finance	4
FINA 351	Managerial Finance	4
GBUS 270	Business Communication	4
GBUS 361	Business Law I	4
GBUS 495	Colloquium*	0
MGMT 371	Principles of Management	4
MKTG 381	Principles of Marketing (WD)	4
	Business Electives**	2

Total: 110

**Six quarters of colloquium required or the number of quarters at WWU as an aviation management major, whichever is less.*

***Business electives may be chosen from courses with prefixes ACCT, CIS, FINA, ECON, GBUS, MGMT, or MKTG.*

Cognates:

ENGL 223	Research Writing (WD)	3
PHYS 201	Conceptual Physics	3
PHYS 202	Conceptual Physics	3
PHYS 204	Conceptual Physics Laboratory	1
PHYS 205	Conceptual Physics Laboratory	1

BIOCHEMISTRY

Kyle Craig (Chemistry), David Lindsey (Biology), Academic Advisors.

The biochemistry major is offered cooperatively by the departments of biology and chemistry.

BIOCHEMISTRY MAJOR (BACHELOR OF SCIENCE)

A student majoring in biochemistry must complete a minimum of 87 quarter credit hours of biology and chemistry courses, the required cognates, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin. Credits applied towards the biochemistry major will not apply towards a biology or chemistry major or minor. Senior students are required to take the MFT (Major Field Test) in Chemistry, as well as the American Chemical Society Biochemistry standardized exam (given during CHEM 431, CHEM 432, CHEM 433 sequence). Transfer credit accepted towards the biochemistry major must be from the major's courses at the institution originating the credit.

Major Requirements:

BIOL 141	General Biology	4
BIOL 142	General Biology	4
BIOL 143	General Biology	4
BIOL 381	Cell Biology I: Structure and Bioenergetics	4
BIOL 382	Cell Biology II: Genetics and Molecular Biology	4
BIOL 383	Cell Biology III: Genomics and Regulation	4
	Choose one:	
BIOL 421, 422	Cancer Biology, Cancer Biology Laboratory	4
BIOL 445	Advanced Microbiology	4
BIOL 464	Animal Physiology	4
BIOL 466	Immunology	4
BIOL 471	Computing for Biology and Bioinformatics	4
CHEM 141	General Chemistry	3
CHEM 142	General Chemistry	3
CHEM 143	General Chemistry	3
CHEM 144	General Chemistry Laboratory	1
CHEM 145	General Chemistry Laboratory	1
CHEM 146	General Chemistry Laboratory	1

CHEM 301	Chemical Equilibrium and Analysis	3
CHEM 305	Chemical Laboratory Techniques	1
CHEM 321	Organic Chemistry	4
CHEM 322	Organic Chemistry	4
CHEM 324	Organic Chemistry Laboratory	1
CHEM 325	Organic Chemistry Laboratory	1
CHEM 383	Intermediate Organic Chemistry	3
	and	
CHEM 386	Intermediate Organic Chemistry Laboratory	1
	or	
CHEM 429	Organic Structural Problems	4
CHEM 350/PHYS 310	Quantum Chemistry	4
	and	
CHEM 352/PHYS 313	Physical Chemistry I	4
	or	
CHEM 352/PHYS 313	Physical Chemistry I	4
	and	
CHEM 353	Physical Chemistry II	3
CHEM 390	Career Preparation Seminar	0
CHEM 405	Integrated Chemistry Laboratory	4
CHEM 431	Foundations of Biochemistry	4
CHEM 432	Foundations of Biochemistry	3
CHEM 433	Foundations of Biochemistry	3
CHEM 497	Communicating Chemistry (WD)	2
BIOL 414	Research in Biology	
	or	2
CHEM 479	Directed Research/Project	
	Electives	3
		Total: 87

Electives:

BIOL 421	Cancer Biology	3-5
	and	
BIOL 422	Cancer Biology Laboratory	1
BIOL 430	Molecular Biology Techniques	4-5
BIOL 435	Developmental Biology	4
BIOL 445	Advanced Microbiology	4
BIOL 464	Animal Physiology	4
BIOL 466	Immunology	4
BIOL 470/PHYS 470	Biophysics	4
BIOL 471	Computing for Biology and Bioinformatics	4
CHEM 303	Analytical Instrumental Methods	3
CHEM 350/PHYS 310	Quantum Chemistry	4
	or	
CHEM 353	Physical Chemistry II	3
CHEM 427	Organometallics	4
CHEM 429	Organic Structural Problems	4
CHEM 442	Inorganic Chemistry	4
BIOL 414	Research in Biology	
	or	1-2; 2
CHEM 479	Directed Research/Project	

**CHEM 303, CHEM 350, CHEM 353, CHEM 427, CHEM 442: These CHEM courses have a corequisite of CHEM 405. As a result, up to two additional quarters of CHEM 405 may be applied as elective credit.*

Cognates:

BIOL 250	Biostatistics	4
	or	
MATH 106	Introduction to Statistics	4
BIOL 216	Introduction to Biological Research I (WD)	3
MATH 171	Calculus I	4
MATH 172	Calculus II	4
PHYS 211	General Physics	3
PHYS 212	General Physics	3
PHYS 213	General Physics	3
	and	
PHYS 214	General Physics Laboratory	1
PHYS 215	General Physics Laboratory	1
PHYS 216	General Physics Laboratory	1
	or	
PHYS 251	Principles of Physics	3
PHYS 252	Principles of Physics	3
PHYS 253	Principles of Physics	3
	and	
PHYS 254	Principles of Physics Laboratory	1
PHYS 255	Principles of Physics Laboratory	1
PHYS 256	Principles of Physics Laboratory	1

BIOENGINEERING SCIENCE

Janice McKenzie, Director.

Students majoring in bioengineering will take courses designed to insure a broad preparation in engineering and biological fundamentals, mathematics, and the physical sciences. Majors will concentrate their studies in an area consistent with their career goals. Electives will be chosen by each student in conference with an assigned advisor from among the members of the bioengineering committee. Each student must receive approval of his/her program from the committee at the beginning of the junior and senior years. Since the bioengineering curriculum is designed to provide a foundation for graduate studies, students whose grade-point averages fall below 3.00 will be encouraged to reconsider their career objectives.

Requirements for bioengineering science include a minimum of 73 quarter hours in the major with at least 60 quarter hours specifically in engineering or biology, plus the required cognates, and the general studies program for the baccalaureate degree as outlined in this bulletin. A course in speech communication is highly recommended. All majors must take the Graduate Record Examination general section.

BIOENGINEERING SCIENCE MAJOR (BACHELOR OF SCIENCE)

Core Requirements (41)

BIOL 141	General Biology	4
BIOL 142	General Biology	4
BIOL 143	General Biology	4
BIOL 214	Biological Research I	1-2; 2
BIOL 314	Biological Research II	1-2; 2
BIOL 381	Cell Biology I: Structure and Bioenergetics	4
BIOL 414	Research in Biology	1-4; 4
BIOL 495	Colloquium	0
CPTR 141	Fundamentals of Programming I	4
ENGR 120	Introduction to Bioengineering	2
ENGR 221	Engineering Mechanics I	3
ENGR 222	Engineering Mechanics II	3
ENGR 223	Engineering Mechanics III	3
ENGR 228	Circuit Analysis	4
ENGR 495	Colloquium	0

BIOL 495 and ENGR 495: 2-4 quarters each. Six quarters of Colloquium are required.

Electives: A total of 32 credits must be chosen between Core Elective, Bioengineering Electives, and Electives.

Core Elective (Choose one of the following courses) (4)

ENGR 321	Mechanics of Materials	4
ENGR 331	Fluid Mechanics	4
ENGR 350	Linear Systems Analysis	4

Bioengineering Electives (8 credits)

BIOL 382	Cell Biology II: Genetics and Molecular Biology	4
BIOL 470/PHYS 470	Biophysics	4
CHEM 301	Chemical Equilibrium and Analysis	3
CHEM 350/PHYS 310	Quantum Chemistry	4
	or	
PHYS 310	Modern Physics I	3
	and	
PHYS 314	Modern Physics Laboratory I	1
CHEM 431	Foundations of Biochemistry	4
CPTR 142	Fundamentals of Programming II	4
PHYS 312/ENGR 312	Physical Electronics	3
	and	
PHYS 315/ENGR 315	Physical Electronics Laboratory	1
PHYS 313	Thermodynamics	4

Electives (17 must be upper division) (20)

	Selected Courses: Biology	8-12
	Selected Courses: Engineering	8-12
	Technical Electives	0-4
	Selected courses from MATH, PHYS, CHEM, CPTR	

Total: 73

Electives must be approved by the Bioengineering Committee after consideration of the total student program.

Cognates:

CHEM 141	General Chemistry	3
CHEM 142	General Chemistry	3
CHEM 143	General Chemistry	3
CHEM 144	General Chemistry Laboratory	1
CHEM 145	General Chemistry Laboratory	1
CHEM 146	General Chemistry Laboratory	1
CHEM 321	Organic Chemistry	4
CHEM 322	Organic Chemistry	4
CHEM 324	Organic Chemistry Laboratory	1
CHEM 325	Organic Chemistry Laboratory	1
MATH 171	Calculus I	4
MATH 172	Calculus II	4
MATH 273	Calculus III	4

MATH 274	Calculus IV	4
MATH 286	Ordinary Differential Equations	3
MATH 315	Probability and Statistics	4
PHYS 251	Principles of Physics	3
PHYS 252	Principles of Physics	3
PHYS 253	Principles of Physics	3
PHYS 254	Principles of Physics Laboratory	1
PHYS 255	Principles of Physics Laboratory	1
PHYS 256	Principles of Physics Laboratory	1

CHEM 321 and CHEM 322: While the first two quarters are required as cognates for the major, a complete, year-long sequence may be necessary to fulfill course prerequisites or requirements for advanced studies.

BIOPHYSICS

Roy Campbell (Physics), David Lindsey (Biology), Academic Advisors.

The biophysics major is offered cooperatively by the departments of biology and physics. Four entrance, four years of high school mathematics is highly recommended.

BIOPHYSICS MAJOR (BACHELOR OF SCIENCE)

A student majoring in biophysics must complete a minimum of 66 quarter hours of biology and physics courses, the required cognates, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin. Senior students are required to take the Major Field Test in Biology or Physics. A summer term at the Rosario Beach Marine Laboratory is highly recommended.

Required Courses:

BIOL 141	General Biology	4
BIOL 142	General Biology	4
BIOL 143	General Biology	4
BIOL 216	Introduction to Biological Research I (WD)	3
BIOL 381	Cell Biology I: Structure and Bioenergetics	4
BIOL 382	Cell Biology II: Genetics and Molecular Biology	4
BIOL 430	Molecular Biology Techniques	4-5
	or	
BIOL 445	Advanced Microbiology	4
BIOL 495	Colloquium	0
	Upper Division Electives in Biology	4
PHYS 251	Principles of Physics	3
PHYS 252	Principles of Physics	3
PHYS 253	Principles of Physics	3
PHYS 254	Principles of Physics Laboratory	1
PHYS 255	Principles of Physics Laboratory	1
PHYS 256	Principles of Physics Laboratory	1
PHYS 310	Modern Physics I	3
PHYS 311	Modern Physics II	3
PHYS 313	Thermodynamics	4
PHYS 314	Modern Physics Laboratory I	1
PHYS 316	Modern Physics Laboratory II	1
PHYS 331	Introduction to Nanotechnology	3
PHYS 332	Introduction to Nanotechnology Laboratory	1
PHYS 414	Experimental Physics I	1
PHYS 470/BIOL 470	Biophysics	4
	Upper Division Electives in Physics	3

Total: 66

BIOL 495: Required each quarter of juniors and seniors while in residence.

Cognates:

CHEM 141	General Chemistry	3
CHEM 142	General Chemistry	3
CHEM 143	General Chemistry	3
CHEM 144	General Chemistry Laboratory	1
CHEM 145	General Chemistry Laboratory	1
CHEM 146	General Chemistry Laboratory	1
CHEM 321	Organic Chemistry	4
CHEM 322	Organic Chemistry	4
CHEM 324	Organic Chemistry Laboratory	1
CHEM 325	Organic Chemistry Laboratory	1
CHEM 431	Foundations of Biochemistry	4
CHEM 432	Foundations of Biochemistry	3
CPTR 141	Fundamentals of Programming I	4
MATH 171	Calculus I	4
MATH 172	Calculus II	4
MATH 273	Calculus III	4
MATH 274	Calculus IV	4
MATH 286	Ordinary Differential Equations	3
MATH 315	Probability and Statistics	4
	or	
BIOL 250	Biostatistics	4

HUMANITIES AND MULTI-DISCIPLINARY STUDIES

Gregory Dodds (Humanities & Multi-Disciplinary Studies), Chair, Cynthia Westerbeck (English).

The major in humanities and multi-disciplinary studies is founded on the following three principles: multidisciplinary study, customization, and academic rigor. The major is specifically designed for students who are seeking to combine professional or technical training in another discipline with strong training in writing and the humanities.

Most majors focus on a specific discipline and type of academic study. This major fills a unique niche by providing a customizable course of study to meet the needs of students with a broad range of interests. The job market is increasingly seeking graduates who possess the critical thinking, writing, and knowledge skills of humanities graduates, but who also have the skills provided by training in STEM or professional areas of expertise. A student majoring in humanities and multi-disciplinary studies might be pursuing a career in medicine, dentistry, science, law, business, or a variety of pre-professional programs.

The majority of the HMDS program requirements are in the form of electives chosen from both the humanities and a variety of other programs. Students choose 20 credits from the humanities; 12 credits from science, social science, technology, engineering, math, or the professions; and 8 flexible elective credits that promote the student's post-graduate goals. In designing their major, students could therefore choose half of their electives from humanities courses and half from non-humanities courses.

Alternatively, a student wishing for a greater emphasis on interdisciplinary coursework within the humanities could select up to 28 credits from the humanities. The specific mix of courses should be planned in consultation with the director of Humanities and Multi-disciplinary Studies and their academic advisor. Selected courses will prepare the student for the interdisciplinary capstone project and their post-graduate career objectives.

The capstone research project and the experiential learning requirement (which often takes the form of an internship) build on the focused interdisciplinary program of courses taken by the student.

HUMANITIES AND MULTI-DISCIPLINARY STUDIES MAJOR (BACHELOR OF ARTS)

A student majoring in humanities and multi-disciplinary studies must complete 65 quarter hours made up of the core requirements, the required number of electives in the humanities and sciences, and the required number of additional electives pertaining to the student's chosen focus of study and senior thesis project.

Core Requirements:

12 credits of History and Literature from the following courses (with at least 4 credits from HIST and 4 credits from ENGL):

ENGL 210	Survey of British and American Literature	4
ENGL 211	Survey of British and American Literature	4
ENGL 212	Survey of British and American Literature	4
HIST 121	The West and the World	4
HIST 122	The West and the World	4
HIST 240	Cities and Cultures in Middle Eastern History	4
HIST 242	Modern East Asian History	4
HIST 254	History of Christianity	4
HIST 257	Voices in African History	4
HIST 274	Study Tour: English History in Context	4
HIST 275	History of England	4
HIST 283	Latin America	4
	or	-
HONR 131	Western Thought	4
HONR 132	Western Thought	4
HONR 133	Western Thought	4

4 Multi-Disciplinary Credits:

HMNT 360/HIST 360	Science and the Enlightenment	4

0-2 Credits of Experiential Learning:

HMNT 490	Experiential Learning	0-2

9 Credits of Research:

HMNT 391	Introduction to Scholarship (WD)	4
HMNT 496	Seminar	2
HMNT 497	Seminar	2
HMNT 498	Seminar	1

Total: 65

Elective Requirements

(These credits cannot also count toward General Studies requirements.)

Humanities Electives

	Humanities	20

Humanities electives must be chosen in consultation with both the director of Humanities and Multidisciplinary Studies and the supervising professor(s) whose expertise relates to the student's

chosen focus of study (16 credits must be upper division. May be chosen from art, English, history, music, religion, philosophy, or theology. Must include 4 credits from ENGL 214 or any upper-division general studies literature course and 4 credits from any upper-division history or philosophy course).

Science, Social Science, Technology, Engineering, Math, and the Professions

	Science, Social Science, Technology, Engineering, Math, and the Professions	12

Choose from biology, business, chemistry, communication, computer science, education, engineering, psychology, health, mathematics, nursing, physical education, physics, social work, sociology, or technology.

Students are allowed broad choice in this category of electives in order to shape their focus of study. These electives, however, must be chosen in consultation with both the director of Humanities and Multi-Disciplinary Studies and the supervising professor(s) whose expertise relates to the student's chosen focus.

Additional Electives

	Additional Electives	8

Students may propose other courses that help them meet their educational/career goals. These electives must be chosen in consultation with both the director of Humanities and Multi-Disciplinary Studies and the supervising professor(s) whose expertise relates to the student's chosen focus of study and thesis project (4 credits must be upper division).

INFORMATION SYSTEMS

Preston Carman (Computer Science), Bruce Toews (Business), Academic Advisors.

The information systems major is offered cooperatively by the School of Business and the Department of Computer Science.

INFORMATION SYSTEMS MAJOR (BACHELOR OF SCIENCE)

The information systems major serves those students who want a career that focuses on the integration of information technology solutions and business processes to meet the information needs of businesses and other enterprises, enabling them to achieve their objectives in an effective, efficient way. The program prepares graduates for a variety of IS careers in business, government, and non-profit organizations.

A student majoring in information systems must complete the core requirements and cognates, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin. Senior students will take an internal concentration exam.

Computer Science Requirements:

CPTR 108	The Art and Practice of Computer Science	3
CPTR 141	Fundamentals of Programming I	4
	or	
CPTR 230	Computing for Insight	4
CPTR 142	Fundamentals of Programming II	4
	or	
CYBS 122	Introduction to Cybersecurity	4.5
CPTR 220	Web Application Development	4
	or	
CPTR 245	DevOps	4
CPTR 396	Internship and Career Readiness Seminar	1
CPTR 420	Introduction to Database Systems	4
	Computer Science Electives*	4
	Total: 24	

**Computer Science electives must be chosen from courses with prefix CPTR, CYBS, or GDEV.*

Business Requirements:

ACCT 201	Principles of Financial Accounting	4
ACCT 341	Accounting Information Systems	4
CIS 140	Business Analytics with Microsoft Excel	4
CIS 210/CPTR 210	Data Communications and Networks	3
CIS 211/CPTR 211	Linux and Windows System Administration	3
CIS 301	Information Systems and Business Intelligence	4
CIS 326/CYBS 326	Network and System Security	4.5
CIS 490	Internship*	0-2
GBUS 270	Business Communication	4
MGMT 366	Operations Management	4
MGMT 463	Business Ethics	4
	or	
CIS 308/CPTR 308	Social, Legal, and Ethical Issues for Computing Technology	4
MGMT 371	Principles of Management	4
MGMT 470/MKTG 470	Principles of Project Management	4
	Business Electives**	0-2
GBUS 495	Colloquium***	0
	or	
ENGR 495	Colloquium***	0
	Total: 72.5	

**Or any of the following: ACCT 490, FINA 490, GBUS 490, MGMT 490, LAW 490, and MKTG 490.*

***Business electives may be chosen from courses with prefixes ACCT (p. 150), CIS (p. 164), ECON (p. 172), FINA (p. 186), GBUS (p. 187), MGMT (p. 200), or MKTG (p. 201).*

****Three quarters required or number of quarters in residence as a declared information systems major at WWU, whichever is less.*

Cognates:

ENGL 223	Research Writing (WD)	3
	or	
JOUR 244	Technical Writing (WD)	3
MATH 121	Precalculus I	4
MATH 215	Data Analysis	4

MUSIC PRODUCTION

Lynelle Ellis (Communication), Jerry Hartman (Visual Arts) and Kraig Scott (Music) academic advisors.

The music production major is offered cooperatively by the Communication and Music departments.

MUSIC PRODUCTION MAJOR (BACHELOR OF MUSIC)

A student majoring in the interdisciplinary major of music production must complete a minimum of 89-94 quarter hours with 45 quarter hours in music and 44-49 quarter hours in communication as listed below. In addition, the student must complete the cognates, general studies program, and all baccalaureate degree requirements as outlined in this bulletin.

Communication Requirements

COMM 145	Media and Culture	4
COMM 148	Creativity and Innovation	3
COMM 245	Directed Media Production	1-2; 2
	or	
COMM 445	Directed Media Production	1-4
COMM 357	Communication Law and Ethics	4
COMM 135/VISF 135	Essentials of Filmmaking	4
COMM 205/VISF 205	Screen Writing	4
COMM 320	Multi-Camera Streaming and Broadcast	4
COMM 333	Audio Production	4
COMM 487	Senior Project	1
VISF 240	Cinematography & Editing	4
	Electives	10-13

Communication Total: 43-49

Electives should be chosen from COMM 445, COMM 490, DRMA 253, PREL 349, MUPF 227, VISD 356, MKTG 384, SPCH 310.

Music Requirements

MUCT 121	Theory I	3
MUCT 122	Theory I	3
MUCT 123	Theory I	3
MUCT 131	Ear Training I	1
MUCT 132	Ear Training I	1
MUCT 133	Ear Training I	1
MUCT 221	Theory II	3
MUCT 222	Theory II	3
MUCT 223	Theory II	3
MUCT 231	Ear Training II	1
MUCT 232	Ear Training II	1
MUCT 233	Ear Training II	1
MUCT 425	Orchestration	3
MUHL 321	History of Music	4
MUHL 322	History of Music	4
MUHL 323	History of Music (WD)	4
	Ensembles	6

Music Total: 45

Total: 89-94

Cognate

VISD 156	Principles of Photography	4

X+DATA CERTIFICATE

The X+Data certificate is designed to supplement a student's major or professional experience in a non-computing field. The courses in this certificate will teach students the programming, modeling, and statistical skills needed for utilizing data to gain insights on important questions in their field.

Requirements

Students must earn a minimum grade of C in each of the following courses.

CPTR 130	Introduction to Data Science	4
CPTR 230	Computing for Insight	4
CPTR 330	Machine Learning for Data Science	4
CPTR 420	Introduction to Database Systems	4
CPTR 493	Capstone Data Science Project	1
MATH 215	Data Analysis	4
	Approved Discipline Specific Course**	3-4

Total: 24-25

***See the online bulletin at wallawalla.edu for a current list of approved courses.*

MATHEMATICS

Benjamin Jackson, Chair; John Foster, Ross Magi, Stefan Sremac, Timothy Tiffin.

The Department of Mathematics offers programs leading to the Bachelor of Arts and Bachelor of Science degrees. It is highly recommended that mathematics majors have four years of high school mathematics.

MATHEMATICS MAJOR (BACHELOR OF ARTS)

A student majoring in mathematics must complete 48 quarter hours in the major. In addition, the student must complete the required cognates, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin. Senior students are required to take the Major Field Test (MFT) in mathematics.

Major Requirements:

MATH 171	Calculus I	4
MATH 172	Calculus II	4
MATH 239	Introduction to Linear Algebra	4
MATH 250	Discrete Mathematics	4
MATH 273	Calculus III	4
MATH 274	Calculus IV	4
MATH 286	Ordinary Differential Equations	3
MATH 315	Probability and Statistics	4
MATH 397	Junior Mathematics Seminar	0
MATH 451	Real Analysis I	4
MATH 461	Abstract Algebra I	4
MATH 496	Senior Mathematics Seminar I	1
MATH 497	Senior Mathematics Seminar II	1
MATH 498	Senior Mathematics Seminar III (WD)	1
	Electives (upper division)	6

Total: 48

Electives must be chosen in consultation with and approved by the student's academic advisor. Credit will not be given toward the major for mathematics courses with numbers below 171. ***Students seeking a teaching endorsement should consult with the certification officer in the School of Education and Psychology.***

Cognate:

CPTR 141	Fundamentals of Programming I	4
	or	
CPTR 230	Computing for Insight	4

MATHEMATICS MAJOR (BACHELOR OF SCIENCE)

A student majoring in mathematics must complete 60 quarter hours in the major, consisting of the core requirements and at least 26 credits of electives. In addition, the student must complete the required cognates, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin. Senior students are required to take the Major Field Test (MFT) in mathematics.

Core Requirements:

MATH 171	Calculus I	4
MATH 172	Calculus II	4
MATH 239	Introduction to Linear Algebra	4
MATH 250	Discrete Mathematics	4
MATH 273	Calculus III	4
MATH 274	Calculus IV	4
MATH 286	Ordinary Differential Equations	3
MATH 315	Probability and Statistics	4
MATH 397	Junior Mathematics Seminar	0
MATH 496	Senior Mathematics Seminar I	1
MATH 497	Senior Mathematics Seminar II	1
MATH 498	Senior Mathematics Seminar III (WD)	1
	Electives (14 must be upper division)	26

Total: 60

**Electives: must include at least two of MATH 451, MATH 452, MATH 461, or MATH 462.*
Students should consult the Career Pathways section below before selecting electives, which must be chosen in consultation with and approved by the student's assigned academic advisor. Credit will not be given for mathematics courses with numbers below 171. ***Students seeking a teaching endorsement should consult with the certification officer in the School of Education and Psychology.***

Cognate:

CPTR 141	Fundamentals of Programming I	4
	or	
CPTR 230	Computing for Insight	4

Select two of the following five sequences:

BIOL 141	General Biology	4
BIOL 142	General Biology	4
BIOL 143	General Biology	4
	or	
CHEM 141	General Chemistry	3
CHEM 142	General Chemistry	3
CHEM 143	General Chemistry	3
CHEM 144	General Chemistry Laboratory	1
CHEM 145	General Chemistry Laboratory	1
CHEM 146	General Chemistry Laboratory	1
	or	

PHYS 251	Principles of Physics	3
PHYS 252	Principles of Physics	3
PHYS 253	Principles of Physics	3
PHYS 254	Principles of Physics Laboratory	1
PHYS 255	Principles of Physics Laboratory	1
PHYS 256	Principles of Physics Laboratory	1
	or	
CPTR 142	Fundamentals of Programming II	4
CPTR 242	Sequential and Parallel Data Structures and Algorithms	4
	One Additional CPTR Course	3-4
	or	
ECON 210	Principles of Microeconomics	4
ECON 211	Principles of Macroeconomics	4
FINA 351	Managerial Finance	4

Career Pathways

The following lists of themed electives suggest ways students can select one or more career pathway. Other electives should be selected on consultation with an academic advisor.

Actuarial Science:
Students pursuing a career in Actuarial Science though ASA designation should take the courses that cover the Validation by Educational Experience (VEE). These include classes in Economics (ECON 211 and ECON 212), Accounting and Finance (ACCT 201, ACCT 202, and FINA 351) and Mathematical Statistics (MATH 315 and MATH 316). In addition, students will find MATH 215 and FINA 441 helpful. Note that some of these classes are taken in the Economics cognate sequence but others should be chosen as electives. Exam P (Probability) is often taken between the junior and senior year while Exam FM (Financial Mathematics) is generally taken near graduation.

Careers in Data Science:
Students interested in careers in data science should select electives that include MATH 215, MATH 316, and CPTR 330. Note that CPTR 330 can be taken for elective MATH credit.

Graduate School in Mathematics:
Students interested in graduate school in mathematics are encouraged to select electives that include MATH 389, MATH 452, and MATH 462. There are some graduate programs for which it would be helpful to have an introductory knowledge of French or German.

Science and Applied Mathematics:
Students interested in applying mathematics in scientific and technical disciplines should select electives that include MATH 215, MATH 341, MATH 351, and MATH 413.

Secondary Teaching:
Students preparing for secondary teaching in Mathematics must take MATH 215, MATH 321, and MEDU 395 in order to complete certification.

MATHEMATICS MINOR

A student minoring in mathematics must complete 28 quarter hours:

Required Courses:

	Electives	28

Electives: 6 must be upper division. Must be chosen in consultation with and approved by the academic advisor assigned by the department chair. Credit will not be given towards the minor for mathematics courses with numbers below 131.

Because of the unique nature of the professional curriculum of the engineering degree, any mathematics course taken to meet any requirement for the BSE degree is considered a cognate and therefore can be simultaneously counted toward the credit requirements for a mathematics minor.

MATHEMATICS FOR MIDDLE SCHOOL TEACHERS MINOR

Required Courses:

MATH 112	Mathematics for Elementary Teachers I	3
MATH 113	Mathematics for Elementary Teachers II	3
	or	
MATH 171	Calculus I	4
MATH 172	Calculus II	4
MATH 273	Calculus III	4
MATH 215	Data Analysis	4
MATH 250	Discrete Mathematics	4
MATH 239	Introduction to Linear Algebra	4
MATH 321	Survey of Geometries in their Historical Contexts	4

Total: 33

MUSIC

Karlyn Bond, Chair; Brandon Beck, Christine Janis, Kraig Scott.

In its general studies courses, the department introduces students to music—both as an art form and a reflection of culture. For aspiring musicians, the music program provides comprehensive instruction in performance, theory, history, and technology. Available to all students is the opportunity to explore special topics in music. Whether preparing music majors for careers in the field, or providing opportunities for general students to improve their skills or pursue their curiosity in music, the Department of Music strives to heighten aesthetic sensitivity, illuminate music's power to express and reflect the human experience in a uniquely abstract way, and enhance campus life and that of the larger community.

The department offers the single professional degree of Bachelor of Music with a choice of two majors: music and music production. The music major is a standalone major, but may also be earned with a concentration in performance. Two music education degrees are also offered: B.Ed. and M.I.T. (Master of Initial Teaching), both of which include preparation for teacher certification.

Formal acceptance as a music major or minor is accomplished by passing a performance audition before the music faculty and completing the Theory I and Ear Training I sequences of classes. Requirements for minimum piano proficiency must be completed before students can advance to upper-division standing in their applied instrument. (Students whose applied instrument is keyboard are exempt from this requirement.) Standing as a music major or minor is a prerequisite for enrollment in all upper-division music courses except performance ensembles.

All students pursuing a music degree must participate in a primary departmental ensemble during each quarter in residence. Music minors must participate in a primary ensemble during each quarter of lessons from departmental faculty. All students will enroll for either one credit or zero credit. University Singers (MUPF 215) serves as the primary ensemble for students whose performance area is voice; Wind Symphony (MUPF 255) for brass, wind, and percussion students; and Symphony Orchestra (MUPF 266) for string students. Any of the three above ensembles may serve as a primary ensemble for piano, harpsichord, and organ students.

The department lists a number of requirements for its majors, which must be met without credit. These include concert and recital attendance and performance classes. Detailed information regarding these and other requirements is included in the Handbook for Music Students and Teachers, available online at music.wallawalla.edu.

Transfer students majoring in music must take a minimum of six credit hours in applied music at Walla Walla University. All majors, with the exception of those pursuing music production, must continue study on their applied instrument until completion of their senior recital.

Senior music majors, with the exception of those pursuing music production, are required to take the Music MFT (as a departmental exit exam), and an exit survey.

MUSIC MAJOR (BACHELOR OF MUSIC)

A student seeking a music major must complete 77 quarter hours in the core, all baccalaureate degree requirements, and the general studies requirements as outlined in this bulletin. A concentration is not required for this major. Students who are considering graduate studies are strongly encouraged to take the general GRE.

Students seeking a B.Mus. degree with a major in music may choose to add a performance concentration or one of two concentrations in music education leading to K-12 Washington State teaching certification. State certification is available in choral or instrumental music. Requirements for all concentrations are outlined below. The Preparation for B.Ed. (Bachelor of Education) concentration prepares the student for to a second bachelor's degree in education. Requirements for the B.Ed. degree (55 credits) are listed in the Education and Psychology section of this bulletin. The Preparation for M.I.T. (Master of Initial Teaching) concentration prepares the student for admission to a one-year M.I.T. degree. Requirements for the M.I.T. degree (47 credits) are listed in the WWU Graduate Bulletin. Guidelines for both options are available from the School of Education and Psychology.

Adventist Education certification requires specific classes in Health, Religion, and Theology. See Education and Psychology (p. 76) section of this bulletin.

Core Requirements:

MUCT 121	Theory I	3
MUCT 122	Theory I	3
MUCT 123	Theory I	3
MUCT 131	Ear Training I	1
MUCT 132	Ear Training I	1
MUCT 133	Ear Training I	1
MUCT 221	Theory II	3
MUCT 222	Theory II	3
MUCT 223	Theory II	3
MUCT 231	Ear Training II	1

MUCT 232	Ear Training II	1
MUCT 233	Ear Training II	1
MUCT 425	Orchestration	3
MUHL 321	History of Music	4
MUHL 322	History of Music	4
MUHL 323	History of Music (WD)	4
MUPF 361	Basic Conducting	2
MUPF 487	Senior Recital (music majors only)	0
	Applied Music (one area; six credits must be upper-division and distributed over at least three quarters)	15
	Ensembles	10
	Electives (six must be upper division)	11

Total: 77

PERFORMANCE CONCENTRATION

In addition to the core requirements, an additional 25 applied music credits must be completed in the primary performance area—for a total of 40 applied music credits. Twenty of these credits must be upper-division and distributed over at least five quarters. MUPF 127 credits may not apply toward this total.

Required Courses:

	Applied Music (one area)	25
MUPF 387	Junior Recital	0

Total: 25

B.ED. PREPARATION FOR MUSIC EDUCATION TEACHER CERTIFICATION CONCENTRATION

In addition to the core requirements, students must complete 28-29 credits and choose one of the following two emphases, depending on certification goals. The five applied music credits required in this concentration are in addition to the 15 contained within the core. Therefore, the total number of applied credits—in one area—is 20.

Instrumental Emphasis

Required Courses:

	Instrumental Techniques and Methods Classes	8
	Voice Performance Studies	3
	Conducting	6

Total: 17

Choral Emphasis

Required Courses:

MUED 251	Singer's Diction	1
MUED 252	Singer's Diction	1
MUED 253	Singer's Diction	1
MUED 354	Vocal Techniques and Methods	3
	Keyboard Performance Studies	6
	Conducting	6

Total: 18

Required Courses:

MUED 395	Elementary School Music Methods and Materials	3
MUED 396	Secondary Music Methods	3
	Applied Music	5

Total: 11

Total: 28-29

M.I.T. PREPARATION FOR MUSIC EDUCATION TEACHER CERTIFICATION CONCENTRATION

In addition to the core requirements, students must complete 45-46 credits and choose one of the following two emphases, depending on certification goals. The five applied music credits required in this concentration are in addition to the 15 contained within the core. Therefore, the total number of applied credits—in one area—is 20.

Instrumental Emphasis

Required Courses:

	Instrumental Techniques and Methods Classes	8
	Voice Performance Studies	3
	Conducting	6

Total: 17

Choral Emphasis

Required Courses:

MUED 251	Singer's Diction	1
MUED 252	Singer's Diction	1
MUED 253	Singer's Diction	1
MUED 354	Vocal Techniques and Methods	3
	Keyboard Performance Studies	6
	Conducting	6

Total: 18

One-Year Master of Initial Teaching (M.I.T.) Prerequisites

Required Courses:

EDUC 211	Introduction to and Foundations of Education	4
EDUC 250	Introduction to Teaching Practices and Technology	2
EDUC 365	Secondary Classroom	4

	Management	
EDUC 395	Secondary Methods of Instruction I	2
EDUC 450	Introduction to Student Teaching: Clinical Practice	1
HIST 386	Cultures of the Pacific Northwest	4
		Total: 17

Required Courses:

MUED 395	Elementary School Music Methods and Materials	3
MUED 396	Secondary Music Methods	3
	Applied Music	5
		Total: 11

Total Credit Hours: 44-45

MUSIC PRODUCTION MAJOR (BACHELOR OF MUSIC)

The music production (p. 114) major is a joint program offered by the Department of Communication and the Department of Music. See the Interdisciplinary Programs (p. 106) section of this bulletin.

MUSIC MINOR

A student minoring in music must complete 30 quarter hours. A maximum of 3 MUPF 127 credits may apply toward the minor. Participation in an ensemble appropriate to the applied area is required each quarter of applied music studies.

Required Courses:

MUCT 121	Theory I	3
MUCT 122	Theory I	3
MUCT 123	Theory I	3
MUCT 131	Ear Training I	1
MUCT 132	Ear Training I	1
MUCT 133	Ear Training I	1
MUHL 124	Introduction to Music	4
	or	
MUHL 321	History of Music	4
	or	
MUHL 322	History of Music	4
	or	
MUHL 323	History of Music (WD)	4
	Applied Music (one area; a maximum of three MUPF 127 credits may count toward the minor, and three credits must be upper division)	8
	Electives (two must be upper division)	6
		Total: 30

NONDEPARTMENTAL

COMMUNITY IMPACT CERTIFICATE

The Community Impact Certificate is designed to provide students with a transformative complement to their chosen academic education at Walla Walla University, impacting them personally and professionally by:

- Exposing them to new ideas about culture and society, and their place in it;
- Engaging them in real-world projects and experiences that demand skillful leadership, hard work, and diplomacy;
- Challenging them to think critically about responsible development and community impact practices;
- Connecting them with resources that help them build industry connections and experience;
- Developing their cross-cultural communications skills.
- Help them develop the skills to assess communities' needs and develop strategies to respond to those needs.

The program aims to engage students deeply, fostering a community that actively learns, grows and serves together while preparing them for humanitarian careers.

Core Class Requirements (4 credits)

SERV 291	Preparation for Community Engagement Experience	2
SERV 392	Community Engagement Experience	0
SERV 493	Reflection on Community Engagement Experience	2

Community Engagement Experience: See description below.

Ethics and Religion (3-4 credits)

MGMT 463	Business Ethics	4
PHIL 305	Moral Philosophy	4
RELH 303	World Religions	4
RELM 233	Introduction to Cross-Cultural Ministry	3
RELT 348	Christian Ethics	4

Culture and Sociology (7-8)

ANTH 225	Cultural Anthropology	4
COMM 325	Multicultural Communication	3
ENGR 390/GBUS 390	Engineering in a Global Context	4
LANG 406	Language and Culture	3
SOCI 204	General Sociology	4
SOCI 234	Current Social Problems	4
SOCI 236	Privilege and Oppression	4
SOCI 420	Immigration and Identity	4
TECH 321	Technology and Society	4

Business (4 credits)

ECON 220	Principles of Global Development	4
MGMT 470/MKTG 470	Principles of Project Management	4
MGMT 488/MKTG 488	Global Management and Marketing	4

Total: 18-20

Community Engagement Experience

The Community Engagement Experience is designed to immerse students in cultural experiences as they receive experiential learning in community impact. The criteria for successful assignments are that students participate in a minimum of 80 hours of immersion in a different culture while participating in community impact. Acceptable assignments include:

- A study experience in a cultural context (ACA, Study Abroad, internship etc.) involving a community impact project. Templates are provided for students wishing to conduct a community needs assessment, develop a business or marketing plan for a local humanitarian service organization, or students may identify their own project given approval by the CICP Committee.
- A work or service experience in a cultural context (EWB, SM, Maranatha, Peace Corps., Non-Governmental Organization, ADRA, ACS etc.)
- A short to long-term service social impact project through the CHE working with community with a focus on exposing students to new cultures and populations. (Blue Zones Project, ACS Advocate Program, Millennium Fellowship Program, etc.)

INTERNSHIP PROGRAM

In selected programs, students may blend their academic study with career-related, paid or unpaid, productive employment in business, industry, government, or social agencies. Internships, full or part-time, are arranged by students and their academic department. Duration of appointments is typically one quarter but may be extended or repeated. One credit hour of internship is equal to 30 work hours. An accurate and complete file is coordinated and maintained by the Student Development Center. Supervision and evaluation are the responsibility of the internship advisor in the student's major field of study, the student's employer, and the Student Development Center.

Participants in the Internship Program may gain valuable work experience while earning university credit. For more information, students should contact their academic departments and the Student Development Center.

Program Guidelines

The following are academic guidelines for the Internship Program: (1) a minimum of 30 hours of approved activity/experience must be completed to have an internship experience recorded on the academic transcript; (2) for each credit earned, a minimum of 30 hours of approved activity must be completed; (3) the internship experience/credit is restricted to the major or minor. A course fee will be charged for students who enroll for 0 credit.

LIBERAL STUDIES (BACHELOR OF LIBERAL STUDIES)

The Bachelor of Liberal Studies (BLS) is designed as a degree completion program to serve students who have previously earned a minimum of 96 college level credits and are needing some course flexibility to complete a bachelor's degree. Students in the BLS degree program must complete 48 quarter hours in an area of emphasis, the General Studies Program requirements and all bachelor's degree requirements as outlined in this bulletin. Students must apply to be admitted to the program.

Applicants to the program must

- Be a current or admitted student of Walla Walla University
- Have completed a minimum of 96 college level credits from a regionally accredited college or university
- Have a cumulative GPA of 2.0 or above on all post-secondary and WWU coursework
- Complete an application to the BLS degree demonstrating how this course of study will meet the student's personal and professional goals
- Apply to the BLS a minimum of three quarters prior to graduation

Degree Requirements

Students must complete a 48 credit Emphasis from the following options:

Emphasis: Arts and Letters

Students will complete coursework from Art, Communication, English and Modern Languages, History, Honors, Music, and Theology

Emphasis: Science, Technology, Engineering and Mathematics (STEM)

Students will complete coursework from Biology, Chemistry, Computer Science, Engineering, Health & Physical Education, Mathematics, Nursing, Physics, and Technology

Emphasis: Social Sciences

Students will complete coursework from Education, Psychology, Social Work and Sociology

Emphasis: Organizational Systems

Students will complete coursework from Business, Communication

Students must also meet the following requirements:

1. Completion of a minimum of 192 quarter hours of academic work with a grade point average of 2.0 or better in an emphasis and overall.
2. Completion of the General Studies Program requirements as listed in the undergraduate bulletin.
3. Completion of a minimum of 60 credits upper division out of the total of 192 credits required for the degree. The emphasis must include 21 upper division credits.
4. No grade lower than a C- may apply within an emphasis.
5. A minimum of 25% of the credits in an emphasis must be from Walla Walla University.
6. At least 40 of the last 45 credits before degree completion must be from Walla Walla University.
7. A BLS degree cannot be awarded in conjunction with another bachelor's degree. However, a student can build on this degree if he or she pursues a second degree at a later date.

LIBERAL STUDIES (ASSOCIATE OF SCIENCE)

A student taking the liberal studies AS degree must complete 96 credits including all BS degree general studies requirements with the exception that only 8 credits of general studies religion is required for the AS degree. This degree cannot be awarded in conjunction with another degree.

Admission requirements

- Have completed a minimum of 45 quarter credits from a regionally accredited college
- Have a cumulative GPA of 2.0 or above on all post-secondary coursework

SCHOOL OF NURSING

T.B.A., Dean; Margaret Carman, Holly Coon, Mary Cohen, Kayla Cohn, Jennifer Larson, Deanna Ludwig-Bos, Leasha Simafranca, Katherine Spencer, Janice Vigil.

The School of Nursing offers a four-year program leading to a baccalaureate degree with a major in nursing. The purpose of the program is to prepare professional nurses to function in a variety of settings and to provide foundation for graduate study.

The general studies, nursing cognates, and sophomore level nursing courses can be completed on the College Place Campus. A limited number of students who have completed the prerequisites and cognates courses may be eligible to complete the sophomore nursing courses on the Portland Campus. All junior and senior nursing courses are completed on the Portland Campus.

The College Place campus is located in College Place Washington. Nursing classrooms, skills and simulations labs are located in the Winter Educational Complex. Students may stay in the residence hall or off campus (depending on eligibility).

The Portland campus is located adjacent to Adventist Health Portland. The nursing education building houses faculty offices, classrooms, skills and simulation lab, and the library. The Howard F. Hansen Hall is the residence for students on the Portland campus.

The School of Nursing has contractual agreements for student clinical experiences in a variety of settings, including regional hospitals, service agencies, home-care, extended care facilities, and schools.

Upon completion of the program, graduates are eligible to apply for the National Council Licensure Examination for Registered Nurses (NCLEX-RN) in the jurisdiction of choice.

Accreditation

The baccalaureate degree in nursing at Walla Walla University is accredited by the Commission on Collegiate Nursing Education (http://www.ccneaccreditation.org). The program is approved by the Washington State Board of Nursing and the Oregon State Board of Nursing.

Admission

Applicants must first apply for admission online to the University. See the admission requirements to the University. Additional requirements are listed below for each student category.

Once admitted to the University, prior to entering the first clinical nursing course, each student must apply and be accepted to the School of Nursing as a nursing major. This typically occurs prior to the beginning of the sophomore year. The following requirements must be met for all categories of nursing applicants:

1. Meet the minimal required GPA. Credits in Anatomy and Physiology, Chemistry, and Microbiology that are more than five years old at the time of admission will not be accepted.
2. Complete the nursing admissions essay.
3. Submit two letters of recommendation in addition to the one required for general admission to the University (teacher, employer, or co-worker preferred). Requirement waived for currently enrolled WWU students.
4. Obtain a passing score on the required entrance test, critical thinking/reasoning. Testing to be scheduled with an admissions advisor. Fees apply. (See the Financial Bulletin for required testing fee). Additional admission requirements must be met for each of the following categories of nursing applicant.

Category 1: Fall Applicant (College Place, Washington campus). In addition to the general admission requirements listed above, applicants must:

1. Complete prerequisite courses with a grade of C or above (see School of Nursing website for a list of specific prerequisite courses).
2. Have a minimum cumulative GPA of 3.0.
3. Complete at least 42 credits of required cognates, general studies, and electives that apply to the nursing major.
4. The application deadline for the Fall (College Place campus) applicant is April 15.

Category 2: Summer Applicant (Portland, Oregon, campus). In addition to the general admission requirements listed above, applicants must:

1. Complete prerequisite courses with a grade of C or above (see School of Nursing website for a list of specific prerequisite courses).
2. Have a minimum cumulative GPA of 3.25.
3. Complete 80+ credits of the required cognates, general studies, and electives that apply to the nursing major.
4. The early application deadline for the summer (Portland campus) applicant is February 1 with a final deadline of March 1. Applications will be accepted on a first-come, first-served basis.

Category 3: Registered Nurse (RN) Applicant. In addition to the general admission requirements listed above, applicants must:

1. Hold an associate degree in nursing from a regionally accredited college.
2. Have a minimum cumulative GPA of 3.0.
3. Hold and provide proof of an unrestricted registered nurse license in the State of Oregon. The

license must remain active and unrestricted throughout the program.

4. Have clinical experience in direct patient care equivalent to the current beginning senior nursing students in the program.
5. Complete validation process. The School of Nursing uses a validation process for previous nursing education to determine advanced placement for RNs. Placement in the program is determined by completed cognates and general studies courses. Additionally, RNs must pass a standardized examination to validate nursing knowledge and to confirm advanced placement as a senior level student (per credit fee applies). After passing the validation exam, the applicant will receive course credit; see course description for NRSG 291 and NRSG 391. Validation exam only needed if applicant has been licensed for longer than 5 years.
6. Applicants accepted on a space-available basis.

Category 4: Licensed Practical Nurse (LPN) Applicant. In addition to the general admission requirements listed above, the LPN applicant must:

1. Hold and provide proof of an unrestricted LPN license in any state. The license must remain unrestricted throughout the program.
2. Complete 85 transferrable credits of prerequisites that apply to the nursing major with a grade of C or above.
3. Have a minimum cumulative GPA of 3.0
4. A grade of C or above is required in all prior nursing courses.
5. Have clinical experience in direct patient care equivalent to the current beginning junior nursing students in the program.
6. Complete validation process. The School of Nursing uses a validation process for previous nursing education to determine advanced placement for LPNs. Placement in the program is determined by completed cognates and general studies courses. Additionally, LPNs must pass a standardized examination to validate nursing knowledge and to confirm advanced placement as a junior level student. (per credit fee applies.) After passing the validation exam, the applicant will receive course credit; see course description NRSG 290. As a substitute for the standardized exam, if you took a standardized, comprehensive L.P.N. NCLEX predictor exam (ATI, Kaplan), please submit your exam results to WWU School of Nursing Portland campus to determine if your score is high enough to grant you validation.
7. Applicants accepted on a space-available basis.

After acceptance into the School of Nursing, the following are required:

1. Each nursing student is subject to a criminal background check and drug screen. The School of Nursing reserves the right to deny admission or remove students from the nursing program who have a record of criminal activity and/or a positive drug screen. State licensure boards reserve the right to deny licensure in their states if applicants have a criminal history or condition that could impact their ability to practice safely.
2. Provide immunization and TB testing records that meet the School of Nursing immunization requirements. Walla Walla University School of Nursing and most of our clinical partners require proof of immunizations. In the interest of public safety, this includes the COVID-19 immunization series, which continues to be highly recommended. Alternatively, at some clinical partner locations, a student may submit a COVID-19 declination form based upon a qualifying sincerely held religious belief or disability. All students must adhere to the clinical site's requirements designed to minimize COVID-19 transmission. If a clinical site requires the COVID-19 vaccine, then unvaccinated students will not be permitted to participate in that clinical partner's program and the student's preferred clinical rotation may therefore be affected.
3. Provide proof of current health insurance.
4. Prior to beginning clinical coursework, each student must obtain and provide proof of current American Heart Association cardiopulmonary resuscitation (BLS-CPR) certification for health care providers. Current CPR certification must be maintained while enrolled in the nursing program.
5. Purchase the standard School of Nursing uniform, available at the School of Nursing office.

Progression and Graduation Requirements

Students must earn a grade of C or better in every required nursing course within a level of course work before progressing to a higher level.

A passing grade in a nursing course cannot be achieved without the successful completion of the course's clinical portion. An unsatisfactory clinical grade or a grade below C in the theory portion of any clinical course requires that the total course be repeated, both theory and clinical, prior to further progression in the program. Students with an incomplete in a clinical nursing course, NRSG 202, NRSG 203, NRSG 204, NRSG 321, NRSG 331, NRSG 344, NRSG 421, NRSG 437, NRSG 441, cannot begin the next clinical course until the incomplete is removed.

Students who demonstrate unsafe practice will be removed from the clinical area and are subject to dismissal as nursing majors.

All clinical placements are arranged and negotiated by the School of Nursing on behalf of students. No students, family members of students, or other representatives may contact a clinical agency independently to attempt to secure a clinical placement without express permission from the School of Nursing. Students who attempt to find their own clinical placement are subject to dismissal as nursing majors.

Students who receive a grade lower than a C or withdraw failing in a required nursing course cannot enroll in further nursing courses until approved to register by the School of Nursing Dean. A written request for approval to register that includes a written plan for improvement must be submitted. Approval to register is granted or denied on a case-by-case basis by the Student Conduct committee. If a request is denied, the student is dismissed from the nursing program. Readmission is not guaranteed and space for reentering students may be limited.

Any student with a WWU GPA average of less than 2.75 will be placed on conditional progression status and be limited to 12 credits for the following quarter. If after one quarter, the student has not achieved a 2.75 GPA, he or she may not enroll in another clinical nursing course until the GPA is above 2.75. Clinical nursing courses may be repeated to improve the GPA on a space available basis.

Nursing majors on the College Place campus must complete all 200 level nursing courses and the following cognate courses (with a grade of C or above) to progress to the Portland campus: BIOL 121, BIOL 122, BIOL 123, BIOL 222, CHEM 105, HLTH 220, MATH 106, PSYC 215, PSYC 130, and SPCH 101 or SPCH 207. In addition, ENGL 121, ENGL 122, and ENGL 223 plus sufficient general studies and electives courses applying to the major must also be completed to hold Junior class standing.

Sophomore and Junior Standardized Kaplan Exams: These exams enable the School of Nursing to evaluate student knowledge against baccalaureate students throughout the United States. These tests provide feedback regarding areas in which further study is necessary. The scores are also used for course content evaluation and curriculum evaluation. During the last quarter of the senior year, two standardized comprehensive nursing examinations are given. A passing score must be achieved on one exam to graduate. Graduation will be delayed and the student will not be eligible to take the NCLEX-RN until a satisfactory score is achieved.

Standardized Exam Policy: For the clinical courses during the sophomore and junior year (beginning with the sophomore comprehensive) each Kaplan exam will be weighted at 5% of the course's total grade. The 5% will be represented by 100 points. 50 points will be earned after completing the Kaplan exam at or above the threshold set by the School of Nursing. An additional 50 points will be earned by completing the assigned remediation.

During the last quarter of the senior year, two standardized comprehensive nursing examinations are given.

Students must graduate within two years of completion of nursing courses to be recommended to take the NCLEX-RN exam.

Student Responsibilities

The School of Nursing Student Handbook is given to all nursing students. Students are responsible for acquainting themselves with its contents and are held accountable for all policies therein.

Students are responsible for their own transportation to agencies used for educational experience. The use of a car is essential for each student to reach clinical sites. Transportation costs, including auto insurance, are the student's responsibility. Students are responsible for parking fees at some clinical locations; if there is a financial hardship, please contact the Dean of the School of Nursing.

Most clinical agencies require up-to-date vaccinations, for students to be allowed to care for patients. Some clinical agencies require additional background security checks and drug screenings. Students are responsible for any associated fees.

Any student missing class or lab time during the first week of a quarter (for any reason) is required to make up that time with the instructor. The student will be charged a fee for each instructor hour of this make-up time (see Financial Bulletin). Students electing not to make up the time missed must withdraw from the course.

Transferring from another Nursing Program

Transfer students will be evaluated individually to determine program placement and accepted on a space-available basis. Placement in the nursing program will be determined by review of syllabi from completed nursing courses. The previous nursing school may be consulted concerning their curriculum content and sequence. General studies and cognate courses will be transferred according to WWU policy. Students wishing to transfer from another nursing program must:

1. Meet all general admission requirements and be a current student or a student within the past two years at a regionally accredited school of nursing.
2. Be in good standing with the previous institution with a cumulative GPA of at least 3.0.

3. Submit a letter of recommendation from the Dean of the School of Nursing from which the applicant is transferring.
4. Submit nursing class syllabi for evaluation.

NURSING MAJOR (BACHELOR OF SCIENCE)

A student majoring in nursing must complete 83 quarter hours in nursing courses, the required cognates, the general studies program, elective courses, and all baccalaureate degree requirements for 192 quarter hours as outlined in this bulletin. In compliance with the state regulations, the School of Nursing reserves the right to revise, add or withdraw courses as needed to ensure a quality nursing program. No grade lower than C will apply.

Required Courses:

NRSG 201	Introduction to Nursing	3

The following 200-level clinical courses can be taken in one of two tracks, College Place or Portland Campus. A student must complete the three clinical courses in one of the following blocks:

College Place Campus Students:

NRSG 202	Fundamentals of Nursing	5
NRSG 203	Health Assessment	4
NRSG 204	Pathophysiology/Pharmacology I	4

Portland Campus students, Accelerated Summer Format:

NRSG 202P	Fundamentals of Nursing	5
NRSG 203P	Health Assessment	4
NRSG 204P	Pathophysiology/Pharmacology I	4
NRSG 321	Nursing of the Acutely Ill Adult	8
NRSG 327	Evidence-Based Practice	3
NRSG 331	Mental Health Nursing	8
NRSG 344	Nursing of the Family	8
NRSG 354	Pathophysiology	5
NRSG 421	Nursing of the Chronically Ill	8
NRSG 431	Leadership In Nursing	3
NRSG 437	Advanced Acute Nursing	8
NRSG 441	Community Health Nursing	8
NRSG 445	Issues and Trends in Nursing	3
NRSG 475	Interpreting Lab Values	2
	or	
NRSG 490	Nursing Practicum	2; 4
NRSG 450	NCLEX Review	3
		Total: 83

Cognates:

No grade lower than C will apply.

BIOL 121	Anatomy and Physiology	4
BIOL 122	Anatomy and Physiology	4
BIOL 123	Anatomy and Physiology	4
BIOL 222	Microbiology	5
CHEM 105	Survey of Chemistry	5
ENGL 223	Research Writing (WD)	3
HLTH 220	Human Nutrition	4
MATH 106	Introduction to Statistics	4
PSYC 130	General Psychology	4
SPCH 101	Fundamentals of Speech Communication	4
	or	
SPCH 207	Small Group Communication	4

PHYSICS

Thomas Ekkens, Chair; Roy Campbell.

The department offers a Bachelor of Science degree with a major in physics. It also offers a major in biophysics in cooperation with the department of biology. A degree in physics prepares a student for a career in industry, for graduate study, and/or for careers in research and teaching. The Bachelor of Science degree is designed to provide extensive preparation for each of these, with the opportunity to gain practical experience in a research or industrial setting. For entrance, four years of high school mathematics is highly recommended.

The interdisciplinary biophysics major fills 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. (See the Interdisciplinary (p. 111)section of this bulletin)

PHYSICS MAJOR (BACHELOR OF SCIENCE)

A student majoring in physics must complete 61 quarter hours in the major, the required cognates, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin.

Each Bachelor of Science major is required to perform either: 1) a summer Research Experience for Undergraduates (REU) program or equivalent; 2) an industrial co-op experience; or 3) an on-campus project undertaken with departmental faculty under the course listing PHYS 479, Directed Research/Project.

Required Courses:

PHYS 251	Principles of Physics	3
PHYS 252	Principles of Physics	3
PHYS 253	Principles of Physics	3
PHYS 254	Principles of Physics Laboratory	1
PHYS 255	Principles of Physics Laboratory	1
PHYS 256	Principles of Physics Laboratory	1
PHYS 310	Modern Physics I	3
PHYS 311	Modern Physics II	3
PHYS 313	Thermodynamics	4
PHYS 314	Modern Physics Laboratory I	1
PHYS 316	Modern Physics Laboratory II	1
PHYS 340	Introduction to Matlab and Mathematica	2
PHYS 401	Electricity and Magnetism	4
PHYS 402	Electricity and Magnetism	4
PHYS 414	Experimental Physics I	1
PHYS 415	Experimental Physics II	1
PHYS 419	Graduate Review	1
PHYS 420	Classical Mechanics	3
PHYS 421	Classical Mechanics	3
PHYS 422	Quantum Mechanics	3
PHYS 423	Quantum Mechanics	3
	Electives	12
	Total: 61	

PHYS 251, PHYS 252, and PHYS 253: Students completing PHYS 211, PHYS 212, PHYS 213 may meet the PHYS 251, PHYS 252, PHYS 253 requirement upon departmental validation

Electives:

Physics electives may be chosen from the following courses or chosen in consultation with advisor:

PHYS 307	Astrophysics	4
PHYS 312/ENGR 312	Physical Electronics	3
PHYS 315/ENGR 315	Physical Electronics Laboratory	1
PHYS 323	Modern Optics	3
PHYS 324	Modern Optics Laboratory	1
PHYS 331	Introduction to Nanotechnology	3
PHYS 332	Introduction to Nanotechnology Laboratory	1
PHYS 435/MATH 435	Mathematical Physics	4
PHYS 470/BIOL 470	Biophysics	4
PHYS 479	Directed Research/Project	1-3

A student can also take PHYS 479, Directed Research/Project, as an elective for 1-3 credits.

Required Cognates:

CHEM 141	General Chemistry	3
CHEM 142	General Chemistry	3
CHEM 143	General Chemistry	3
CHEM 144	General Chemistry Laboratory	1
CHEM 145	General Chemistry Laboratory	1
CHEM 146	General Chemistry Laboratory	1
CPTR 141	Fundamentals of Programming I	4
CPTR 142	Fundamentals of Programming II	4
ENGL 223	Research Writing (WD)	3
MATH 171	Calculus I	4
MATH 172	Calculus II	4
MATH 273	Calculus III	4
MATH 274	Calculus IV	4
MATH 239	Introduction to Linear Algebra	4
MATH 286	Ordinary Differential Equations	3

Recommended Courses:

ENGR 228	Circuit Analysis	4
ENGR 325	Instrumentation	3

ENGR 354	Digital Logic	3
MATH 315	Probability and Statistics	4
MATH 341	Numerical Analysis	4
MATH 413	Partial Differential Equations	4

BIOPHYSICS MAJOR (BACHELOR OF SCIENCE)

The biophysics (p. 111) major is a joint program offered by the Department of Biological Sciences and the Department of Physics. See the Interdisciplinary Programs section (p. 106) of this bulletin.

PHYSICS MINOR

A student minoring in physics must complete 27 quarter hours in physics. Either the Principles of Physics sequence or the General Physics sequence, but not both, are required of all minors. PHYS 310 Modern Physics I and PHYS 314 Modern Physics Laboratory I are required of all minors. For students also completing the BSE, these requirements are modified as below:

1. For BSE students with a concentration in Electrical Engineering or a concentration in Computer Engineering the following modifications apply:
   - If the student has satisfactorily completed ENGR 332 Thermodynamics and PHYS 259 Independent Study: Thermodynamics for one credit, it will be considered the equivalent of PHYS 313 Thermodynamics, and the total required quarter hours for a minor are reduced by 4 credits.
   - If the student has received departmental certification of satisfactory knowledge of PHYS 401 after satisfactory completion of ENGR 451 the total required quarter hours for a minor are reduced by 4 quarter credit hours.
   - If the student has received departmental certification of satisfactory knowledge of PHYS 312 and PHYS 315 by satisfactory completion of ENGR 312 and ENGR 315, respectively, the total required quarter hours for a minor are reduced by 3 and 1 quarter credit hours, respectively.
2. For BSE students with a concentration in Mechanical Engineering the following modifications apply:
   - If the student has satisfactorily completed ENGR 332 Thermodynamics and PHYS 259 Independent Study: Thermodynamics for one credit, it will be considered the equivalent of PHYS 313 Thermodynamics, and the total required quarter hours for a minor are reduced by 4 quarter credits.

Because of the unique nature of the professional curriculum of the engineering degree, any physics course taken to meet any requirement for the BSE degree is considered a cognate and therefore can be simultaneously counted toward the credit requirements for a physics minor.

As a result of overlap in course content of ENGR 312, ENGR 315, and ENGR 332 with physics courses, these courses may be simultaneously counted toward both a BSE degree and a physics minor.

PREPROFESSIONAL PROGRAMS

The University offers courses required for admission to professional or technical schools. Most preprofessional curricula require two units of high school mathematics (algebra and geometry). All programs should be planned in consultation with and approved by the assigned academic advisor.

The requirements for Loma Linda University are listed in this bulletin for some programs. Requirements for admission to preprofessional programs vary among different professional schools and are subject to change. Students should request information about current admission requirements from the professional school they plan to attend.

Completion of courses listed in the Preprofessional Programs does not assure acceptance into the professional school of your choice. For up-to-date requirements for Loma Linda School of Allied Health Professions, see the http://www.llu.edu/allied-health/sahp/transfer/index.page.

Please note that C- grades are not transferable for credit.

DENTISTRY

Kyle Craig, Jeremy Wiggins, Academic Advisors.

The minimum requirement for admission to dentistry is 144 quarter hours. However, most dental schools expect candidates to have completed a bachelor's degree. The following courses are basic requirements for Loma Linda University School of Dentistry. Other dental schools may also have similar requirements:

Required Courses:

BIOL 141	General Biology	4
BIOL 142	General Biology	4
BIOL 143	General Biology	4
CHEM 141	General Chemistry	3
CHEM 142	General Chemistry	3
CHEM 143	General Chemistry	3
CHEM 144	General Chemistry Laboratory	1
CHEM 145	General Chemistry Laboratory	1
CHEM 146	General Chemistry Laboratory	1
CHEM 321	Organic Chemistry	4
CHEM 322	Organic Chemistry	4
CHEM 324	Organic Chemistry Laboratory	1
CHEM 325	Organic Chemistry Laboratory	1
CHEM 431	Foundations of Biochemistry	4
CHEM 432	Foundations of Biochemistry	3
ENGL 121	Introduction to Analytical Writing	3
ENGL 122	Introduction to Research Writing	3
PHYS 211	General Physics	3
PHYS 212	General Physics	3
PHYS 213	General Physics	3
PHYS 214	General Physics Laboratory	1
PHYS 215	General Physics Laboratory	1
PHYS 216	General Physics Laboratory	1

Loma Linda University also recommends additional courses selected from the following areas (in priority order):

- Histology
- Human anatomy
- Animal physiology
- Microbiology or advanced microbiology
- Cell biology I, II
- Immunology
- Ceramics
- Management
- Marketing
- Psychology
- Accounting
- Communication

Pre-dental students should choose a major and plan for a degree even though they may be accepted to dentistry prior to completion of degree requirements.

LAW

Gregory Dodds, Academic Advisor.

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 advisor.

Courses designed to develop skills in oral and written communication and the ability to reason and think analytically are strongly recommended. The Legal Studies minor (p. 105) offered by the department of history and philosophy provides this focus.

MEDICAL RADIOGRAPHY

Gerry Larson, Academic Advisor

Loma Linda University offers a number of programs that prepare personnel to assist the specialized physician in obtaining anatomical and physiological images of the body or in treating diseases by the use of various types of radiation. The graduate can find employment in hospitals, medical & physician's offices/clinic, public health agencies, industry and Armed Forces. The program is recommended for the student wishing to become a radiologic technologist in a diagnostic radiography department, assisting in

fluoroscopic examinations, diagnostic tests and specialized operating room procedures.

Programs exist in the following areas: medical radiography (AS degree), radiation technology (BS degree), and certificates in medical sonography, nuclear medicine technology, radiation therapy technology, and special imaging technology.

Required Courses:

BIOL 121	Anatomy and Physiology	4
BIOL 122	Anatomy and Physiology	4
BIOL 123	Anatomy and Physiology	4
BIOL 121L	Anatomy and Physiology Lab	0
BIOL 122L	Anatomy and Physiology Lab	0
BIOL 123L	Anatomy and Physiology Lab	0
ENGL 121	Introduction to Analytical Writing	3
ENGL 122	Introduction to Research Writing	3
MATH 121	Precalculus I	4
NRSG 234	Medical Terminology	2
PHYS 201	Conceptual Physics	3
	and	
PHYS 204	Conceptual Physics Laboratory	1
	or	
PHYS 211	General Physics	3
	and	
PHYS 214	General Physics Laboratory	1
PSYC 130	General Psychology	4
	or	
SOCI 204	General Sociology	4
SPCH 101	Fundamentals of Speech Communication	4
	or	
SPCH 310	Advanced Interpersonal and Nonverbal Communication	3

Total: 42

Religion: All courses taken at Loma Linda University.

Electives: To meet minimum total requirements of 42 quarter units (or 28 Semester units). Select additional courses from the following content areas.

Recommended courses include: Spanish, Cultural Anthropology, Nutrition, Physical Education, and Critical Thinking.

Additional courses could include: Psychology, Sociology, Chemistry, Computers, Statistics, Language, Philosophy, History, Art/Music Appreciation, Geology, Political Science, and Economics.

Work experience: 8 hours minimum work/observation experience (volunteer/employee) in a radiology department.

Note: C minus (C-) grades are not transferrable for credit.

MEDICINE

David Lindsey, Jeremy Wiggins, Academic Advisors.

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 3.50 or above, computed separately for science and non-science courses. AP, CLEP, and online credits do not meet Loma Linda University requirements for required science courses. The following courses are normally required by Loma Linda University:

Required Courses:

BIOL 141	General Biology	4
BIOL 142	General Biology	4
BIOL 143	General Biology	4
CHEM 141	General Chemistry	3
CHEM 142	General Chemistry	3
CHEM 143	General Chemistry	3
CHEM 144	General Chemistry Laboratory	1
CHEM 145	General Chemistry Laboratory	1
CHEM 146	General Chemistry Laboratory	1
CHEM 321	Organic Chemistry	4
CHEM 322	Organic Chemistry	4
CHEM 324	Organic Chemistry Laboratory	1
CHEM 325	Organic Chemistry Laboratory	1
CHEM 431	Foundations of Biochemistry	4
ENGL 121	Introduction to Analytical Writing	3
ENGL 122	Introduction to Research Writing	3
PHYS 211	General Physics	3
PHYS 212	General Physics	3
PHYS 213	General Physics	3
PHYS 214	General Physics Laboratory	1
PHYS 215	General Physics Laboratory	1
PHYS 216	General Physics Laboratory	1

Total: 62

MATH 121 and MATH 122 are prerequisites for CHEM 141 and PHYS 211.

Also recommended are:

BIOL 250	Biostatistics	4
	or	
MATH 106	Introduction to Statistics	4
BIOL 381	Cell Biology I: Structure and Bioenergetics	4
BIOL 382	Cell Biology II: Genetics and Molecular Biology	4
BIOL 383	Cell Biology III: Genomics and Regulation	4
BIOL 464	Animal Physiology	4
PSYC 140	Introduction to Psychology:	4

	Social Foundations	
PSYC 141	Introduction to Psychology: Biological Foundations	4
SOCI 204	General Sociology	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.

NURSING

See Nursing section of this Bulletin (p. 122).

OCCUPATIONAL THERAPY

Mike Hellie, Academic Advisor.

Students preparing for the Master of Occupational Therapy degree should plan to complete a Baccalaureate degree and complete the following requirements:

BIOL 121	Anatomy and Physiology	4
BIOL 122	Anatomy and Physiology	4
BIOL 123	Anatomy and Physiology	4
MATH 106	Introduction to Statistics	4
NRSG 234	Medical Terminology	2
PSYC 215	Developmental Psychology	4

In addition to the above, Loma Linda University requires a documented minimum of 40 hours of volunteer or employee work experience in an occupational therapy department before acceptance.

No grade below a B- will be accepted by LLU.

OPTOMETRY

Tom Ekkens, Academic Advisor.

While two years of college work is the minimum requirement for admission to most optometry schools, the majority of students being admitted have finished at least four years of college or received a bachelor's degree. Students interested in optometry should choose a major even though they may later gain admission to professional school before finishing it. At some optometry schools a student admitted before graduation must then finish a bachelor's degree while pursuing professional studies. This is not advisable since the requirements of the school awarding the degree must then be met.

The preprofessional curriculum should include as a minimum the following courses:

Required Courses:

BIOL 250	Biostatistics	4
	or	
MATH 106	Introduction to Statistics	4
CHEM 141	General Chemistry	3
CHEM 142	General Chemistry	3
CHEM 143	General Chemistry	3
CHEM 144	General Chemistry Laboratory	1
CHEM 145	General Chemistry Laboratory	1
CHEM 146	General Chemistry Laboratory	1
ENGL 121	Introduction to Analytical Writing	3
ENGL 122	Introduction to Research Writing	3
MATH 171	Calculus I	4
PHYS 211	General Physics	3
PHYS 212	General Physics	3
PHYS 213	General Physics	3
PHYS 214	General Physics Laboratory	1
PHYS 215	General Physics Laboratory	1
PHYS 216	General Physics Laboratory	1
PSYC 130	General Psychology	4

Additional Requirements:

Since the requirements for other pre-optometry courses differ among the optometry schools, students should obtain catalogs from each school of interest in order that all prerequisites may be fulfilled. Other required courses will include some or all of the following:

BIOL 121	Anatomy and Physiology	4
BIOL 122	Anatomy and Physiology	4
BIOL 123	Anatomy and Physiology	4
BIOL 141	General Biology	4
BIOL 142	General Biology	4
BIOL 143	General Biology	4
BIOL 222	Microbiology	5
CHEM 321	Organic Chemistry	4
CHEM 322	Organic Chemistry	4
CHEM 324	Organic Chemistry Laboratory	1
CHEM 325	Organic Chemistry Laboratory	1
CHEM 431	Foundations of Biochemistry	4
	An additional psychology course	

Students should visit optometrystudents.com for a list of optometry schools and additional information.

ORTHOTICS AND PROSTHETICS

Tom Ekkens, Academic Advisor.

Entry requirements vary according to the professional school. Summarized below are the requirements for entry into the program at the University of Washington. For admission into the Orthotics and Prosthetics program, students are required to complete a bachelor's degree from an accredited college or university. Applicants must have a cumulative grade point average of at least 3.0 (B) for the most recent 60 semesters or 90 quarter credits to be considered for admission. In addition, applicants must have a cumulative grade point average of at least 3.0 (B) in

the required prerequisite courses with no single course graded less than 2.0 (C). It is highly recommended that all prerequisite course grades be 2.5 or above. If you have any prerequisite course grades between 2.0 and 2.4, your academic record will be reviewed on a case-by-case basis. Grades lower than 2.0 in a prerequisite course will not be accepted.

Required Courses:

BIOL 121	Anatomy and Physiology	4
BIOL 122	Anatomy and Physiology	4
BIOL 123	Anatomy and Physiology	4
BIOL 121L	Anatomy and Physiology Lab	0
BIOL 122L	Anatomy and Physiology Lab	0
BIOL 123L	Anatomy and Physiology Lab	0
BIOL 141	General Biology	4
	and	
BIOL 141L	General Biology Lab	0
	or	
BIOL 222	Microbiology	5
BIOL 250	Biostatistics	4
	or	
MATH 106	Introduction to Statistics	4
CHEM 105	Survey of Chemistry	5
	or	
CHEM 141	General Chemistry	3
CHEM 144	General Chemistry Laboratory	1
PHYS 211	General Physics	3
	and	
PHYS 214	General Physics Laboratory	1
	or	
PHYS 201	Conceptual Physics	3
	and	
PHYS 204	Conceptual Physics Laboratory	1
PSYC 130	General Psychology	4
PSYC 215	Developmental Psychology	4
	or	
PSYC 492	Abnormal Psychology	4

Volunteer Experience: Although volunteer experience is not required to apply to the program, it is highly recommended. The most competitive applicants have a minimum of 50 hours volunteering, observing, or job shadowing in a prosthetic and orthotic clinic.

PHARMACY

Melvin Roberts, Academic Advisor.

At least three years of college work are required. Additional requirements are often needed if a bachelor's degree is not completed. Students should consult with the college of pharmacy of their choice about course requirements. In general the course requirements will include:

Required Courses:

BIOL 141	General Biology	4
BIOL 142	General Biology	4
BIOL 143	General Biology	4
BIOL 381	Cell Biology I: Structure and Bioenergetics	4
	or	
BIOL 382	Cell Biology II: Genetics and Molecular Biology	4
	or	
CHEM 431	Foundations of Biochemistry	4
CHEM 141	General Chemistry	3
CHEM 142	General Chemistry	3
CHEM 143	General Chemistry	3
CHEM 144	General Chemistry Laboratory	1
CHEM 145	General Chemistry Laboratory	1
CHEM 146	General Chemistry Laboratory	1
CHEM 321	Organic Chemistry	4
CHEM 322	Organic Chemistry	4
CHEM 324	Organic Chemistry Laboratory	1
CHEM 325	Organic Chemistry Laboratory	1
CHEM 383	Intermediate Organic Chemistry	3
CHEM 386	Intermediate Organic Chemistry Laboratory	1
PHYS 211	General Physics	3
PHYS 214	General Physics Laboratory	1

MATH 121 and MATH 122 are prerequisites for CHEM 141 and PHYS 211.

Additional recommended sciences:

BIOL 382	Cell Biology II: Genetics and Molecular Biology	4
BIOL 383	Cell Biology III: Genomics and Regulation	4
BIOL 449	Histology	4-5
BIOL 222	Microbiology	5
	or	
BIOL 445	Advanced Microbiology	4
BIOL 122	Anatomy and Physiology	4
	and	
BIOL 123	Anatomy and Physiology	4
	or	
BIOL 464	Animal Physiology	4
CHEM 432	Foundations of Biochemistry	3
CHEM 433	Foundations of Biochemistry	3

All pharmaceutical colleges require three years in residency beyond the three years of prepharmacy; most require four years. It is highly recommended that applicants obtain volunteer or paid pharmacy work experience.

PHYSICAL THERAPY

See the Health and Physical Education (p. 102) section of this bulletin.

PHYSICAL THERAPY ASSISTANT

Michael Hellie, Academic Advisor.

These are usually two-year programs and students receive an Associate Degree upon completion. Loma Linda University (LLU) offers this program with one year of college prerequisite courses and one year of training at LLU. Courses with grades below C do not count on the program. Courses at Walla Walla University which meet these prerequisites are:

Required Courses:

BIOL 121	Anatomy and Physiology	4
BIOL 122	Anatomy and Physiology	4
BIOL 123	Anatomy and Physiology	4
ENGL 121	Introduction to Analytical Writing	3
ENGL 122	Introduction to Research Writing	3
NRSG 234	Medical Terminology	2
PHYS 201	Conceptual Physics	3
PHYS 204	Conceptual Physics Laboratory	1
PSYC 130	General Psychology	4
PSYC 215	Developmental Psychology	4
	or	
PSYC 492	Abnormal Psychology	4
SPCH 101	Fundamentals of Speech Communication	4
	or	
SPCH 310	Advanced Interpersonal and Nonverbal Communication	3

A minimum of 80 hours work/observation experience required in a physical therapy department, 20 hours of which must be in an in-patient setting and 20 hours in an outpatient setting.

Health and Wellness (2-4)

Select at least two credits from the following:

PEAC	Any PEAC activity courses	2
	or	
HLTH 110	Wellness for Living	3
	or	
HLTH 220	Human Nutrition	4

Humanities (4)

Select four credits from the following courses:

ART 251	Introduction to Art	4
ENGL 210	Survey of British and American Literature	4
ENGL 211	Survey of British and American Literature	4
ENGL 212	Survey of British and American Literature	4
HIST 121	The West and the World	4
HIST 122	The West and the World	4
HIST 221	History of the United States	4
HIST 222	History of the United States	4
MUHL 124	Introduction to Music	4
PHIL 205	Introduction to Philosophy	4

Any foreign language course may be used as well.

Religion

Four credits a year; eight credits max. For every 12 quarter units of coursework taken at an SDA college or university, you must take 1 (one) quarter unit of religion at an SDA institution.

Electives

To meet minimum total of 48 quarter hours.

PHYSICIAN ASSISTANT

Kyle Craig, Academic Advisor.

There is a wide variation in the prerequisites for entrance into a Physician Assistant program. A bachelor's degree is required for admittance, typically with a minimum science GPA of 3.0. Clinical experience involving direct patient care is required. The number of hours of clinical experience also varies widely. Loma Linda requires at least 2,000 hours or hands-on paid patient care experience. Physician Assistant programs are a master's level program.

Requirements may include the following courses; however, students should request information about **current** admission requirements from the professional school they plan to attend.

Required Courses:

BIOL 121	Anatomy and Physiology	4
BIOL 122	Anatomy and Physiology	4
BIOL 123	Anatomy and Physiology	4
BIOL 121L	Anatomy and Physiology Lab	0
BIOL 122L	Anatomy and Physiology Lab	0
BIOL 123L	Anatomy and Physiology Lab	0
BIOL 445	Advanced Microbiology	4
CHEM 141	General Chemistry	3
CHEM 142	General Chemistry	3
CHEM 143	General Chemistry	3
CHEM 144	General Chemistry Laboratory	1
CHEM 145	General Chemistry Laboratory	1
CHEM 146	General Chemistry Laboratory	1
ENGL 121	Introduction to Analytical Writing	3
ENGL 122	Introduction to Research Writing	3
MATH 121	Precalculus I	4

ANTH 225	Cultural Anthropology	4
	or	
SOCI 204	General Sociology	4
PSYC 130	General Psychology	4
	or	
PSYC 215	Developmental Psychology	4
	Religion (4 credits per year)	

Recommended Courses

MATH 106	Introduction to Statistics	4
NRSG 234	Medical Terminology	2
SPAN 101	Elementary Spanish	4
SPAN 102	Elementary Spanish	4
SPAN 103	Elementary Spanish	4

VETERINARY SCIENCE

Jim Nestler, Academic Advisor.

The requirements below apply to the Washington-Idaho-Montana-Utah (WIMU) Regional Program in veterinary medical education. Since the basic requirements for entrance into other veterinary schools may be different, students should confer with the schools of their choice.

Required Courses:

BIOL 141	General Biology	4
BIOL 142	General Biology	4
BIOL 143	General Biology	4
BIOL 250	Biostatistics	4
BIOL 381	Cell Biology I: Structure and Bioenergetics	4
BIOL 382	Cell Biology II: Genetics and Molecular Biology	4
CHEM 141	General Chemistry	3
CHEM 142	General Chemistry	3
CHEM 143	General Chemistry	3
CHEM 144	General Chemistry Laboratory	1
CHEM 145	General Chemistry Laboratory	1
CHEM 146	General Chemistry Laboratory	1
CHEM 321	Organic Chemistry	4
CHEM 322	Organic Chemistry	4
CHEM 324	Organic Chemistry Laboratory	1
CHEM 325	Organic Chemistry Laboratory	1
CHEM 431	Foundations of Biochemistry	4
CHEM 432	Foundations of Biochemistry	3
ENGL 121	Introduction to Analytical Writing	3
ENGL 122	Introduction to Research Writing	3
MATH 121	Precalculus I	4
PHYS 211	General Physics	3
PHYS 212	General Physics	3
PHYS 213	General Physics	3
PHYS 214	General Physics Laboratory	1
PHYS 215	General Physics Laboratory	1
PHYS 216	General Physics Laboratory	1
	General Studies (Arts, humanities, social science, history)	27

Recommended Courses:

Electives highly recommended by the WIMU Regional Program include:

BIOL 222	Microbiology	5
BIOL 383	Cell Biology III: Genomics and Regulation	4
BIOL 464	Animal Physiology	4
BIOL 466	Immunology	4

Total: 105

Veterinary Medical Exposure and Animal Experience

Applicants must have a significant number of hours of veterinary medical exposure (may include biomedical research, academic medicine, or private practice) and experience with animals by November 1 of the year of application.

SCHOOL OF SOCIAL WORK AND SOCIOLOGY

Deisy Haid, Dean; Emily Tillotson, B.S.W. Director; Kristen Coffeen-Smith, Field Director; Jim Boyd, Cheris Current, Analizeth Pesqueira, Jeremy Springer, Idah Taruwinga, and Jody Washburn.

The School of Social Work and Sociology offers a Bachelor of Social Work degree. Minors are available in social welfare and sociology.

The degree in social work is designed to prepare students for generalist social work practice in a variety of practice settings and graduate study. Supervised field education experience (400 Clock Hours) in selected social work agencies is an integral part of the program. The Bachelor of Social Work is accredited by the Council on Social Work Education.

Candidates for social work are selected on the basis of scholarship, ethical conduct, awareness of diverse issues, and a commitment to social and economic justice. In addition to completing the requirements for the Bachelor of Social Work, students must be accepted into candidacy in the junior year to continue in the program. BSW Candidates will submit a resume, personal statement, and references. Criteria for acceptance include a minimum grade point average of 2.75.

SOCIAL WORK MAJOR (BACHELOR OF SOCIAL WORK)

Students enrolled in the professional curriculum must complete a total of 192 quarter hours, including the general studies requirements for a Bachelor of Science degree, the core requirements (72quarter hours) in social work and cognates (20 quarter hours) in sociology. The core requirements include 12 hours of field education the senior year, which involves 400 clock hours in a supervised professional social work practice setting. Grades in core requirements and cognates must be no lower than C-.

Core Requirements:

SOWK 260	Human Behavior and The Social Environment I	4
SOWK 261	Human Behavior and The Social Environment II	4
SOWK 264	Introduction to Social Work	4
SOWK 265	Social Work History, Ethics, and Theory	4
SOWK 266	Social Welfare Policy	4
SOWK 371	Social Work Practice with Individuals	4
SOWK 372	Social Work Practice with Small Groups	4
SOWK 373	Social Work Practice with Couples and Families	4
SOWK 375	Policy and Advocacy Practice for Social Justice	3
SOWK 465	Social Work Practice with Organizations and Communities	4
SOWK 466	Comparative Theories of Social Work Practice	3
SOWK 490	Field Education	12
SOWK 491	Social Work Capstone	2
	Electives	16
	Total: 72	

Electives may be chosen from classes with the following prefixes: SOWK (minimum of 6 credits), SOCI, CORR, ANTH, PLSC. A maximum of 8 credits of electives may also be chosen from PSYC 130 or PSYC 140, PSYC 215, PSYC 247, PSYC 344, PSYC 370, PSYC 373, PSYC 447, PSYC 466, PSYC 492.

Cognates:

ENGL 223	Research Writing (WD)	3
SOCI 204	General Sociology	4
SOCI 234	Current Social Problems	4
SOCI 236	Privilege and Oppression	4
SOCI 451	Research Methods I	4
SOCI 452	Research Methods II	4

SOCIAL WELFARE MINOR

A student minoring in social welfare must complete 30 quarter hours.

Required Courses:

SOWK 260	Human Behavior and The Social Environment I	4
SOWK 261	Human Behavior and The Social Environment II	4
SOWK 264	Introduction to Social Work	4
SOWK 265	Social Work History, Ethics, and Theory	4
SOWK 266	Social Welfare Policy	4
SOWK 375	Policy and Advocacy Practice for Social Justice	3
	Electives	7
	Total: 30	

Electives must be chosen from the following prefixes in consultation with the academic advisor: SOWK, SOCI, ANTH, CORR.

SOCIOLOGY MINOR

A student minoring in sociology must complete 30 quarter hours:

Required Courses:

SOCI 204	General Sociology	4
SOCI 234	Current Social Problems	4
SOCI 236	Privilege and Oppression	4
SOCI 496	Sociology Seminar	3; 9
	Electives	15
		Total: 30

Electives must be chosen in consultation with the academic advisor from the following prefixes: SOCI, SOWK, ANTH, CORR.

TECHNOLOGY

Rob Holm, Chair; Shawn Dietrich, Josie Henderson, Jefre Humbert, Darryl Penney, James Veverka.

The Department of Technology provides quality technological instruction in a Christian environment, preparing students to work in a variety of service industries. Each program provides a balance between technical theory and practical laboratory experiences. Students may choose from an array of four-year Bachelor of Science or Associate of Science degree programs.

The Bachelor of Science majors offered in the Department of Technology include Automotive Service, Aviation Technology, and Product Design. Each of these majors include a number of core courses which provide broad technical experience. Along with the technical expertise, these majors provide communication, writing, and social skills through the University general studies program. Combining the specific major requirements, the technical core courses, and the general studies program provides the student with exemplary skills for today's workplace.

Bachelor of Science (BS) degrees in Automotive Management and Aviation Management are also jointly offered by the Technology Department and the School of Business. These degrees combine technology and business to prepare students for management or corporate positions within the automotive and aviation industries. See the Interdisciplinary Programs section of this bulletin for these majors.

The Associate of Science specializations offered in the Department of Technology include Automotive Technology, Aviation Technology, and Product Design. Each specialization prepares graduates for employment in that field. In each case, a broad technical background balances theory with laboratory experience. These programs serve students who wish to complete their technical training in a Christian environment with minimal general studies and time requirements. The programs also allow continuance in the baccalaureate programs with minimal loss of credit.

Courses in the Department of Technology provide non-majors with the opportunity of developing technical skills to complement their major, provide a minor, or to strengthen their background in the applied arts.

Students must obtain a C- or above in cognates.

AUTOMOTIVE SERVICE MAJOR (BACHELOR OF SCIENCE)

A student majoring in Automotive Service must complete a minimum of 78 quarter hours in the major consisting of the core courses and technical requirements. In addition, the student must complete required cognates, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin.

Core Requirements:

AUTO 134	Internal Combustion Engine Theory	2
AUTO 135	Internal Combustion Engine Laboratory	2
AUTO 145	Manual Drive Trains and Axles	2
AUTO 146	Manual Drive Trains and Axles Laboratory	2
AUTO 156	Electrical Systems	2
AUTO 157	Electrical Systems Laboratory	2
AUTO 280	Practicum	2
AUTO 214	Engine Performance	2
AUTO 215	Engine Performance Laboratory	2
AUTO 335	Suspension and Steering Systems	2
AUTO 336	Suspension and Steering Systems Laboratory	2
AUTO 337	Brake Systems and Traction Control	2
AUTO 338	Brake Systems and Traction Control Laboratory	2
AUTO 355	Climate Control Systems	2
AUTO 356	Climate Control Systems Laboratory	2
AUTO 357	Automatic Transmissions and Transaxles	2
AUTO 358	Automatic Transmissions and Transaxles Laboratory	2
AUTO 365	Diesel Engines	3
AUTO 414	Advanced Engine Performance	3
AUTO 434	High Performance Engine Tuning	3
AUTO 466	Body Electronics and Computer Systems	3
AUTO 473	Hybrid Vehicles and Alternative Fuels	3
AUTO 480	Advanced Practicum	2
AUTO 495	Colloquium	0
DSGN 121	Fundamentals of CAD	2
TECH 137	Oxyacetylene Welding and Cutting	2
TECH 138	Shielded Metal Arc Welding	2
TECH 235	Materials and Processes	4
TECH 241	Fabrication and Machining I	2
TECH 321	Technology and Society	4
TECH 335	CNC Prototyping	3
TECH 380	Space Planning and Design	3
TECH 499	Senior Project	1
	Electives	4
		Total: 78

AUTO 495: Open only to students of junior standing or higher. Automotive degree candidates must satisfactorily complete two quarters, at least one of which must be during the senior year.

Cognates:

ACCT 201	Principles of Financial Accounting	4
CIS 140	Business Analytics with Microsoft Excel	4
ENGL 223	Research Writing (WD)	3
MGMT 371	Principles of Management	4
	or	
MGMT 375/MKTG 375	Foundations of Entrepreneurship	4
PHYS 201	Conceptual Physics	3
PHYS 202	Conceptual Physics	3
PHYS 204	Conceptual Physics Laboratory	1
PHYS 205	Conceptual Physics Laboratory	1

AVIATION TECHNOLOGY MAJOR (BACHELOR OF SCIENCE)

A student majoring in Aviation Technology must complete a minimum of 70 quarter hours in the major consisting of the core courses and technical requirements. In addition, the student must complete required cognates, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin. Aviation Technology students can work with their academic advisor to focus their elective choices towards a career as a professional pilot. Specialty areas include commercial aviation or mission/humanitarian aviation.

The aviation program trains students using a Part 61 Federal Aviation Administration (FAA) training course outline. A specific level of mastery and progress is required to complete the academic courses, earn flight certificates and ratings, and continue in the program. To be successful in training and in the aviation industry students must demonstrate proficiency in learning, sound judgment, safety awareness, and good moral character. Students will be allowed to register for flight classes based on performance in prerequisite classes. Due to the demanding and unforgiving nature of aviation operations, the Chair of the Technology department in consultation with the aviation faculty may dismiss students from aviation classes at any time. Reasons for such action may include, but are not limited to, the following: reckless operations, safety concerns or violations, security concerns raised by foreign and domestic background information, excessive cancellations, or documented progress delays in training due to students' teach-ability, skill, or retention of knowledge.

WWU Aviation Standard Operating Procedures

Walla Walla University Aviation Standard Operating Procedures are given to all aviation students. Students have the responsibility to acquaint themselves with the contents and are held accountable for all policies therein. Students found to be in violation of the WWU Aviation Standard Operating Procedures or judged to be unsafe will be removed from the flight schedule and will be subject to dismissal as aviation majors.

All flight courses require progress and a level of mastery for course completion, earning flight certificates and ratings, and continuation in the program. Students will be allowed to register for flight classes based on performance in prerequisite classes. To be successful in training in the aviation industry students must demonstrate proficiency in learning, sound judgment, safety awareness, and good moral character. In the aviation industry character is evaluated based on an applicant's driving and/or criminal record. Excessive movement infractions, driving while under the influence, suspension or revocation of a driver's license, or a pattern of criminal activity are all viewed as terms of "moral character." The aviation program recognizes that people can change and these items are not immediately disqualifying, but future employers will consider them, and an applicant with a background must be prepared to work hard to show change.

Students are solely responsible for their own transportation to agencies used for educational experience. The use of ground transportation is essential for each student to reach the Walla Walla Regional Airport where the WWU flight center is located. Transportation costs, including auto insurance and liability, are the student's responsibility.

Once a student is enrolled at WWU in the Aviation Technology (Bachelor of Science) program, all subsequent flight training required as part of the student's course of study must be completed in residence at WWU in WWU aircraft unless otherwise approved by the Aviation Faculty. Flight training completed away from WWU will not be guaranteed credit for the corresponding WWU course.

All flight courses have additional expenses. Please see the current Financial Bulletin for details.

Core Requirements:

AVIA 125	Air Traffic Control & Airspace	2
AVIA 140	Survey of Aviation	1
AVIA 141	Private Pilot Lectures	4
AVIA 142	Private Pilot Flight Training I	2
AVIA 143	Private Pilot Flight Training II	2

AVIA 144	Private Pilot Flight Training III	2
AVIA 234	Aviation Weather	2
AVIA 256	Aircraft Systems and Basic Maintenance	4
AVIA 261	Instrument Pilot Lectures	4
AVIA 262	Instrument Flight Training	3
AVIA 263	Advanced Instrument Flight Training	3
AVIA 264	Cross Country Flight	2
AVIA 270	Aviation Human Factors	2
AVIA 325	Advanced Cross Country Flight	2
AVIA 334	Commercial Pilot Lectures	4
AVIA 335	Commercial Flight Training	3
AVIA 336	Advanced Commercial Flight Training	3
AVIA 337	Mission/Humanitarian Flight Training	2
AVIA 340	Multi-Engine Flight Training	3
AVIA 355	Aviation Safety	2
AVIA 356	Principles of Flight Instruction	2
AVIA 455	Crew Resource Management	2
AVIA 496	Senior Seminar	2
TECH 137	Oxyacetylene Welding and Cutting	2
TECH 138	Shielded Metal Arc Welding	2
TECH 380	Space Planning and Design	3
TECH 499	Senior Project	1

Choose 4 credits from the following:

AVIA 280	Practicum	1-6; 6
AVIA 357	Flight Instructor Training	2
AVIA 358	Advanced Flight Instructor Training	3
AVIA 450	Aviation Law and Regulations	2
AVIA 458	Instrument Instructor Flight Training	2
AVIA 460	Multi-Engine Instructor Flight Training	2
AVIA 480	Advanced Practicum	1-6; 6

Total: 70

Aviation students planning a career in mission/humanitarian flight are encouraged to take RELH 303 World Religions and RELM 233 Introduction to Cross Cultural Ministry as part of their general studies religion requirements.

Cognates:

ACCT 201	Principles of Financial Accounting	4
CIS 140	Business Analytics with Microsoft Excel	4
ENGL 223	Research Writing (WD)	3
GBUS 361	Business Law I	4
MGMT 371	Principles of Management	4
	or	
MGMT 375/MKTG 375	Foundations of Entrepreneurship	4
PHYS 201	Conceptual Physics	3
PHYS 202	Conceptual Physics	3
PHYS 204	Conceptual Physics Laboratory	1
PHYS 205	Conceptual Physics Laboratory	1

PRODUCT DESIGN MAJOR (BACHELOR OF SCIENCE)

A student majoring in Product Design must complete a minimum of 86 quarter hours in the major consisting of the core courses and technical requirements. In addition, the student must complete required cognates, the general studies program, and all baccalaureate degree requirements for a total of 192 quarter hours, as outlined in this bulletin.

Product Design is the professional service of creating and developing concepts and specifications optimizing the function, value and appearance of products and systems for the mutual benefit of user and manufacturer. Students learn to analyze and solve diverse design problems from technical, aesthetic, social, and ecological viewpoints. Design thinking is utilized throughout the program along with the project-based curriculum. Work progresses from developmental drawings, mock-ups and models, to working drawings and prototype construction with manufacturing considerations. Additionally, Product Designers may perform their work in a digital arena such as web design and UI/UX. The B.S. in Product Design offers the knowledge and experiences that prepare students to become competitive product and industrial designers.

Core Requirements:

DSGN 110	Design Principles I	4
DSGN 111	Design Principles II	4
DSGN 121	Fundamentals of CAD	2
DSGN 215	Design Theory, History, and Criticism	4
DSGN 312	Design Strategies and Methodologies	4
VIS 102	Creative Foundations II: Design	4
VISD 263	Web Design Studio	4
VIS 373	Portfolio Design	4
PRDN 120	Models and Prototypes	3
PRDN 130	3-D Design I	3
PRDN 230	3-D Design II	3
PRDN 266	Presentation Graphics for Product Design	4

PRDN 330	3-D Design III	3
PRDN 345	Environment Design	4
PRDN 210	Product Design Studio	4
PRDN 310	Product Design Studio	4
PRDN 410	Product Design Studio	4
PRDN 411	Senior Project Studio	4
TECH 137	Oxyacetylene Welding and Cutting	2
	or	
TECH 138	Shielded Metal Arc Welding	2
TECH 220	Introduction to Basic Woodworking	2
TECH 223	Introduction to Fine Woodworking	2
TECH 235	Materials and Processes	4
TECH 236	Introduction to Plastics	2
TECH 335	CNC Prototyping	3
TECH 499	Senior Project	1
		Total: 86

Cognates:

ENGL 223	Research Writing (WD)	3
SPCH 101	Fundamentals of Speech Communication	4

Complete one of the following: (3)

ART 324	History of World Art	3
ART 325	History of World Art	3
ART 326	History of World Art	3

Choose one of the following: (4)

MKTG 381	Principles of Marketing (WD)	4
MKTG 383	Principles of Advertising	4
MKTG 384	Consumer Behavior	4

AUTOMOTIVE MANAGEMENT MAJOR (BACHELOR OF SCIENCE)

The automotive management (p. 106) major is a joint program offered by the School of Business and the Department of Technology. See the Interdisciplinary Programs (p. 106) section of this bulletin.

AVIATION MANAGEMENT MAJOR (BACHELOR OF SCIENCE)

The aviation management (p. 106) major is a joint program offered by the School of Business and the Department of Technology. See the Interdisciplinary Programs section (p. 106) of this bulletin.

AUTOMOTIVE TECHNOLOGY (ASSOCIATE OF SCIENCE)

A student specializing in Automotive Technology must complete a minimum of 55 quarter hours in the specialization consisting of the core courses and technical requirements. In addition, the student must complete required cognates, general studies requirements, and all Associate of Science degree requirements as outlined in this bulletin.

The A.S. in Automotive Technology has been designed to be completed in three years. Due to the many alternating–year AUTO classes, it will generally take three years of full-time study to complete the required classes for the degree. The A.S. in Automotive Technology is primarily intended for students who are already pursuing a bachelor's degree.

Core Requirements:

AUTO 134	Internal Combustion Engine Theory	2
AUTO 135	Internal Combustion Engine Laboratory	2
AUTO 145	Manual Drive Trains and Axles	2
AUTO 146	Manual Drive Trains and Axles Laboratory	2
AUTO 156	Electrical Systems	2
AUTO 157	Electrical Systems Laboratory	2
AUTO 280	Practicum	2
AUTO 214	Engine Performance	2
AUTO 215	Engine Performance Laboratory	2
AUTO 335	Suspension and Steering Systems	2
AUTO 336	Suspension and Steering Systems Laboratory	2
AUTO 337	Brake Systems and Traction Control	2
AUTO 338	Brake Systems and Traction Control Laboratory	2
AUTO 355	Climate Control Systems	2
AUTO 356	Climate Control Systems Laboratory	2
AUTO 357	Automatic Transmissions and Transaxles	2
AUTO 358	Automatic Transmissions and Transaxles Laboratory	2
AUTO 414	Advanced Engine Performance	3
DSGN 121	Fundamentals of CAD	2
TECH 335	CNC Prototyping	3
	Electives	13
		Total: 55

Electives must be chosen from AUTO, AVIA, or TECH in consultation with and approved by the academic advisor.

AVIATION TECHNOLOGY (ASSOCIATE OF SCIENCE)

A student specializing in Aviation Technology must complete a minimum of 53 quarter hours in the specialization consisting of the core courses and technical requirements. In addition, the student must complete required cognates, general studies requirements, and all Associate of Science degree requirements as outlined in this bulletin.

The aviation program trains students using a Part 61 Federal Aviation Administration (FAA) training course outline. A specific level of mastery and progress is required to complete the academic courses, earn flight certificates and ratings, and continue in the program. To be successful in training and in the aviation industry students must demonstrate proficiency in learning, sound judgment, safety awareness, and good moral character. Students will be allowed to register for flight classes based on performance in prerequisite classes. Due to the demanding and unforgiving nature of aviation operations, the Chair of the Technology department in consultation with the aviation faculty may dismiss students from aviation classes at any time. Reasons for such action may include, but are not limited to, the following: reckless operations, safety concerns or violations, security concerns raised by foreign and domestic background information, excessive cancellations, or documented progress delays in training due to student's teach-ability, skill, or retention of knowledge.

WWU Aviation Standard Operating Procedures

Walla Walla University Aviation Standard Operating Procedures are given to all aviation students. Students have the responsibility to acquaint themselves with the contents and are held accountable for all policies therein. Students found to be in violation of the WWU Aviation Standard Operating Procedures or judged to be unsafe will be removed from the flight schedule and will be subject to dismissal as aviation majors.

All flight courses require progress and a level of mastery for course completion, earning flight certificates and ratings, and continuation in the program. Students will be allowed to register for flight classes based on performance in prerequisite classes. To be successful in training an in the aviation industry students must demonstrate proficiency in learning, sound judgment, safety awareness, and good moral character. In the aviation industry character is evaluated based on an applicant's driving and/or criminal record. Excessive movement infractions, driving while under the influence, suspension or revocation of a driver's license, or a pattern of criminal activity are all viewed as terms of "moral character." The aviation program recognizes that people can change and these items are not immediately disqualifying, but future employers will consider them, and an applicant with a background must be prepared to work hard to show change.

Students are solely responsible for their own transportation to agencies used for educational experience. The use of ground transportation is essential for each student to reach the Walla Walla Regional Airport where the WWU flight center is located. Transportation costs, including auto insurance and liability, are the student's responsibility.

Once a student is enrolled at WWU in the Aviation Technology (Associate of Science) program, all subsequent flight training required as part of the student's course of study must be completed in residence at WWU in WWU aircraft unless otherwise approved by the Aviatio0n Faculty. Flight training completed away from WWU will not be guaranteed credit for the corresponding WWU course.

All flight courses have additional expenses. Please see the current WWU financial bulletin for details.

Core Requirements:

AVIA 125	Air Traffic Control & Airspace	2
AVIA 140	Survey of Aviation	1
AVIA 141	Private Pilot Lectures	4
AVIA 142	Private Pilot Flight Training I	2
AVIA 143	Private Pilot Flight Training II	2
AVIA 144	Private Pilot Flight Training III	2
AVIA 234	Aviation Weather	2
AVIA 256	Aircraft Systems and Basic Maintenance	4
AVIA 261	Instrument Pilot Lectures	4
AVIA 262	Instrument Flight Training	3
AVIA 263	Advanced Instrument Flight Training	3
AVIA 264	Cross Country Flight	2
AVIA 270	Aviation Human Factors	2
AVIA 325	Advanced Cross Country Flight	2
AVIA 334	Commercial Pilot Lectures	4
AVIA 335	Commercial Flight Training	3
AVIA 336	Advanced Commercial Flight Training	3
AVIA 337	Mission/Humanitarian Flight Training	2
	Electives	6
		Total: 53

Electives: Electives must be chosen in consultation with and approved by the academic advisor.

PRODUCT DESIGN (ASSOCIATE OF SCIENCE)

A student specializing in Product Design must complete a minimum of 44 quarter hours in the

specialization consisting of the core courses and technical requirements. In addition, the student must complete required cognates, general studies requirements, and all Associate of Science degree requirements as outlined in this bulletin.

Core Requirements:

DSGN 110	Design Principles I	4
DSGN 111	Design Principles II	4
DSGN 121	Fundamentals of CAD	2
DSGN 215	Design Theory, History, and Criticism	4
VIS 102	Creative Foundations II: Design	4
PRDN 120	Models and Prototypes	3
PRDN 130	3-D Design I	3
PRDN 210	Product Design Studio	4
PRDN 230	3-D Design II	3
PRDN 266	Presentation Graphics for Product Design	4
PRDN 330	3-D Design III	3
TECH 220	Introduction to Basic Woodworking	2
TECH 235	Materials and Processes	4

Total: 44

AVIATION MINOR

A student minoring in Aviation must complete 29 quarter hours.

The aviation program trains students using a Part 61 Federal Aviation Administration (FAA) training course outline. A specific level of mastery and progress is required to complete the academic courses, earn flight certificates and ratings, and continue in the program. To be successful in training and in the aviation industry students must demonstrate proficiency in learning, sound judgment, safety awareness, and good moral character. Students will be allowed to register for flight classes based on performance in prerequisite classes. Due to the demanding and unforgiving nature of aviation operations, the Chair of the Technology department in consultation with the aviation faculty may dismiss students from aviation classes at any time. Reasons for such action may include, but are not limited to, the following: reckless operations, safety concerns or violations, security concerns raised by foreign and domestic background information, excessive cancellations, or documented progress delays in training due to student's teach-ability, skill, or retention of knowledge.

Once a student is enrolled at WWU, regardless of academic major, all subsequent flight training required as part of the student's course of study must be completed in residence at WWU in WWU aircraft unless otherwise approved by the Aviation Faculty. Flight training completed away from WWU will not be guaranteed credit for the corresponding WWU course.

Required Courses:

AVIA 125	Air Traffic Control & Airspace	2
AVIA 140	Survey of Aviation	1
AVIA 141	Private Pilot Lectures	4
AVIA 142	Private Pilot Flight Training I	2
AVIA 143	Private Pilot Flight Training II	2
AVIA 144	Private Pilot Flight Training III	2
AVIA 234	Aviation Weather	2
AVIA 270	Aviation Human Factors	2
	Electives	12

Total: 29

Electives: 3 must be upper division. Approval of aviation advisor required. Electives must be chosen in consultation with and approved by the academic advisor.

TECHNOLOGY MINOR

A student minoring in Technology must complete 30 quarter hours:

Required Courses:

DSGN 110	Design Principles I	4
DSGN 121	Fundamentals of CAD	2
TECH 235	Materials and Processes	4
	Electives	20

Total: 30

Electives: 3 must be upper division. Approval of technology advisor required.

SCHOOL OF THEOLOGY

Carl Cosaert, Dean; Tiago Arrais, Brant Berglin, Susan Bungard-Beck, Paul Dybdahl, Mathilde Frey, Pedrito Maynard-Reid.

The principal purposes of the School of Theology are to provide undergraduate education for students seeking to pursue religious callings such as pastoral ministry, chaplaincy, religious scholarship, and to offer courses in religion for the general student body in harmony with the mission of the University.

Students interested in becoming pastors, chaplains, evangelists, Bible workers, or teachers of religion should pursue the Theology and Religious Studies Major. This degree provides students with the biblical, theological, and religious course work that is the foundation for the study of religion. Without adding either that Pastoral or Chaplaincy concentrations, the Theology and Religious Studies Major degree is ideal for those who wish to have an emphasis in religious at the undergraduate level, but who do not want or need to have the practical elements of ministry or biblical languages as part of their education.

A Concentration in Pastoral Ministry is the preferred pathway for those desiring to pursue a career in ministry because it includes elements of religious practice, and the development of proficiency in two major Biblical languages, Greek and Hebrew. The Concentration in Pastoral Ministry is also designed to meet Seminary entrance requirements.

The School of Theology offers a third major, one in Biblical Languages. This major is intended for those who wish to gain facility in the basic tools for biblical study, especially those anticipating graduate work in this and related areas.

Candidates for the Theology degree who want to receive a recommendation from the faculty to Church employing agencies, in addition to completing the listed requirements for the degree, must go through the process of endorsement. The process of endorsement is more fully described in a separate handbook obtainable from the School of Theology. Those who achieve endorsement should expect to go on into some kind of internship before going to seminary, typically the Theological Seminary at Andrews University, where they will complete an additional two years of study in order to earn the basic ministerial degree, a Master of Divinity. Those planning to attend the Seminary should complete the undergraduate subjects required for entrance and maintain a minimum grade-point average of 2.50.

All majors must successfully complete a Senior Comprehensive Examination in order to graduate. In addition, students taking a Concentration in Pastoral Ministry are required to take Greek and Hebrew qualification exams prior to graduation. Majors who pass at appropriate levels may not need to take the full Biblical language sequence if they attend the Seventh-day Adventist Theological Seminary at Andrews University.

Students who plan to teach religion in Seventh-day Adventist academies are advised to obtain 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 university career.

THEOLOGY AND RELIGIOUS STUDIES MAJOR (BACHELOR OF ARTS)

A student majoring in Theology and Religious Studies must complete 54 quarter hours in the major, the required cognates, the general studies requirements, and all baccalaureate degree requirements as outlined in this bulletin. Theology and Religious Studies major may also take one of two concentrations: Pastoral Ministry or Chaplaincy Ministry.

Required Courses:

RELB 111	Messages of the Old Testament	4
RELB 231	Exploring the New Testament	4
RELB 302	Pentateuch	4
RELB 313	Revelation	4
RELB 340	Acts & New Testament Letters	4
RELB 496	Seminar in Biblical Hermeneutics	4
RELH 303	World Religions	4
RELH 457	History of Adventism	3
RELP 131	Introduction to Faith and Ministry	4
RELT 348	Christian Ethics	4
RELT 417	Prophetic Inspiration	3
RELT 456	Systematic Theology I	4
RELT 457	Systematic Theology II	4
RELT 495	Colloquium (12 required)	0
	Biblical Studies Electives	4
		Total: 54

Electives must be from one of the following courses:

RELB 274	Study Tour: The Holy Lands and Its People	4
RELB 304	Hebrew Prophets	4
RELB 337	Jesus and The Gospels	4
RELB 362	Paul and The Gospel	4
RELB 408	The Bible and the Human Condition	4
RELB 474	Study Tour: The Holy Lands and Its Peoples	4

Cognates:

ENGL 223	Research Writing (WD)	3
HIST 254	History of Christianity	4

HIST 307	Reform and Revolt	4
	or	
HIST 437	Medieval and Renaissance Europe	4
	or	
HIST 474	Study Tour: English Reformation	4

Whenever possible, Theology and Religion majors are advised to take RELP 131 as their first course, followed by RELB 111 and RELB 231, in that order.

The School of Theology recommends that students take PSYC 130 General Psychology or PSYC 214 Developmental Psychology as one of their general studies electives.

Note on Endorsement for Theology and Religious Studies majors: Students desiring a recommendation for denominational hiring will need to gain Endorsement by a two-step process described in the School of Theology Handbook.

PASTORAL MINISTRY CONCENTRATION

Cognates:

GREK 231	Greek I	4
GREK 232	Greek I	4
GREK 331	Greek II	4
HEBR 331	Hebrew I	4
HEBR 332	Hebrew II	4
MGMT 371	Principles of Management	4
	or	
MGMT 375/MKTG 375	Foundations of Entrepreneurship	4
SERV 305	Community Engagement for Churches	2

Pastoral Mentoring Experience:

Theology and Religious Studies majors seeking the pastoral ministry concentration must complete an internship approved by the School of Theology. Those anticipating pastoral work in the Seventh-day Adventist Church must participate in the internship program operated jointly between the School of Theology and the Upper Columbia Conference. It is also highly recommended that students participate in the ten-week summer internship program with the North Pacific Union Conference. Details of this program are available in the School of Theology Handbook.

Required Courses:

RELP 236	Church Worship	2
RELP 281	Biblical Preaching: Foundations	2
RELP 336	Church and Personal Ministry	4
RELP 382	Biblical Preaching: Exposition	2
RELP 385	Pastoral Internship	0
RELP 400	Grief and Loss	2
RELP 482	Pastoral Care	2
RELP 492	Public Evangelism I	1
RELP 493	Public Evangelism II	1
		Total: 16

**Four quarters of Pastoral Internship are required.*

CHAPLAINCY MINISTRY CONCENTRATION

Required Courses:

RELM 233	Introduction to Cross-Cultural Ministry	3
RELP 270	Chaplain Ministry	2
RELP 281	Biblical Preaching: Foundations	2
RELP 385	Pastoral Internship	0
RELP 482	Pastoral Care	2
RELP 400	Grief and Loss	2
	Electives	8
		Total: 15

**Three quarters of Pastoral Internship are required.*

Electives:

CHPL 505	History and Role of Chaplains	4.5
CHPL 510	Spiritual Care and Chaplaincy	4.5
CHPL 530	Spiritual Care and Chaplaincy	1.5
CHPL 540	Spiritual Care in Pediatrics	1.5
CHPL 560	Spiritual Care in Pediatrics	1.5
CHPL 570	Spiritual Care and Mental Illness	1.5
CHPL 580	Spiritual Care and Trauma	1.5
MGMT 201	Introduction to Healthcare Administration	2
RELP 336	Church and Personal Ministry	4
RELP 382	Biblical Preaching: Exposition	2
RELT 568	Wrestling with God in Suffering	4.5

Cognates:

PSYC 215	Developmental Psychology	4

Theology and Religious Studies majors seeking the chaplaincy ministry concentration must complete an internship approved by the School of Theology.

BIBLICAL LANGUAGES MINOR

A student minoring in Biblical Languages must complete 28 quarter hours of Biblical Language electives and required coursework:

Required Courses:

GREK 231	Greek I	4
GREK 232	Greek I	4

GREK 331	Greek II	4
HEBR 331	Hebrew I	4
HEBR 332	Hebrew II	4
RELH 205	Biblical Archaeology	4
	Electives	4
		Total: 28

**Electives must be two Readings classes, one of which must be GREK 342. Approval of biblical languages advisor required.*

RELIGION MINOR

A student minoring in religion must complete 30 quarter hours of religion courses:

Required Courses:

	Electives	30

Electives: 12 must be upper division. Approval of religion advisor recommended.

All religion classes (courses with REL[x] prefixes), except RELP, may count toward a Religion Minor.

At least one lower-division religion course is required before students may take upper-division religion courses listed in the bulletin.

VISUAL ARTS

Joel Libby, chair; Brent Bergherm, Jerry Hartman

The Department of Visual Arts fosters a creative environment where students learn to effectively engage with society and each other while developing their unique craft and vision. We believe that each student's creativity is a natural gift from God and work toward cultivating an awareness, appreciation, and understanding of the various forms of visual experience and expression within the context of the human experience. Through instruction and practice, students develop their creative abilities for practical use. The Bachelor of Fine Art (BFA) degree offers majors in film, fine art, and graphic design. The department also offers an Associate of Fine Art in visual art and minors in film, fine art, graphic design, and photography.

The BFA is a professional degree that provides an opportunity for developing technical competence and aesthetic and ethical discernment, preparing students for studio art and industry careers. Unique to a BFA, and making up approximately one quarter of the degree, art studio courses provide students time for personal practice within a major of study to develop unique creativity, craft, and vision as they demonstrate competencies within their discipline. Art studio courses provide collaboration between all BFA majors, and each course is mentored by multiple art professors who provide individualized feedback along a customized learning path. The art studio experience culminates in a body of work that during the final year of the degree, students present in public art galleries and film festivals including a student designed show at the Clyde and Mary Harris Gallery in spring quarter.

FILM MAJOR (BACHELOR OF FINE ARTS)

A student majoring in film must complete the major core requirements including electives and art studio courses, for a total of 97 credit hours, plus16 credit hours of cognates, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin.

Core Requirements:

ART 324	History of World Art	3
ART 325	History of World Art	3
ART 326	History of World Art	3
VIS 101	Creative Foundations I: Sketching	4
VIS 102	Creative Foundations II: Design	4
VIS 103	Creative Foundations II: Typography	4
VIS 111	Core I: Visual Storytelling	4
VIS 112	Core II: Personal Expression	4
VIS 113	Core III: Elements of Industry	4
VIS 271	Directing Creative Projects	4
VIS 272	Art Production	4
VIS 373	Portfolio Design	4
VIS 490	Internship	4
VIS 496	Senior Art Studio	4
VIS 497	Senior Art Studio	4
VIS 498	Senior Art Studio	4
	Electives	20
		Total: 97

Select 8 credits from the following courses:

VISF 135	Essentials of Filmmaking	4
VISF 205	Screenwriting	4
VISF 240	Cinematography and Post-production	4
VISF 333	Audio Production	4
VISF 425	Interactive and VR Storytelling	4

Complete 12 credits of Art Studio courses:

VIS 250	Art Studio	4; 16

Electives:

Electives tailor the BFA to the student's emphasis and must be selected from the following, in consultation with and approved by the academic advisor assigned by the department chair:

DSGN 370	Fundamentals of Packaging	4
PRDN 345	Environment Design	4
VISA 194	Still Life Painting	4
VISA 264	Sculpture	4
VISA 284	Ceramics: Hand Building	4
VISA 285	Ceramics: Wheel Throwing	4
VISA 294	Printmaking	4
VISA 374	Ceramics	2; 4
VISD 156	Principles of Photography	4
VISD 263	Web Design Studio	4
VISD 356	Advanced Digital Fine Art Photography	4
VISD 358	Photo Assignments	1-4; 8
VISD 466	UI/UX Design Fundamentals	4
VISF 135	Essentials of Filmmaking	4
VISF 205	Screenwriting	4
VISF 240	Cinematography and Post-production	4
VISF 333	Audio Production	4
VISF 425	Interactive and VR Storytelling	4

Cognates:

Choose one track to focus study in a related field:

Adventist Colleges Abroad (16)

ACA Summer program accepted for 9 credits with an additional 7 elective credits selected from the major to reach 16 credits. (Italy is recommended.)

Business (16)

MGMT 375/MKTG 375	Foundations of Entrepreneurship	4
MGMT 470/MKTG 470	Principles of Project Management	4
MKTG 381	Principles of Marketing	4
MKTG 415	Digital Marketing	4

Communication (14-15)

Two additional major elective credits required to reach 16 credits.

COMM 145	Media and Culture	4
COMM 148	Creativity and Innovation	3
COMM 460/COMM 260	Professional Film Festival/Conference Participation	1; 2
COMM 480	Redemptive Cinema	3

Drama (16)

DRMA 101	Introduction to Theatre	3
DRMA 242	Acting	4
DRMA 252	Performance	0-2; 4
	and/or	
DRMA 253	Technical Production	0-2; 4
DRMA 452	Advanced Performance	0-2; 4
	and/or	
DRMA 453	Advanced Technical Production	0-2; 4

LA Film Studies Center (24)

Petitions will be considered to attend a semester at the Los Angeles Film Studies Center (a study program within the Council for Christian Colleges and Universities) for up to 24 cognate credits. If a student completes the LA Film Studies Center Cognate Option, 8 credits will apply to the elective requirements for the major.

Writing Cognate

In addition to completing a cognate track, one of the following writing in the disciplines (WD) options must be taken:

ENGL 223	Research Writing (WD)	3
VISF 205	Screenwriting (WD)	4
WRIT 324	Creative Nonfiction Writing (WD)	4
WRIT 334	Poetry Writing (WD)	4

FINE ART MAJOR (BACHELOR OF FINE ARTS)

A student majoring in fine art must complete the major core requirements, including electives and art studio courses, for a total of 97 credit hours, plus 16 credit hours of cognates, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin.

Core Requirements:

ART 324	History of World Art	3
ART 325	History of World Art	3
ART 326	History of World Art	3
VIS 101	Creative Foundations I: Sketching	4
VIS 102	Creative Foundations II: Design	4
VIS 103	Creative Foundations II: Typography	4
VIS 111	Core I: Visual Storytelling	4
VIS 112	Core II: Personal Expression	4
VIS 113	Core III: Elements of Industry	4
VIS 260/VIS 460	Professional Film Festival/Conference Participation	0-1; 2
VIS 271	Directing Creative Projects	4
VIS 272	Art Production	4
VIS 490	Internship	4
VIS 496	Senior Art Studio	4
VIS 497	Senior Art Studio	4
VIS 498	Senior Art Studio	4
	Electives	20
		Total: 97

Select 8 credits from the following courses:

VISA 194	Still Life Painting	4
VISA 264	Sculpture	4
VISA 284	Ceramics: Hand Building	4
VISA 285	Ceramics: Wheel Throwing	4
VISA 294	Printmaking	4

Complete 12 credits of Art Studio courses:

VIS 250	Art Studio	4; 16

Electives:

Electives tailor the BFA to the student's emphasis and must be selected from the following, in consultation with and approved by the academic advisor assigned by the department chair:

DSGN 370	Fundamentals of Packaging	4
PRDN 345	Environment Design	4
VISA 194	Still Life Painting	4
VISA 264	Sculpture	4
VISA 284	Ceramics: Hand Building	4
VISA 285	Ceramics: Wheel Throwing	4
VISA 294	Printmaking	4

VISA 374	Ceramics	2; 4
VISD 156	Principles of Photography	4
VISD 263	Web Design Studio	4
VISD 356	Advanced Digital Fine Art Photography	4
VISD 358	Photo Assignments	1-4; 8
VISD 466	UI/UX Design Fundamentals	4
VISF 135	Essentials of Filmmaking	4
VISF 205	Screenwriting	4
VISF 240	Cinematography and Post-production	4
VISF 333	Audio Production	4
VISF 425	Interactive and VR Storytelling	4

Cognates:

Choose one track to focus study in a related field:

Adventist Colleges Abroad (16)

ACA Summer program accepted for 9 credits with an additional 7 elective credits selected from the major to reach 16 credits. (Italy is recommended.)

Business (16)

MGMT 375/MKTG 375	Foundations of Entrepreneurship	4
MGMT 470/MKTG 470	Principles of Project Management	4
MKTG 381	Principles of Marketing	4
MKTG 415	Digital Marketing	4

Communication (14)

Two additional major elective credits required to reach 16 credits.

COMM 145	Media and Culture	4
COMM 148	Creativity and Innovation	3
PREL 349	Social Media Strategies	3
SPCH 207	Small Group Communication	4
	Electives	2

Drama (16)

DRMA 101	Introduction to Theatre	3
DRMA 242	Acting	4
DRMA 252	Performance	0-2; 4
	and/or	
DRMA 253	Technical Production	0-2; 4
DRMA 452	Advanced Performance	0-2; 4
	and/or	
DRMA 453	Advanced Technical Production	0-2; 4

Technology (16)

DSGN 121	Fundamentals of CAD	2
DSGN 312	Design Strategies and Methodologies	4
TECH 137	Oxyacetylene Welding and Cutting	2
TECH 138	Shielded Metal Arc Welding	2
TECH 220	Introduction to Basic Woodworking	2
TECH 235	Materials and Processes	4

Writing Cognate

In addition to completing a cognate track, one of the following writing in the disciplines (WD) options must be taken:

ENGL 223	Research Writing (WD)	3
VISF 205	Screenwriting (WD)	4
WRIT 324	Creative Nonfiction Writing (WD)	4
WRIT 334	Poetry Writing (WD)	4

GRAPHIC DESIGN MAJOR (BACHELOR OF FINE ARTS)

A student majoring in graphic design must complete the major core requirements including electives and art studio courses, for a total of 97 credit hour hours, plus 16 credit hours of cognates, the general studies program, and all baccalaureate degree requirements as outlined in this bulletin.

Core Requirements:

ART 324	History of World Art	3
ART 325	History of World Art	3
ART 326	History of World Art	3
VIS 101	Creative Foundations I: Sketching	4
VIS 102	Creative Foundations II: Design	4
VIS 103	Creative Foundations II: Typography	4
VIS 111	Core I: Visual Storytelling	4
VIS 112	Core II: Personal Expression	4
VIS 113	Core III: Elements of Industry	4
VIS 260/VIS 460	Professional Film Festival/Conference Participation	0-1; 2
VIS 271	Directing Creative Projects	4
VIS 272	Art Production	4
VIS 373	Portfolio Design	4
VIS 490	Internship	4
VIS 496	Senior Art Studio	4
VIS 497	Senior Art Studio	4
VIS 498	Senior Art Studio	4
	Electives	20
		Total: 97

Select 8 credits from the following courses:

DSGN 370	Fundamentals of Packaging	4
PRDN 345	Environment Design	4

VISD 156	Principles of Photography	4
VISD 263	Web Design Studio	4
VISD 356	Advanced Digital Fine Art Photography	4
VISD 358	Photo Assignments	1-4; 8
VISD 466	UI/UX Design Fundamentals	4

Complete 12 credits of Art Studio courses:

VIS 250	Art Studio	4; 16

Electives:

Electives tailor the BFA to the student's emphasis and must be selected from the following, in consultation with and approved by the academic advisor assigned by the department chair:

DSGN 370	Fundamentals of Packaging	4
PRDN 345	Environment Design	4
VISA 194	Still Life Painting	4
VISA 264	Sculpture	4
VISA 284	Ceramics: Hand Building	4
VISA 285	Ceramics: Wheel Throwing	4
VISA 294	Printmaking	4
VISA 374	Ceramics	2; 4
VISD 156	Principles of Photography	4
VISD 263	Web Design Studio	4
VISD 356	Advanced Digital Fine Art Photography	4
VISD 358	Photo Assignments	1-4; 8
VISD 466	UI/UX Design Fundamentals	4
VISF 135	Essentials of Filmmaking	4
VISF 240	Cinematography and Post-production	4
VISF 333	Audio Production	4
VISF 425	Interactive and VR Storytelling	4

Cognates:

Choose one track to focus study in a related field:

ACA Summer program accepted for 9 credits with an additional 7 elective credits selected from the major to reach 16 credits. (Italy is recommended.)

Business (16)

MGMT 375/MKTG 375	Foundations of Entrepreneurship	4
MGMT 470/MKTG 470	Principles of Project Management	4
MKTG 381	Principles of Marketing (WD)	4
MKTG 415	Digital Marketing	4

Communication (15)

One additional major elective credits required to reach 16 credits.

COMM 145	Media and Culture	4
COMM 148	Creativity and Innovation	3
JOUR 341	Feature Writing	4
PREL 451	Publication Design and Editing	4
	Electives	2

Drama (16)

DRMA 101	Introduction to Theatre	3
DRMA 242	Acting	4
DRMA 252	Performance and/or	0-2; 4
DRMA 253	Technical Production	0-2; 4
DRMA 452	Advanced Performance and/or	0-2; 4
DRMA 453	Advanced Technical Production	0-2; 4

Technology (16)

DSGN 121	Fundamentals of CAD	2
DSGN 312	Design Strategies and Methodologies	4
TECH 137	Oxyacetylene Welding and Cutting	2
TECH 138	Shielded Metal Arc Welding	2
TECH 220	Introduction to Basic Woodworking	2
TECH 235	Materials and Processes	4

Writing Cognate

In addition to completing a cognate track, one of the following writing in the disciplines (WD) options must be taken:

ENGL 223	Research Writing (WD)	3
VISF 205	Screenwriting (WD)	4
WRIT 324	Creative Nonfiction Writing (WD)	4
WRIT 334	Poetry Writing (WD)	4

VISUAL ARTS (ASSOCIATE OF FINE ARTS)

A student specializing in visual arts must complete a minimum of 48 credit hours, including the core courses and technical requirements. In addition, the student must complete the general studies requirements and all associate degree requirements as outlined in this bulletin.

Required Courses:

VIS 101	Creative Foundations I: Sketching	4
VIS 102	Creative Foundations II: Design	4
VIS 103	Creative Foundations II: Typography	4
VIS 111	Core I: Visual Storytelling	4
VIS 112	Core II: Personal Expression	4

VIS 113	Core III: Elements of Industry	4
	Electives	24
		Total: 48

Electives must be chosen from VIS, VISA, VISD, or VISF with approval of the advisor.

FILM MINOR

A student minoring in film must complete 28 credits.

Required Courses:

VIS 101	Creative Foundations I: Sketching	4
VIS 102	Creative Foundations II: Design	4
VIS 111	Core I: Visual Storytelling	4
	Electives	16
		Total: 28

Electives must be chosen from the following list and/or from VIS, VISD, or VISD with approval of the minor advisor.

Electives:

VISF 135	Essentials of Filmmaking	4
VISF 205	Screenwriting	4
VISF 240	Cinematography and Post-production	4
VISF 333	Audio Production	4
VISF 425	Interactive and VR Storytelling	4

FINE ART MINOR

A student minoring in fine art must complete 28 credits.

Required Courses:

VIS 101	Creative Foundations I: Sketching	4
VIS 102	Creative Foundations II: Design	4
VIS 112	Core II: Personal Expression	4
	Electives	16
		Total: 28

Electives must be chosen from the following list and/or from VIS, VISD, or VISF with approval of the minor advisor.

Electives:

VISA 194	Still Life Painting	4
VISA 264	Sculpture	4
VISA 284	Ceramics: Hand Building	4
VISA 285	Ceramics: Wheel Throwing	4
VISA 294	Printmaking	4
VISA 374	Ceramics	2; 4

GRAPHIC DESIGN MINOR

A student minoring in graphic design must complete 28 credits.

Required Courses:

VIS 101	Creative Foundations I: Sketching	4
VIS 102	Creative Foundations II: Design	4
VIS 113	Core III: Elements of Industry	4
	Electives	16
		Total: 28

Electives must be chosen from the following list and/or from VIS, VISA, VISD, or VISF with approval of the minor advisor.

Electives:

DSGN 370	Fundamentals of Packaging	4
PRDN 345	Environment Design	4
VISD 263	Web Design Studio	4
VISD 466	UI/UX Design Fundamentals	4

PHOTOGRAPHY MINOR

A student minoring in photography must complete 28 credits.

Required Courses:

VIS 101	Creative Foundations I: Sketching	4
VIS 102	Creative Foundations II: Design	4
VIS 111	Core I: Visual Storytelling	4
	Electives	16
		Total: 28

Electives must be chosen from the following list and/or from VIS, VISA, VISD, or VISF with approval of the minor advisor.

Electives:

VISD 156	Principles of Photography	4
VISD 356	Advanced Digital Fine Art Photography	4
VISD 358	Photo Assignments	1-4; 8

COURSES

ACCT - ACCOUNTING

ACCT 201 - PRINCIPLES OF FINANCIAL ACCOUNTING (4)
Study of the accounting concepts and procedures related to the preparation of financial statements according to accounting principles generally accepted in the United States.

ACCT 202 - PRINCIPLES OF FINANCIAL ACCOUNTING (3)
Study of the accounting concepts and procedures related to the preparation of financial statements according to accounting principles generally accepted in the United States. Prerequisite: ACCT 201.

ACCT 203 - PRINCIPLES OF MANAGERIAL ACCOUNTING (3)
Study of the accounting information used by managers in decision-making. Topics include cost accounting, break-even analysis, performance measurement, and budgeting. Prerequisite: ACCT 201.

ACCT 235 - FUNDAMENTALS OF INCOME TAX (2)
Fundamentals of United States federal income taxation and preparation of personal income tax returns. Credit cannot be earned for both ACCT 235 and ACCT 335.

ACCT 321 - INTERMEDIATE ACCOUNTING (4)
Study of financial accounting concepts and content, construction, and analysis of financial statements within the framework of generally accepted accounting principles. Prerequisite: ACCT 202.

ACCT 322 - INTERMEDIATE ACCOUNTING (4)
Study of financial accounting concepts and content, construction, and analysis of financial statements within the framework of generally accepted accounting principles. Prerequisite: ACCT 202.

ACCT 323 - INTERMEDIATE ACCOUNTING (4)
Study of financial accounting concepts and content, construction, and analysis of financial statements within the framework of generally accepted accounting principles. Prerequisite: ACCT 202.

ACCT 331 - MANAGERIAL COST ACCOUNTING (4)
Study of standards and budgets for control, cost-volume-profit relationships, discretionary and committed 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.

ACCT 335 - PERSONAL INCOME TAX (4)
Study of United States income taxation laws and regulations relating to tax planning and preparation of individual income tax returns. Credit cannot be earned for both ACCT 235 and ACCT 335.

ACCT 341 - ACCOUNTING INFORMATION SYSTEMS (4)
Study of computerized accounting information systems and programs, including internal controls, systems documentation and analysis, and accounting software packages. Prerequisite: ACCT 201, CIS 140 (or permission of instructor).

ACCT 350 - NOT-FOR-PROFIT AND GOVERNMENT ACCOUNTING (4)
Study of the application of accounting principles, procedures, and presentations for not-for-profit and government institutions. Offered alternate years. Prerequisite: ACCT 202.

ACCT 421 - ADVANCED ACCOUNTING (4)
Preparation of consolidated financial statements, partnership accounting, foreign currency transactions, and translation of foreign currency financial statements. Offered alternate years. Prerequisite: ACCT 322.

ACCT 430 - AUDITING (4)
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, or permission of instructor.

ACCT 435 - BUSINESS TAXATION (4)
Study of United States federal income taxation of corporations, partnerships, and fiduciaries. Offered alternate years. Prerequisite: ACCT 335.

ACCT 490 - INTERNSHIP (0-4; 4)
Practical experience allowing application of classroom learning in the major field of study. Requirements include a minimum of 120 hours of documented work experience. See the Internship Program in the Nondepartmental section of the Bulletin. Graded S or NC. (Course fees apply for students enrolled for 0 credit.)

ANTH - ANTHROPOLOGY

ANTH 225 - CULTURAL ANTHROPOLOGY (4)
Study of the origin and nature of culture, cultural universals, the uniformities and variations in human cultural development in a cross-cultural context. Field research methods are emphasized and field work is embedded in the course.

ART - 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, architecture, printmaking, and the minor arts. Will not apply toward a major or minor in art.

ART 324 - HISTORY OF WORLD ART (3)
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. Does not need to be taken in sequence

ART 325 - HISTORY OF WORLD ART (3)
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. Does not need to be taken in sequence.

ART 326 - HISTORY OF WORLD ART (3)
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. Does not need to be taken in sequence.

ART 330 - GENERATIVE AI IMAGES & DATA (4)
Through the study and use of image based generative AI students explore the major art style movements of the 20th century. Focus on finding and discussing embedded bias in the image data sets and output samples.

AUTO - AUTOMOTIVE

AUTO 114 - PERSONAL CAR CARE (3)
Study of the automobile with emphasis on general maintenance and service procedures. Specifically designed for the student without an automotive background. Two lectures and one laboratory per week. (Course fees apply.)

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. Prerequisite: Permission of instructor.

AUTO 135 - INTERNAL COMBUSTION ENGINE LABORATORY (2)
Laboratory study of engine components through disassembly, inspection, measurement, servicing, and reassembly of engines. (Course fees apply.) Corequisite: AUTO 134.

AUTO 145 - MANUAL DRIVE TRAINS AND AXLES (2)
Study of manual transmissions and the automotive drive train and axle system with emphasis on proper procedures in diagnosis, servicing, and repair. Two lectures per week. This class will help prepare the student for the ASE A3 Test.

AUTO 146 - MANUAL DRIVE TRAINS AND AXLES LABORATORY (2)
Laboratory study and application of technical information and skills required to diagnose, service, adjust, and perform test procedures on clutch assemblies, manual transmissions, transfer cases, drive lines, universal joints, bearings, and final drive assemblies. (Course fees apply.) Corequisite: AUTO 145.

AUTO 156 - ELECTRICAL SYSTEMS (2)
Study of the principles and operation of automotive electrical systems and components, including charging, cranking, ignition, lighting, and accessory systems. This class will help prepare the student for the ASE A6 Test. Two lectures per week.

AUTO 157 - ELECTRICAL SYSTEMS LABORATORY (2)
Laboratory study and application of technical information and skills required to diagnose service, and repair automotive starting, charging, ignition, lighting, and accessory systems. (Course fees apply.) Corequisite: AUTO 156.

AUTO 214 - ENGINE PERFORMANCE (2)
Study of logical diagnosis and troubleshooting techniques as applied to engine repair and drivability. Theory and operation of fuel and emission control systems. Emphasizes use of electronic instrumentation as a diagnostic tool. Two lectures per week. This class will help prepare the student for the ASE A8 Test. Prerequisite: AUTO 134, AUTO 135, AUTO 156, AUTO 157. Corequisite: AUTO 215.

AUTO 215 - ENGINE PERFORMANCE LABORATORY (2)
Laboratory study and application of diagnostic principles in troubleshooting drivability, emissions, and performance problems of automotive engines. Includes experience with a computerized dynamometer and electronic test equipment. (Course fees apply.) Corequisite: AUTO 214.

AUTO 280 - PRACTICUM (1-6; 6)
Laboratory work in Automotive chosen in consultation with the supervising laboratory instructor. Six credits maximum. One 3-hour laboratory per week per credit. (Course fees apply.)

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. (Course fees apply.) Prerequisite: AUTO 134, AUTO 135.

AUTO 291 - ASE A1 VALIDATION (4)

Validation of prior automotive education for National Institute of Automotive Service Excellence (ASE) certification with successful completion of the A1 Engine Repair test. Students with current National ASE certification A1 are granted four lower division automotive credits and are exempt from AUTO 134 and AUTO 135. (Course fees apply.)

AUTO 292 - ASE A3 VALIDATION (4)

Validation of prior automotive education for National Institute of Automotive Service Excellence (ASE) certification with successful completion of the A3 Manual Drive Train and Axles test. Students with current National ASE certification A3 are granted four lower division automotive credits and are exempt from AUTO 145 and AUTO 146. (Course fees apply.)

AUTO 293 - ASE A6 VALIDATION (4)

Validation of prior automotive education for National Institute of Automotive Service Excellence (ASE) certification with successful completion of the A6 Electrical/Electronic Specialist test. Students with current National ASE certification A6 are granted four lower division automotive credits and are exempt from AUTO 156 and AUTO 157. (Course fees apply.)

AUTO 335 - SUSPENSION AND STEERING SYSTEMS (2)

Study of automotive suspension and steering system theory, designs, and applications, including the integration of tires and wheels, principles of wheel alignment, and methods of suspension component diagnosis and repair. This class will help prepare the student for the ASE A4 Test. Two lectures per week. Offered odd years. Prerequisite: AUTO 145; AUTO 146. Corequisite: AUTO 336.

AUTO 336 - SUSPENSION AND STEERING SYSTEMS LABORATORY (2)

Laboratory study and application of suspension and steering systems diagnosis and service procedures, including tire service, repair, and balancing. Experience performing 4-wheel alignments on a variety of vehicles using state-of-the-art computerized alignment equipment. Offered odd years. (Course fees apply.) Corequisite: AUTO 335.

AUTO 337 - BRAKE SYSTEMS AND TRACTION CONTROL (2)

Study of automotive brake and traction control systems with specific emphasis on system theory of operation. Includes study of ABS (anti-lock braking systems) systems and their integration with other vehicle systems. This class will help prepare the student for the ASE A5 Test. Two lectures per week. Offered even years. Corequisite: AUTO 338.

AUTO 338 - BRAKE SYSTEMS AND TRACTION CONTROL LABORATORY (2)

Laboratory study and application of brake and ABS system troubleshooting and repair, brake system service, traction control system troubleshooting and repair. Experience using computerized servicing tools. Offered even years. (Course fees apply.) Corequisite: AUTO 337.

AUTO 355 - CLIMATE CONTROL SYSTEMS (2)

Study of climate control systems and service procedures as they relate to passenger vehicles and light trucks with emphasis on diagnosis and current control technologies. This class will help prepare the student for the ASE A7 Test. Offered odd years. Corequisite: AUTO 356.

AUTO 356 - CLIMATE CONTROL SYSTEMS LABORATORY (2)

Laboratory study and application of automotive climate control system service techniques; includes a broad range of diagnostic, repair, and service experiences. Offered odd years. (Course fees apply.) Corequisite: AUTO 355.

AUTO 357 - AUTOMATIC TRANSMISSIONS AND TRANSAXLES (2)

Study of passenger car and light truck automatic transmission and transaxle theory and service procedures. Emphasis on diagnosis and repair procedures of the latest control systems. This class will help prepare the student for the ASE A2 Test. Offered even years. Corequisite: AUTO 358.

AUTO 358 - AUTOMATIC TRANSMISSIONS AND TRANSAXLES LABORATORY (2)

Laboratory study and application of automatic transmission service procedures, repair procedures, and diagnosis of late-model control system problems using computerized test equipment. Offered even years. (Course fees apply.) Corequisite: AUTO 357.

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. Recommended: AUTO 286. Offered even years. (Course fees apply.) Prerequisite: AUTO 156, AUTO 157.

AUTO 391 - ASE A4 VALIDATION (4)

Validation of prior automotive education for National Institute of Automotive Service Excellence (ASE) certification with successful completion of the A4 Suspension and Steering test. Students with current

National ASE certification A4 are granted four upper division credits and are exempt from AUTO 335 and AUTO 336. (Course fees apply.)

AUTO 392 - ASE A5 VALIDATION (4)
Validation of prior automotive education for National Institute of Automotive Service Excellence (ASE) certification with successful completion of the A5 Brakes test. Students with current National ASE certification A5 are granted four upper division credits and are exempt from AUTO 337 and AUTO 338. (Course fees apply.)

AUTO 393 - ASE A7 VALIDATION (4)
Validation of prior automotive education for National Institute of Automotive Service Excellence (ASE) certification with successful completion of the A7 Heating and Air Conditioning test. Students with current National ASE certification A7 are granted four upper division credits and are exempt from AUTO 355 and AUTO 356. (Course fees apply.)

AUTO 394 - ASE A2 VALIDATION (4)
Validation of prior automotive education for National Institute of Automotive Service Excellence (ASE) certification with successful completion of the A2 Automatic Transmissions and Transaxles test. Students with current National ASE certification A2 are granted four upper division credits and are exempt from AUTO 357 and AUTO 358. (Course fees apply.)

AUTO 395 - ASE A8 VALIDATION (4)
Validation of prior automotive education for National Institute of Automotive Service Excellence (ASE) certification with successful completion of the A8 Engine Performance test. Based on successful completion of a standardized examination, students with current National ASE certification A8 are granted four upper division automotive credits and are exempt from AUTO 314 and AUTO 315. (Course fees apply.)

AUTO 396 - ASE T2 VALIDATION (3)
Validation of prior automotive education for National Institute of Automotive Service Excellence (ASE) certification with successful completion of the T2 Diesel Engines Test. Students with current National ASE certification T2 are granted three upper division automotive credits and are exempt from AUTO 365. (Course fees apply.)

AUTO 397 - ASE L1 VALIDATION (3)
Validation of prior automotive education for National Institute of Automotive Service Excellence (ASE) certification with successful completion of the L1 Advanced Engine Performance Specialist test. Students with current National ASE certification L1 are granted three upper division automotive credits and are exempt from AUTO 414. (Course fees apply.)

AUTO 414 - ADVANCED ENGINE PERFORMANCE (3)
Advanced study of automotive engine management systems theory and application. Specific emphasis on solving complicated drivability and emissions problems with use of sophisticated test equipment and logic. This class will help prepare the student for the ASE L1 Test. Two lectures and one laboratory per week. Offered odd years. (Course fees apply.) Prerequisite: AUTO 214, AUTO 215.

AUTO 434 - HIGH PERFORMANCE ENGINE TUNING (3)
Advanced study of aftermarket high performance engine modifications and tuning. Includes specific instruction in dynamometer tuning on late model GM, Ford, and Chrysler engines using aftermarket tuning hardware and software such as HP Tuners, AEM and SCT. Offered even years. (Course fees apply.) Prerequisite: AUTO 414.

AUTO 466 - BODY ELECTRONICS AND COMPUTER SYSTEMS (3)
Study of vehicle electronic and control systems that are not part of the power train. Includes theory of operation, diagnosis, and service of systems such as anti-theft, navigation, audio, video, remote vehicle controls, integrated lighting, communications, wipers, as well as others. Emphasizes heavy use of computerized test equipment, scanners, and wiring diagrams for diagnosis. Two lectures and one laboratory per week. Offered odd years. (Course fees apply.) Prerequisite: AUTO 156, AUTO 335, AUTO 337, AUTO 355.

AUTO 473 - HYBRID VEHICLES AND ALTERNATIVE FUELS (3)
Advanced study of theory and service of alternative vehicle fuel and propulsion systems such as LPG, natural gas, alcohol, electric, and hybrid systems. Two lectures and one laboratory per week. Offered even years. (Course fees apply.) Prerequisite: AUTO 214, AUTO 466, or permission of instructor.

AUTO 480 - ADVANCED PRACTICUM (1-6; 6)
Advanced laboratory work in Automotive chosen in consultation with the supervising laboratory instructor. Six credits maximum. One 3-hour laboratory per week per credit. (Course fees apply.) Prerequisite: Lower division work in chosen area.

AUTO 490 - INTERNSHIP (0-4; 4)
Individual contract arrangement involving students, faculty, cooperative businesses and organizations to gain experience in a work environment. Allows the student to apply advanced classroom learning. A minimum of 30 hours of approved activity/experience must be completed for each credit earned. Internship credit is restricted to the major field of study. A response paper will be done at the end of the

internship experience. See the Internship Program in the Nondepartmental section of the Bulletin. Graded S or NC. (Course fees apply for students enrolled for 0 credit.) Prerequisite: Approval by department.

AUTO 495 - COLLOQUIUM (0)
Experiences and lectures relating to current automotive industry trends, technologies, environmental, and employment issues. Open only to students of junior standing or higher. Automotive degree candidates must satisfactorily complete two quarters, at least one of which must be during the senior year. Grades S or NC. Additional course fees apply.

AVIA - AVIATION

AVIA 110 - INTRODUCTION TO FLIGHT (1)
An introduction to the experience of flight. The student will learn basic aviation principles and develop an understanding of the airplane. Will not apply toward a major or minor in Technology. Cannot be taken simultaneously with or after AVIA 141.

AVIA 125 - AIR TRAFFIC CONTROL & AIRSPACE (2)
An introduction to the U.S. National Airspace System with emphasis on understanding and applying critical elements of ATC in flight operations. Along with learning fundamental knowledge of the ATC system in the US, topics will include: navigational aids; airspace; communications; the Code of Federal Aviation Regulations; ATC procedures; control tower operations; non-radar operations; radar operations; and differing types of environment concerns within a geographic area. Offered odd years.

AVIA 135 - REMOTE PILOT GROUND SCHOOL (2)
An overview of the knowledge necessary to complete the Remote Pilot Certificate, including applicable Federal Aviation Regulations (FARs), the National Airspace System, aviation weather, weight and loading, and aerodynamics. Prepares the student to pass the FAA Remote Pilot Knowledge Test. (Course fees apply.)

AVIA 140 - SURVEY OF AVIATION (1)
Introduction to the aviation program and industry with the intention of preparing the student to begin flight training. Topics covered: Careers and opportunities; academics and flying; financial arrangements for training; aviation medical certification; ethics; substance use and its effect on pilot careers; professionalism, flight scheduling; industry standards; and familiarization with the Federal Aviation Administration (FAA), Transportation Security Administration (TSA), and National Transportation Safety Board (NTSB).

AVIA 141 - PRIVATE PILOT LECTURES (4)
Instructor-led discussions concerning aeronautical decision-making (ADM), crew resource management (CRM), aerodynamics, airworthiness, aeromedical factors, night and high altitude operations, weather hazards and reports, airport operations, flight planning, weight and balance (W&B), aircraft performance limitations, aircraft systems and abnormal/emergency procedures, and scenario based training to simulate more closely the actual flight conditions known to cause most fatal General Aviation (GA) accidents. Will also include an introduction and overview to the Federal Aviation Regulations (FARs) governing the applicable parts and subparts to the private pilot certificate. Prepares the student to pass the FAA Private Pilot Knowledge Test. (Course fees apply.)

AVIA 142 - PRIVATE PILOT FLIGHT TRAINING I (2)
Pre-solo aeronautical knowledge and flight training in preparation for solo flight. Topics of discussion will be reviewed from Private Pilot Lectures AVIA 141. (Course fees apply.) Prerequisite: To be taken or acquired prior to or concurrently with this course: AVIA 140, and AVIA 141, or permission of the Aviation Faculty.

AVIA 143 - PRIVATE PILOT FLIGHT TRAINING II (2)
Flight instruction in advanced takeoffs and landings, night operations, and cross country flight operations in preparation for solo cross country flight. Includes a review of flight maneuvers and knowledge necessary to pass the Private Pilot Practical Test. Topics of discussion will be reviewed from Private Pilot Lectures AVIA 141. (Instructor fees apply.) Prerequisite: AVIA 142.

AVIA 144 - PRIVATE PILOT FLIGHT TRAINING III (2)
Flight instruction in solo cross country flight operations, advanced takeoffs and landing, night operations, and advanced maneuvers necessary to complete the Private Pilot Practical test. Topics of discussion will be reviewed from Private Pilot Lectures AVIA 141. (Instructor fees apply.) Prerequisite: AVIA 143.

AVIA 225 - PILOT ORIENTATION (0)
Flight and ground instruction to provide orientation for pilots who have completed flight training outside Walla Walla University. Will include aircraft operation, checklist usage, and compliance with WWU Standard Operating Procedures.

AVIA 234 - AVIATION WEATHER (2)
Study of weather, concepts of weather, weather hazards, meteorological flight planning, aviation weather equipment, and consideration of weather

conditions as they relate to aircraft and flight performance. Offered odd years.

AVIA 256 - AIRCRAFT SYSTEMS AND BASIC MAINTENANCE (4)

Study of aircraft systems and basis maintenance. Topics will include: Engines of different types; systems such as propeller, electrical, environmental, hydraulic, pneumatics, fuel, ignition, lubrication, and pressurization systems, hydraulic systems, air conditioning and heating systems, oxygen systems, landing gear systems, brake systems, ice and rain detection/protection systems, fire detection/extinguishing systems, fuel systems, and flight controls. Offered even years.

AVIA 261 - INSTRUMENT PILOT LECTURES (4)

Study of aircraft flight instruments, instrument interpretation, instrument publications, regulations and procedures. Instructor-led discussions concerning aeronautical decision-making (ADM), crew resource management (CRM), aerodynamics, airworthiness, aeromedical factors, night and high altitude operations, weather hazards and reports, airport operations, flight planning, weight and balance (W&B), aircraft performance limitations, aircraft systems and abnormal/emergency procedures, and scenario based training to simulate more closely the actual flight conditions known to cause most fatal General Aviation (GA) accidents. Will also include an introduction and overview to the Federal Aviation Regulations (FARs) governing the applicable parts and subparts to the instrument pilot rating. Prepares student to pass the FAA Instrument Knowledge Test. (Course fees apply.) Prerequisite: AVIA 143 and private pilot certificate, or permission of the Aviation Faculty.

AVIA 262 - INSTRUMENT FLIGHT TRAINING (3)

Flight instruction in instrument departures, attitude instrument flying, holding procedures, instrument navigation, and enroute navigation. Topics of discussion will be reviewed from Instrument Pilot Lectures AVIA 261. (Instructor fees apply.) Prerequisite: AVIA 143 and private pilot certificate, or permission of the Aviation Faculty.

AVIA 263 - ADVANCED INSTRUMENT FLIGHT TRAINING (3)

Flight instruction in instrument approaches and arrival procedures. Includes the long IFR cross-country flight required for the instrument rating. Topics of discussion will be reviewed from Instrument Pilot Lectures AVIA 261. (Instructor fees apply.) Prerequisite: AVIA 262; To be taken prior to or concurrently with this course: AVIA 261.

AVIA 264 - CROSS COUNTRY FLIGHT (2)

Directed cross-country flight experience to meet the flight requirements for the instrument pilot flight training course outline. (Instructor fees apply.) Prerequisite: AVIA 143 and private pilot certificate, or permission of the Aviation Faculty.

AVIA 270 - AVIATION HUMAN FACTORS (2)

An overview of the role of psychology in the field of aviation. Explores the human factors' effect on such things as the design of aircraft systems, the selection and training of pilots, stress, fatigue, decision making, workload management, situational awareness, crew coordination, communication, human error, fitness, attitudes, and substance abuse. Prerequisite: AVIA 262, or permission of the Aviation Faculty.

AVIA 280 - PRACTICUM (1-6; 6)

Laboratory work in Aviation chosen in counsel with the supervising laboratory instructor. Six credits maximum. One 3-hour laboratory per week per credit. (Instructor fees apply.)

AVIA 325 - ADVANCED CROSS COUNTRY FLIGHT (2)

Directed cross-country flight experience to meet the flight requirements for the commercial pilot flight training course outline. (Course fees apply.) Prerequisite: AVIA 264, or permission of the Aviation Faculty.

AVIA 334 - COMMERCIAL PILOT LECTURES (4)

Study of advanced aircraft systems, advanced aerodynamics, commercial operations, commercial pilot maneuvers, and the commercial environment. Instructor-led discussions concerning aeronautical decision making (ADM), crew resource management (CRM), aerodynamics, airworthiness, aeromedical factors, night and high altitude operations, weather hazards and reports, airport operations, flight planning, weight and balance (W&B), aircraft performance limitations, aircraft systems and abnormal/emergency procedures, and scenario-based training to simulate more closely the actual flight conditions known to cause most fatal General Aviation (GA) accidents. Will also include an introduction and overview to the Federal Aviation Regulations (FARs) governing the applicable parts and subparts to the commercial pilot certificate. Prepares student to pass the FAA Commercial Knowledge Test. (Course fees apply.) Prerequisite: AVIA 143 and private pilot certificate.

AVIA 335 - COMMERCIAL FLIGHT TRAINING (3)

Advanced and complex aircraft flight training, including systems training, takeoffs and landings, and complex aircraft emergency procedures. Topics of discussion will be reviewed from Commercial Pilot Lectures AVIA 334. (Course fees apply.) Prerequisite: AVIA 143 and private pilot certificate.

AVIA 336 - ADVANCED COMMERCIAL FLIGHT TRAINING (3)

Advanced aircraft maneuvers and skills in preparation for the commercial checkride. Includes training of flight maneuvers and knowledge necessary to pass the Commercial Pilot Practical Test. Topics of discussion will be reviewed from Commercial Pilot Lectures AVIA 334. (Course fees apply.) Prerequisite: AVIA 335; To be taken prior to or concurrently with AVIA 334.

AVIA 337 - MISSION/HUMANITARIAN FLIGHT TRAINING (2)

High performance aircraft training, developing pilot skills related to mission/humanitarian flight operations. Training to include an introduction to unimproved runway flight operations and flying in mountainous terrain. Topics of discussion will be reviewed from Commercial Pilot Lectures AVIA 334. (Course fees apply.) Prerequisite: AVIA 336, or permission of the Aviation Faculty.

AVIA 340 - MULTI-ENGINE FLIGHT TRAINING (3)

Flight instruction in multi-engine aircraft including: takeoffs and landings, air work, single-engine operations, and emergency procedures. Topics of discussion will be reviewed from Commercial Pilot Lectures AVIA 334. Includes training of flight maneuvers and knowledge necessary to pass the Multi-Engine Rating Practical Test. (Course fees apply.) Prerequisite: AVIA 334 and AVIA 336 and commercial pilot single-engine certificate, or permission of the Aviation Faculty.

AVIA 355 - AVIATION SAFETY (2)

Focus on aircraft and airline safety with study and application of decision making, risk management, and handling of aircraft related emergencies. Topics of discussion: incidents; accidents; safety studies; and accident investigations with a focus on casual and contributing factors to those investigated events and any resulting changes to mitigate future risk. (Course fees apply.) Prerequisite: AVIA 270 or permission of the Aviation Faculty.

AVIA 356 - PRINCIPLES OF FLIGHT INSTRUCTION (2)

Study of the methods of flight instruction, course organization, lesson planning, student progression, and practical teaching experiences. Prepares the student for the Flight Instructor and Fundamentals of Instructing Knowledge Tests. (Course fees apply.) Prerequisite: AVIA 336, or permission of the Aviation Faculty.

AVIA 357 - FLIGHT INSTRUCTOR TRAINING (2)

Flight instruction introducing the methods of training for primary and advanced flight instruction, including upset/spin training. (Course Fees apply.) Prerequisite: AVIA 336 and commercial pilot certificate, or permission of the Aviation Faculty.

AVIA 358 - ADVANCED FLIGHT INSTRUCTOR TRAINING (3)

Flight instruction in preparation for the Certified Flight Instructor Practical Test. This includes training in primary and advanced flight instruction techniques. (Course fees apply.) Prerequisite: AVIA 357; To be taken prior to or concurrently AVIA 356.

AVIA 450 - AVIATION LAW AND REGULATIONS (2)

Study and application of the Code of Federal Regulations (CFR). Emphasis on 14 and 49 CFR parts. Discussion topics to include: constitutional law, administrative law, enforcement actions, and international law affecting aviation. Additionally, may include the consideration and analysis of aviation regulatory environments and processes, such as regulatory certifications, rulemaking, and legislation. Offered odd years. Prerequisite: GBUS 361, or permission of the Aviation Faculty.

AVIA 455 - CREW RESOURCE MANAGEMENT (2)

Study of the many facets of Crew Resource Management (CRM), situational awareness, information processing, communications, and decision making. Includes human factors and human error as it relates to today's modern aircraft. Students will have the opportunity to apply CRM principles in both single and multi-pilot roles. (Course fees apply.) Prerequisite: AVIA 355, or permission of the Aviation Faculty.

AVIA 458 - INSTRUMENT INSTRUCTOR FLIGHT TRAINING (2)

Flight instruction in preparation for the Instrument Flight Instructor Practical Test. (Course fees apply.) Prerequisite: AVIA 358 and certified flight instructor certificate, or permission of the Aviation Faculty.

AVIA 460 - MULTI-ENGINE INSTRUCTOR FLIGHT TRAINING (2)

Flight instruction in preparation for the Multi-Engine Flight Instructor Practical Test. (Course fees apply.) Prerequisite: AVIA 358 and certified flight instructor certificate, or permission of the Aviation Faculty.

AVIA 480 - ADVANCED PRACTICUM (1-6; 6)

Advanced laboratory work in Aviation in counsel with the supervising laboratory instructor. Six credits maximum. One 3 hour laboratory per week per credit. (Course fees apply.) Prerequisite: Lower division work in chosen area.

AVIA 490 - INTERNSHIP (0-4; 4)

Individual contract arrangement involving students, faculty, cooperative businesses and organizations to gain experience in a work environment. Allows the student to apply advanced classroom learning. A minimum of 30 hours of approved activity/experience

must be completed for each credit earned. Internship credit is restricted to the major field of study. A response paper will be done at the end of the internship experience. See the Internship Program in the Nondepartmental section of the Bulletin. Graded S or NC. (Course fees apply for students enrolled for 0 credit.) Prerequisite: Approval by department.

AVIA 496 - SENIOR SEMINAR (2)
Preparation for the aviation industry and job market to include the following: aviation resume design, technical interview training, simulator evaluation, ethics, and professionalism. Open only to Aviation students with senior standing. (Course fees apply.)

BIOL - BIOLOGY

BIOL 105 - CONTEMPORARY BIOLOGY (4)
Introduction to biological concepts and information for nonscience majors. Information is presented in the context of contemporary issues faced by society. BIOL 105 emphasizes the biology of the human organism and BIOL 106 emphasizes the functioning of ecosystems and the challenges of human impacts upon the environment. Course is designed to meet the general studies science requirements. One laboratory per week. Will not apply to a biology major or minor. (Course fees apply.)

BIOL 106 - CONTEMPORARY BIOLOGY (4)
Introduction to biological concepts and information for nonscience majors. Information is presented in the context of contemporary issues faced by society. BIOL 105 emphasizes the biology of the human organism and BIOL 106 emphasizes the functioning of ecosystems and the challenges of human impacts upon the environment. Course is designed to meet the general studies science requirements. One laboratory per week. Will not apply to a biology major or minor. (Course fees apply.)

BIOL 121 - ANATOMY AND PHYSIOLOGY (4)
Study of human (organ-system) anatomy and physiology with reference to cellular, genetic, and developmental relationships. First quarter focuses on the integumentary, skeletal, and muscular systems. Second quarter focuses on nervous, endocrine, and circulatory systems. Third quarter focuses on digestive, urinary, lymphatic, respiratory, and reproductive systems. Must be taken in sequence. One laboratory per week. Will not apply to biology major electives. High school or college chemistry strongly recommended. (Course fees apply.)

BIOL 122 - ANATOMY AND PHYSIOLOGY (4)
Study of human (organ-system) anatomy and physiology with reference to cellular, genetic, and developmental relationships. First quarter focuses on the integumentary, skeletal, and muscular systems. Second quarter focuses on nervous, endocrine, and circulatory systems. Third quarter focuses on digestive, urinary, lymphatic, respiratory, and reproductive systems. Must be taken in sequence. One laboratory per week. Will not apply to biology major electives. High school or college chemistry strongly recommended. (Course fees apply.) Prerequisite: BIOL 121.

BIOL 123 - ANATOMY AND PHYSIOLOGY (4)
Study of human (organ-system) anatomy and physiology with reference to cellular, genetic, and developmental relationships. First quarter focuses on the integumentary, skeletal, and muscular systems. Second quarter focuses on nervous, endocrine, and circulatory systems. Third quarter focuses on digestive, urinary, lymphatic, respiratory, and reproductive systems. Must be taken in sequence. One laboratory per week. Will not apply to biology major electives. High school or college chemistry strongly recommended. (Course fees apply.) Prerequisite: BIOL 122.

BIOL 141 - GENERAL BIOLOGY (4)
Study of the basic principles of biology of animals, plants, and microorganisms. Topics include the cell, physiology, genetics, development, taxonomy, and ecology. Must be taken in sequence. One laboratory per week. High school or college chemistry strongly recommended. (Course fees apply.)

BIOL 142 - GENERAL BIOLOGY (4)
Study of the basic principles of biology of animals, plants, and microorganisms. Topics include the cell, physiology, genetics, development, taxonomy, and ecology. Must be taken in sequence. One laboratory per week. High school or college chemistry strongly recommended. (Course fees apply.) Prerequisite: BIOL 141.

BIOL 143 - GENERAL BIOLOGY (4)
Study of the basic principles of biology of animals, plants, and microorganisms. Topics include the cell, physiology, genetics, development, taxonomy, and ecology. Must be taken in sequence. One laboratory per week. High school or college chemistry strongly recommended. (Course fees apply.) Prerequisite: BIOL 142.

BIOL 150 - INTRODUCTION TO THE MARINE SCIENCES (4)
Introduction to the global oceans and seas, including physical, biological and societal aspects. Students will also be introduced to the basics of marine organism husbandry for laboratory use. Includes a survey of career prospects in the marine sciences. One laboratory per week.

BIOL 214 - BIOLOGICAL RESEARCH I (1-2; 2)

Student will work with a departmental advisor on research activities such as a literature search, preliminary experiments, data collection, or data analysis. Prerequisite Permission of the instructor.

BIOL 216 - INTRODUCTION TO BIOLOGICAL RESEARCH I (WD) (3)

Study of the process of science throughout history, current principles of scientific research, and the function of the scientific method. Will include methods of literature research, scientific writing, and formal oral presentations. Fulfills the Writing in the Disciplines Requirement (WD). Prerequisite: BIOL 143.

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. One laboratory per week. Will not apply to biology major. (Course fees apply.) Prerequisite: BIOL 141, BIOL 142 or CHEM 105 or permission of instructor.

BIOL 250 - BIOSTATISTICS (4)

Practice and theory of statistical methods in quantitative biology. One laboratory per week. Prerequisite: BIOL 143, MATH 121, MATH 122, or permission of instructor.

BIOLOGICAL SCIENCES UPPER DIVISION PREREQUISITES

BIOL 141, BIOL 142, BIOL 143 are prerequisites for all upper-division courses.

BIOL 305 - GENERAL ECOLOGY (4)

Study of the relationship of plants and animals, both as individuals and assemblages, to their physical and biological environment. Laboratory work includes field studies designed to examine ecological principles. One laboratory per week. (Course fees apply.)

BIOL 314 - BIOLOGICAL RESEARCH II (1-2; 2)

Student will work with a departmental advisor on research activities such as a literature search, preliminary experiments, data collection, or data analysis. Prerequisite Permission from of the instructor.

BIOL 326 - JOURNAL CLUB: (1; 3)

Students will read primary science research articles on a selected topic and then meet weekly to informally discuss and critically analyze the article, understand the methods, data and figures, and identify the article's broader implications. May be repeated for credit when topics vary. Prerequisite BIOL 250.

BIOL 360 - PLANT BIOLOGY (4)

Fundamental principles of plant biology with emphasis on morphology, anatomy, taxonomy, physiology, ecology, and natural history of algae, non-vascular, and vascular plants. One laboratory per week. Offered alternate years. (Course fees apply.)

BIOL 381 - CELL BIOLOGY I: STRUCTURE AND BIOENERGETICS (4)

The first quarter of a year-long sequence that covers the cell and molecular biology, and biochemistry of living cells. Topics include structure and function of biological membranes and subcellular organelles, metabolism and bioenergetics, cytoskeleton and motility, signal transduction, and cell-cell interactions. Priority will be given to biology, biochemistry, and bioengineering majors. One laboratory per week. (Course fees apply.) Corequisite: CHEM 321 or permission of instructor.

BIOL 382 - CELL BIOLOGY II: GENETICS AND MOLECULAR BIOLOGY (4)

The second quarter of a year-long sequence that covers the cell and molecular biology, and biochemistry of living cells. A study of DNA replication, mutation and repair, the transfer of information from DNA to protein, prokaryotic gene regulation, and the principles of heredity in individuals and populations. Laboratory will include an introduction to recombinant DNA technology. One laboratory per week. (Course fees apply.) Prerequisite: BIOL 381 and CHEM 321.

BIOL 383 - CELL BIOLOGY III: GENOMICS AND REGULATION (4)

The third quarter of a year-long sequence that covers the cell and molecular biology and biochemistry of living cells. Advances in genomics, epigenetics, and control of gene expression. Topics will be explored in the context of development; growth, differentiation, morphogenesis, and cancer. One laboratory per week. (Course fees apply.) Prerequisite: BIOL 381, BIOL 382, and CHEM 322.

BIOL 403 - ORNITHOLOGY (4-5)

Study of birds of North America, with emphasis on physiology, identification, migration, and life histories. One laboratory per week. (College Place campus - 4 quarter hours; Rosario Beach Marine Laboratory - 5 quarter hours.) A weekend field trip is required. Offered alternate years. (Course fees apply.)

BIOL 405 - NATURAL HISTORY OF VERTEBRATES (4-5)

Study of vertebrates with emphasis on natural history, ecology, physiology, and taxonomy. One laboratory per week. (College Place campus - 4 quarter hours; Rosario Beach Marine Laboratory - 5 quarter hours.) A weekend field trip is required. Offered alternate years. (Course fees apply.)

BIOL 407 - ENTOMOLOGY (4-5)

Study of the insects of the world. Topics include their diversity, behavior, ecology, anatomy, physiology, and relationships with humans. Field and laboratory activities emphasize sampling, specimen preparation, and identification of local species.

BIOL 410 - LIMNOLOGY (4-5)

Introduction to the history, structure, physical characteristics, and biota of lakes, river, and streams and to the physical, biological, and geochemical processes occurring there. One laboratory per week with some Sunday labs. (College Place campus - 4 quarter hours; Rosario Beach Marine Laboratory - 5 quarter hours.) (Course fees apply.) Offered alternate years on College Place campus. Prerequisite Junior standing in a science, mathematics, or engineering major, or consent of instructor.

BIOL 414 - RESEARCH IN BIOLOGY (1-4; 4)

The student will work with a departmental advisor on an independent basis. Research may include data collection and analysis and must include demonstration of scientific communication (manuscript, poster, presentation). Prerequisite BIOL 216 and permission of instructor.

BIOL 419 - FIELD STUDIES (1-2; 6)

A short-term intensive study of flora and fauna in a region of special biological interest, along with their interrelations with one another. Orientation and follow-up required. Prerequisite: BIOL 143.

BIOL 421 - CANCER BIOLOGY (3-5)

A study of the molecular, cellular, biochemical, and genetic basis of cancer. Topics will include the hallmarks of cancer, cell cycle, signal transduction, oncogenes, tumor suppressor genes, angiogenesis, genome integrity, programmed cell death, and metastasis. Primary research literature will be reviewed. (College Place campus – 3 quarter hours; Rosario Beach Marine Laboratory – 5 quarter hours.) Offered alternate years.

BIOL 422 - CANCER BIOLOGY LABORATORY (1)

Laboratory integrated with BIOL 421. A study of tissue histology and methods used for immunoblotting, immunohistochemistry, and flow cytometry. (Course fees apply.) Corequisite: BIOL 421.

BIOL 426 - SYSTEMATIC BOTANY (4-5)

Study of the principles of plant classification, together with a systematic survey of vascular plants, with emphasis on natural history and ecology. One laboratory per week. (College Place campus - 4 quarter hours; Rosario Beach Marine Laboratory - 5 quarter hours.) Offered as needed. (Course fees apply.)

BIOL 430 - MOLECULAR BIOLOGY TECHNIQUES (4-5)

Introduction to the theory and practice of modern molecular techniques. The laboratory will include techniques such as the purification and analysis of DNA, RNA, and protein, recombination DNA procedures, mutagenesis, hybridization methods, PCR, and DNA sequencing technology. Two laboratories per week. (College Place campus - 4 quarter hours; Rosario Beach Marine Laboratory - 5 quarter hours). Offered as needed. (Course fees apply.) Prerequisite: BIOL 382, CHEM 322, CHEM 325.

BIOL 435 - 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. One laboratory per week. Offered as needed. Prerequisite: BIOL 381, BIOL 382 and CHEM 322; or permission of department.

BIOL 440 - HUMAN ANATOMY (4)

A study of human anatomy with an emphasis on the relationship between structure and function. Students will explore anatomy with virtual dissection and interactive technology that creates 3D visualizations from MRI and CT scans. Normal structures will be compared with injured and diseased structures. One laboratory per week. (Course fees apply.)

BIOL 445 - ADVANCED MICROBIOLOGY (4)

Study of the principles of morphology, physiology, and function of bacteria and other microorganisms. One laboratory per week. Offered alternate years. (Course fees apply.) Prerequisite: BIOL 143 and CHEM 143.

BIOL 449 - HISTOLOGY (4-5)

Study of the microscopic anatomy of cells, tissues, and organs, including reference to their functions. Emphasis placed on vertebrate tissues. Two laboratories per week. (College Place campus - 4 quarter hours; Rosario Beach Marine Laboratory - 5 quarter hours). Offered as needed.

BIOL 450 - PALEOBIOLOGY (4-5)

Study of the biology, diversity, and history of ancient life and of the principles and methods employed in interpreting life of the past. Special consideration will be given to the fossil record of western North America. (College Place campus - 4 quarter hours; Rosario Beach Marine Laboratory - 5 quarter hours). Offered as needed.

BIOL 464 - ANIMAL PHYSIOLOGY (4)

Study of animal physiology with emphasis on integration of organ systems. One laboratory per week. (Course fees apply.) Prerequisite: BIOL 381.

BIOL 465 - ECOLOGICAL PHYSIOLOGY (3)

Study of how an animal's physiology helps it survive in its unique environment. Special attention will be

focused on internal physiological specializations and how these enable an animal to cope with a range of environments and habitats. Strongly recommended prerequisite: BIOL 381. Offered alternate years. Prerequisite: BIOL 143.

BIOL 466 - IMMUNOLOGY (4)

Study of the molecular and cellular bases of the immune response including clinical applications. One laboratory per week. (Course fees apply.) Prerequisite: BIOL 382.

BIOL 470 - BIOPHYSICS (4)

Study of the structure and function of biological systems from the perspective of the physical sciences. Prerequisite BIOL 143; PHYS 213 or PHYS 253; MATH 171; or permission of instructor. Cross-Listed as: PHYS 470.

BIOL 471 - COMPUTING FOR BIOLOGY AND BIOINFORMATICS (4)

Introduction to computational tools commonly used in the biological sciences including image and video analysis, spatial data analysis, biological molecule modeling, genetic sequence handling, phylogenetics, transcriptomics, and genomics. Examples from recent published literature including selections in the medical and environmental sciences are used. Prerequisite: BIOL 250.

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 biology majors or with permission of the instructor. Recommended for senior year.

BIOL 486 - TISSUE ENGINEERING (4)

Study of tissue functionality and biomaterial design including the basic concepts underlying physiological responses to wounds and foreign materials. Topics include biomaterial scaffolds, relevant cell types, soluble regulators or their genes, and mechanical loading and culture conditions. Prerequisite: BIOL 381 with C or better, or permission of instructor. Cross-Listed as: ENGR 486.

BIOL 495 - COLLOQUIUM (0)

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 biology majors. Graded S or NC.

BIOL 496 - SENIOR SEMINAR (2)

Presentation and discussion of current topics in biology. Students will read scientific articles and lead and participate in weekly discussions. Graded S or NC. Prerequisite: BIOL 250 and senior standing.

Rosario Beach Marine Laboratory Courses

BIOL 141, BIOL 142, BIOL 143 or equivalent is prerequisite for all courses listed below. Rosario Beach Marine Laboratory courses of 5 credits include an additional credit for the requirement of a research problem (See BIOL 403, BIOL 405, BIOL 410, BIOL 426, BIOL 430, BIOL 450). Normally a maximum of two of the following courses are taught during a summer; see the Summer Bulletin.

All of the following except BIOL 440 qualify as marine-oriented courses.

BIOL 417 - BEHAVIOR OF MARINE ORGANISMS (5)

A study of inter- and intraspecific behaviors of marine animals and their behavioral responses to the physical environment. The course involves laboratory experience, field observations, and research project. Prerequisite A course in animal behavior, organismal biology and/or psychology.

BIOL 458 - MARINE BIOLOGY (5)

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

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 PHYCOLOGY (5)

A systematic survey of marine algae, covering the principles of their classification, natural history, ecology, physiology, and practical use.

BIOL 468 - COMPARATIVE PHYSIOLOGY (5)

Comparative study of the physiology and life processes of animals with emphasis on invertebrates. Prerequisite BIOL 381.

BIOL 475 - MARINE INVERTEBRATES (5)

A study of the biology of selected groups of marine invertebrates.

CDEV - CAREER DEVELOPMENT

CDEV 100 - EXPERIENTIAL PROGRAM (6; 18)

May be taken only if supervision is in conjunction with an approved Cooperative Educational experience. Credit will not apply toward graduation. Graded S or NC. (Course fees apply.)

CDEV 101 - EXPERIENTIAL LEARNING (0-3; 3)

Practical experience in an off-campus setting through a contractual agreement among the student, faculty advisor, co-op coordinator and off-campus supervisor before work begins. The agreement will be supervised by the Student Development Center through the cooperative education program and meet the criteria for cooperative education as outlined in the bulletin. Students will work in a career area of interest with the goal of defining a career focus or major. Graded S or NC.

CDEV 210 - CAREER EXPLORATION AND PREPARATION (0-1)

Development of career exploration and decision making skills, allowing the student to implement appropriate job search strategies. This would include resume writing, interviewing techniques and development of positive work habits and attitudes. Graded S or NC for 0 credits. Graded A-F for 1 credit. (Course fees apply.)

CHPL - CHAPLAINCY

AdventHealth University Classes:
The following classes with a CHPL or RELT prefix are offered in collaboration with AdventHealth University. Courses taken with a CHPL prefix are offered on a semester schedule. Students enrolling in courses offered in the fall semester will start coursework in August and complete the course in December. Classes offered during the spring semester will begin in January and end in May. Departmental permission required.

CHPL 505 - HISTORY AND ROLE OF CHAPLAINS (4.5)

Chaplains provide pastoral care in specialized contexts and have played a role in providing care in military, healthcare, hospice, corporate, congregational, and human services organizations, as well as a variety of other settings. This course examines the history of chaplaincy and discusses the variety of contexts in which chaplains provide pastoral and spiritual care. This is achieved through the exploration of a theology of spiritual care that informs the ministry of chaplaincy. Departmental permission required.

CHPL 510 - SPIRITUAL CARE AND CHAPLAINCY (4.5)

Chaplains are pastoral specialists who have developed the competencies to care for the human spirit. This course will examine the unique role of the healthcare chaplain as an integral member of an interdisciplinary team. Students will assess best practices on integrating spiritual care into the daily life of those with whom they serve. They will also learn how to be more intentional in their use of self and power when relating to patients, families and staff. Departmental permission required.

CHPL 530 - SPIRITUAL CARE AND CHAPLAINCY (1.5)

This course will explore the range of spiritual need across the individual and family life cycle as it intersects with illness and hospitalization. We will examine how chronic disease impacts the individual and family, using family systems theory and developmental theory to understand the individual and family dynamics of care. Departmental permission required.

CHPL 540 - SPIRITUAL CARE IN PEDIATRICS (1.5)

This course explores the unique role of the spiritual care provider in the pediatric hospital or unit. We will examine how the chaplain serves as advocate for children, partner in support for staff and clinical providers, provides context in the midst of difficult medical and ethical decisions and helps children find their meaning and hope in developmentally appropriate ways in the midst of their hospitalization, from NICU to the general pediatric unit. Departmental permission required.

CHPL 550 - SPIRITUAL CARE IN PEDIATRICS (1.5)

This course will explore the different spiritual, religious and existential beliefs about dying and death, and examine the role of the spiritual care provider in helping patients and families navigate the meaningfulness of belief. We will review issues of emotional and spiritual distress, conflicts that can occur between those who are dying and those they are in relationship with, as well as learn about the concepts of hospice care, differentiated from palliative care. Some time will be spent looking at the role of the spiritual care provider in providing bereavement support for families and other significant relationships of the deceased. Departmental permission required.

CHPL 560 - SPIRITUAL CARE IN PEDIATRICS (1.5)

This course explores the role of the spiritual care provider in the context of a general hospital. We will explore different disease processes, and how a diagnosis impacts the spiritual needs of a patient and their family. Issues of helplessness, dynamics of hope, exploration of family and inter-professional dynamics will be explored, along with caring for the hospital as your parish and strategies for communicating spiritual indicators with clinical team members will be examined. Departmental permission required.

CHPL 570 - SPIRITUAL CARE AND MENTAL ILLNESS (1.5)

Mental health has two dimensions—absence of mental illness and presence of a well-adjusted personality that contributes effectively to the life of the community. Ability to take responsibility for one's own actions,

flexibility, high frustration tolerance, acceptance of uncertainty, involvement in activities of social interest, acceptance of handicaps, tempered self-control, harmonious relationships to self, others, including God, are the essential features of mental health. Spirituality is an important aspect of mental health. Students will learn to analyze and evaluate the appropriate role of the chaplain in the dignified and respectful care of patients with mental illness. Departmental permission required.

CHPL 580 - SPIRITUAL CARE AND TRAUMA (1.5)

This course will introduce students to the concept of psychological first aid for those who have been impacted by an emergency, mass casualty event, or natural disaster. Students will explore how to identify spiritual distress and interventions for building healthy recovery and long-term resilience. What is the chaplain's role in responding to emergency, crisis or trauma? Departmental permission required.

CHEM - CHEMISTRY

CHEM 105 - SURVEY OF CHEMISTRY (5)

Survey of topics in inorganic, organic, and biochemistry relevant to nursing and allied health professions. Does not apply toward a chemistry major or minor. Four lectures and one laboratory per week. (Course fees apply.)

CHEM 141 - GENERAL CHEMISTRY (3)

Study of the structure and states of matter; atomic and molecular theory, including valency, periodicity, and bonding; solutions and equilibria, stoichiometry, kinetics, and thermodynamics; and the descriptive chemistry of metals and nonmetals. Must be taken in sequence. Prerequisite To be taken prior to or concurrently with this course: MATH 121, MATH 122 or equivalent. Corequisite: CHEM 144.

CHEM 142 - GENERAL CHEMISTRY (3)

Study of the structure and states of matter; atomic and molecular theory, including valency, periodicity, and bonding; solutions and equilibria, stoichiometry, kinetics, and thermodynamics; and the descriptive chemistry of metals and nonmetals. Must be taken in sequence. Prerequisite: CHEM 141; To be taken prior to or concurrently with this course: MATH 121, MATH 122 or equivalent. Corequisite: CHEM 145.

CHEM 143 - GENERAL CHEMISTRY (3)

Study of the structure and states of matter; atomic and molecular theory, including valency, periodicity, and bonding; solutions and equilibria, stoichiometry, kinetics, and thermodynamics; and the descriptive chemistry of metals and nonmetals. Must be taken in sequence. Prerequisite: CHEM 142; To be taken prior to or concurrently with this course: MATH 121, MATH 122 or equivalent. Corequisite: CHEM 146.

CHEM 144 - GENERAL CHEMISTRY LABORATORY (1)

Laboratory integrated with CHEM 141. One laboratory per week. (Course fees apply.) Corequisite: CHEM 141.

CHEM 145 - GENERAL CHEMISTRY LABORATORY (1)

Laboratory integrated with CHEM 142. One laboratory per week. (Course fees apply.) Corequisite: CHEM 142.

CHEM 146 - GENERAL CHEMISTRY LABORATORY (1)

Laboratory integrated with CHEM 143. One laboratory per week. (Course fees apply.) Corequisite: CHEM 143.

CHEM 301 - CHEMICAL EQUILIBRIUM AND ANALYSIS (3)

Study of chemical equilibrium through a perspective of applications in analytical chemistry. Consideration is given to solubility as affected by competing equilibria, to acid-base equilibria in aqueous solutions, and to complexation equilibria; includes an introduction to oxidation reduction equilibria. Prerequisite: CHEM 143. Corequisite: CHEM 405.

CHEM 303 - ANALYTICAL INSTRUMENTAL METHODS (3)

Primary emphasis is on electrochemistry, optical spectroscopies, mass spectrometry, and separations techniques. Consideration is given to both the instrumentation and techniques of interest in chemical analysis. Offered on demand. Prerequisite: CHEM 301, CHEM 305, or permission of instructor. Corequisite: CHEM 405.

CHEM 305 - CHEMICAL LABORATORY TECHNIQUES (1)

Study and application of chemical techniques to upper division laboratories and research in chemistry and biochemistry. Includes best practices for keeping the laboratory notebook and for writing reports, techniques in chemical and instrumental analysis, and use of statistics. One laboratory each week. Only open to chemistry and biochemistry majors or by permission of the instructor. Prerequisite CHEM 143, CHEM 146. Corequisite: CHEM 301 or CHEM 321.

CHEM 321 - ORGANIC CHEMISTRY (4)

Study of the principles of organic chemistry including the properties, reactions and spectroscopic analysis of organic compounds. Must be taken in sequence. Prerequisite: CHEM 143. Corequisite: CHEM 324.

CHEM 322 - ORGANIC CHEMISTRY (4)

Study of the principles of organic chemistry including the properties, reactions, and spectroscopic analysis of organic compounds. Must be taken in sequence. Prerequisite: CHEM 143. Corequisite: CHEM 325.

CHEM 324 - ORGANIC CHEMISTRY LABORATORY (1)

Introduction to microscale techniques of preparation, purification, and identification of organic compounds. Includes spectroscopic techniques. One laboratory per week. (Course fees apply.) Corequisite: CHEM 321.

CHEM 325 - ORGANIC CHEMISTRY LABORATORY (1)

Introduction to microscale techniques of preparation, purification, and identification of organic compounds. Includes spectroscopic techniques. One laboratory per week. (Course fees apply.) Corequisite: CHEM 322.

CHEM 350 - QUANTUM CHEMISTRY (4)

Study of quantum theory with applications to atomic structure, molecular structure, and spectroscopy. Offered alternate years. May be taken either before or after CHEM 352 and CHEM 353. Prerequisite: MATH 172; PHYS 213 or PHYS 253; CHEM 143. Corequisite: CHEM 405 or permission of instructor. Cross-Listed as: PHYS 310.

CHEM 352 - PHYSICAL CHEMISTRY I (4)

Survey of important topics in physical chemistry: thermodynamics applied to phase and chemical equilibria, kinetics, transport properties, and molecular dynamics. CHEM 352 and CHEM 353 must be taken in sequence. Prerequisite: MATH 172; PHYS 213 or PHYS 253; CHEM 143. Corequisite: CHEM 405 or permission of instructor. Cross-Listed as: PHYS 313.

CHEM 353 - PHYSICAL CHEMISTRY II (3)

Continued survey of important topics in physical chemistry: thermodynamics applied to phase and chemical equilibria, kinetics, transport properties, and molecular dynamics. CHEM 352 and CHEM 353 must be taken in sequence. Prerequisite: CHEM 352. Corequisite: CHEM 405 or permission of instructor.

CHEM 383 - INTERMEDIATE ORGANIC CHEMISTRY (3)

Further study of reaction mechanisms, spectroscopic techniques, and synthetic transformations, including retrosynthesis. Prerequisite: CHEM 322. Corequisite: CHEM 386 or permission of the instructor.

CHEM 386 - INTERMEDIATE ORGANIC CHEMISTRY LABORATORY (1)

The use of microscale techniques for the preparation, purification and identification of organic compounds. Includes spectroscopic techniques. Intended for majors and interested students. One laboratory per week. (Course fees apply.) Corequisite: CHEM 383.

CHEM 390 - CAREER PREPARATION SEMINAR (0)

Course includes the preparation of materials and interview skills necessary for successful transition to graduate school, professional school, or the workplace. Students also attend several chemistry career presentations by alumni and others. Open only to chemistry and biochemistry majors with junior or senior standing. Graded S or NC.

CHEM 405 - INTEGRATED CHEMISTRY LABORATORY (1; 6)

A research laboratory integrating the major disciplines in chemistry: analytical, biochemical, inorganic, organic, and physical. Course will be synchronized with lecture courses for a given quarter, and will include experimental, analytical, and written components. Six quarters are required of BS Chemistry majors and four quarters for BS Biochemistry majors. Open to chemistry and biochemistry majors or by permission of the instructor. Prerequisite or Corequisite: CHEM 305 Prerequisite: CHEM 305 (or corequisite). Corequisite: CHEM 305 (or prerequisite).

CHEM 427 - ORGANOMETALLICS (4)

Examines transformations of organotransition-metal species with an emphasis on basic mechanisms, structure-reactivity relationships, and applications in organic synthesis. Offered alternate years. Prerequisite: CHEM 383, CHEM 386. Corequisite: CHEM 405.

CHEM 429 - ORGANIC STRUCTURAL PROBLEMS (4)

Application of nuclear magnetic resonance and mass spectrometry to organic structural determination. Three lectures and one laboratory per week. Offered alternate years. Prerequisite: CHEM 322.

CHEM 431 - FOUNDATIONS OF BIOCHEMISTRY (4)

Application of chemical principles to the study of proteins, nucleic acids, enzyme catalysis, membrane transport, bioenergetics, and metabolic pathways. An introduction to cellular signaling is included. Recommended: BIOL 381, BIOL 382. Must be taken in sequence. Prerequisite: CHEM 322.

CHEM 432 - FOUNDATIONS OF BIOCHEMISTRY (3)

Application of chemical principles to the study of proteins, nucleic acids, enzyme catalysis, membrane transport, bioenergetics, and metabolic pathways. An introduction to cellular signaling is included. Recommended: BIOL 381, BIOL 382. Must be taken in sequence. Prerequisite: CHEM 322.

CHEM 433 - FOUNDATIONS OF BIOCHEMISTRY (3)

Application of chemical principles to the study of proteins, nucleic acids, enzyme catalysis, membrane transport, bioenergetics, and metabolic pathways. An introduction to cellular signaling is included. Recommended: BIOL 381, BIOL 382. Must be taken in sequence. Prerequisite: CHEM 322.

CHEM 442 - INORGANIC CHEMISTRY (4)
Study of the physical and chemical properties of inorganic and coordination compounds. Focus is on reaction mechanisms and the relationship between structure and reactivity. Places emphasis on the use of molecular orbital, ligand field, and crystal field theories as tools to understanding the structure and reactivity of inorganic compounds. Sections on coordination compounds will highlight synthesis, reactivity trends, and recent advances in coordination chemistry. Offered on demand. Prerequisite: CHEM 143, CHEM 350, or permission of instructor. Corequisite: CHEM 405.

CHEM 479 - DIRECTED RESEARCH/PROJECT (1-3; 6)
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. Open only to chemistry and biochemistry majors.

CHEM 497 - COMMUNICATING CHEMISTRY (WD) (2)
Discussion and application of oral, written, and visual communication skills necessary for majors to attain proficiency with the scientific literature and to contribute to scientific literacy in society at large. Open only to chemistry and biochemistry majors with senior standing. Fulfills the Writing in the Disciplines Requirement (WD).

CIS - COMPUTER INFORMATION SYSTEMS

CIS 140 - BUSINESS ANALYTICS WITH MICROSOFT EXCEL (4)
Study of two key productivity packages used in businesses today to analyze and visualize data: Microsoft Excel and Access. Use of spreadsheets and databases to solve real-world problems, with special emphases on business intelligence and analytics. Prerequisite: Working knowledge of personal computers and Microsoft Office.

CIS 210 - DATA COMMUNICATIONS AND NETWORKS (3)
Introduction to the concepts and tools needed to set-up and maintain a secure computer network. Students will be able to describe the OSI model, configure wired and wireless local area networks utilizing switches and routers, set-up IP address spaces including sub-nets, configure network services such as DHCP and DNS, troubleshoot network problems, and understand best practices for security and reliability. Offered odd years. Cross-Listed as: CPTR 210.

CIS 211 - LINUX AND WINDOWS SYSTEM ADMINISTRATION (3)
Introduction to the concepts and skills needed to work as a professional system administrator in both Linux and Windows environments. Students will install and configure operating system software, set-up and manage user accounts and shared resources, configure resource permissions in complex scenarios, plan and perform backups and other disaster-preparedness tasks, monitor servers for security breaches and other issues, troubleshoot common problems, and automate repetitive processes. Offered even years. Cross-Listed as: CPTR 211.

CIS 240 - BUSINESS ANALYTICS AND DATA VISUALIZATION (4)
Study of business analytical methods and data visualization tools, including application software such as Tableau, Python, Excel, and Power BI. Prerequisite: CIS 140.

CIS 301 - INFORMATION SYSTEMS AND BUSINESS INTELLIGENCE (4)
An examination of the fundamentals of business intelligence and information systems as operational mechanisms of the management process and how to solve real-world business problems, with a special emphasis on business analytics. Prerequisite: CIS 140.

CIS 308 - SOCIAL, LEGAL, AND ETHICAL ISSUES FOR COMPUTING TECHNOLOGY (4)
Examination of the role of computing in modern society with a focus on social and ethical issues from a Christian world view. Topics may include copyright, privacy, computer crime, constitutional matters, ethical issues relating to computer gaming, risks of computer failures, evaluating reliability of computer models, trade and communications in the global village, computers in the workplace, responsibilities of the computer professional. Cross-Listed as: CPTR 308.

CIS 326 - NETWORK AND SYSTEM SECURITY (4.5)
Modern organizations know that even the strongest systems can be vulnerable to cyber-attacks. As a result, jobs in cybersecurity are rapidly expanding as companies look to secure their digital assets. This course will teach you how to secure those assets by identifying and fixing potential security vulnerabilities. By the end of the course, you will be able to identify and remedy common network and systems vulnerabilities. This online class has optional live sessions. Cross-Listed as: CYBS 326.

CIS 490 - INTERNSHIP (0-4)

Practical experience allowing application of classroom learning. Requirements include a minimum of 120 hours of documented work experience. See the Internship Program in the Nondepartmental section of the bulletin. Graded S or NC. (Course fees apply for students enrolled for 0 credit.)

COMM - COMMUNICATION

COMM 135 - ESSENTIALS OF FILMMAKING (4)
Basic cinematic language and processes of preproduction (concept, story, planning), production (camera operation, cinematography, directing), and post-production (sound and picture editing). Students create multiple films. (Course fees apply.) Cross-Listed as: VISF 135.

COMM 145 - MEDIA AND CULTURE (4)
Introduction to the development and influence of media in communication globally and to principles of media literacy. Emphasis on understanding culture's practices, perspectives, and products and the social, economic, political, and psychological factors influencing media users.

COMM 148 - CREATIVITY AND INNOVATION (3)
The ability to think creatively and foster innovation is a fundamental skill for success in any discipline. This course provides an overview of the theories of creativity, helps students explore the creative process, and instills a practical understanding of creative thinking concepts students can apply to their personal and professional life.

COMM 205 - SCREEN WRITING (4)
Students will journey behind the screen to create films from idea to script. Participants will study and write short films to be produced by students in other production or studio courses. Topics include story, analysis, formula, and screenplay formatting.

COMM 245 - DIRECTED MEDIA PRODUCTION (1-2; 2)
Practice of media production in areas where the student has demonstrated potential in production-related courses. Under the instructor's supervision, the student completes a project. Prerequisite: permission of the instructor.

COMM 248 - ON-CAMERA PERFORMANCE (3)
The course provides the essential skills and techniques needed to excel in on-camera performance. This course provides hand-on training in effective on-camera technique including use of voice, body language, reading from a teleprompter, and conducting interviews.

COMM 260 - PROFESSIONAL FILM FESTIVAL/CONFERENCE PARTICIPATION (1; 2)
Preparation for, attending, participating in, and reflecting on a professional film festival/ conference. Students research and plan schedule of workshops and events to attend. A journal and paper are required. (Course fees apply.) Cross-Listed as: COMM 460.

COMM 320 - MULTI-CAMERA STREAMING AND BROADCAST (4)
Study and experience in multi-camera live production for studio and remote broadcast and streaming. Course covers basic studio and control room techniques including directing, camera operation, lighting, switching, and live graphics.

COMM 325 - MULTICULTURAL COMMUNICATION (3)
Study and practice in communicating cross-culturally. In the intercultural context students explore practices, perspectives, and products from a Christian worldview. Requires students to actively engage in new cultures as they examine their interactions outside of their own culture.

COMM 333 - AUDIO PRODUCTION (4)
Advanced study of the sound medium and procedures for creative sound production in various media. Emphasis on recording, mixing, and effects in sound design for film, media, music, radio, and television. Students create a variety of audio projects. Prerequisite COMM 135.

COMM 357 - COMMUNICATION LAW AND ETHICS (4)
Study of legal and ethical issues affecting mass communication media professionals, including libel, privacy, confidentiality, access, intellectual property, advertising, fair use, production contracts, and media regulation.

COMM 360 - SOCIAL AND SPIRITUAL INFLUENCE THROUGH MEDIA (3)
The study of the strategic use of entertainment-education media and online platforms for social and spiritual change and influence. Includes examination of social change theories and research that explains how entertainment influences attitudes, values, beliefs, and behavior.

COMM 394 - DIRECTED READING: (1-2; 3)
Independent reading for students who wish to broaden their knowledge of history, biographies, classics, professional and/or trend literature in communication. Offered alternatively with JOUR 394 and SPCH 394.

COMM 444 - MEDIA, CULTURE, AND WORLDVIEW (2)
An exploration of how the media reflects and influences culture and how that relates to the Christian worldview. Includes topics such as media literacy, media ecology, and media effects.

COMM 445 - DIRECTED MEDIA PRODUCTION (1-4)
Refinement of media production skills in areas where the student has demonstrated potential in production-related courses. Under the instructor's supervision, the student designs and completes a project. Prerequisite: Permission of the instructor.

COMM 460 - PROFESSIONAL FILM FESTIVAL/CONFERENCE PARTICIPATION (1; 2)
Preparation for, attending, participating in, and reflecting on a professional film festival/ conference. Students research and plan schedule of workshops and events to attend. A journal and paper are required. (Course fees apply.) Cross-Listed as: COMM 260.

COMM 475 - COMMUNICATION THEORY (3)
An overview of theoretical frameworks related to the various contexts of communication. The critical analysis, application, and use of theory in research are examined in light of a Christian worldview.

COMM 480 - REDEMPTIVE CINEMA (3)
A look at historical and contemporary examples of visual narrative in the form of cinema produced for the purpose of communicating spiritual and humanitarian messages. Includes reflection, analysis and evaluation.

COMM 487 - SENIOR PROJECT (1)
A student-selected, department-approved project to demonstrate the student's ability to perform in his/her major field of instruction. Satisfactory completion of this course constitutes the department comprehensive requirement for the bachelor's degree. At least three quarters prior to graduation students must submit a project proposal to the department. Graded A-F.

COMM 490 - INTERNSHIP (0-4; 4)
Practical experience in the student's major field of instruction. The student works under the co-direction of professionals in participating agencies and the department. Requirements include a minimum of 120 hours of documented work experience. Open only to majors in this field of study. See the Internship Program in the Nondepartmental section of the Bulletin. Graded S or NC. (Course fees apply for students enrolled for 0 credit.) Prerequisite: Instructor's permission must be obtained one quarter before registration.

COMM 495 - COMMUNICATION COLLOQUIUM (0)
A series of lectures, programs, discussions, and other activities presented by communication and/or language professionals. Majors are required to attend six quarters, at least one must be during the senior year. Graded S or NC.

COMM 496 - COMMUNICATION RESEARCH I (3)
An integrating course required of all strategic communication, digital communication, and international communication majors. Study spans two quarters and includes a review of literature and research methods in communication; experience in conducting primary, empirical research projects; and oral presentation of formal papers. Prerequisite: COMM 475.

COMM 497 - COMMUNICATION RESEARCH II (1)
An integrating course required of all strategic communication, digital communication, and global international communication majors. Study spans two quarters and includes a review of literature, and research methods in communication; experience in conducting primary, empirical research projects; and oral presentation of formal papers. Prerequisite: COMM 496.

CORR - CORRECTIONS, LAW ENFORCEMENT AND CRIMINAL JUSTICE

CORR 285 - INTRODUCTION TO CRIMINAL JUSTICE (4)
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. Offered alternate years.

CORR 385 - CRIMINOLOGY (4)
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. Offered alternate years. Prerequisite: SOCI 204 or CORR 285 or permission of instructor.

CORR 387 - JUVENILE DELINQUENCY (3)
Study of delinquency, juvenile courts, detention, and probation; investigation and comparison of programs of treatment and prevention. Offered alternate years. Prerequisite: SOCI 204 or CORR 285 or permission of instructor.

CPTR - COMPUTER SCIENCE

Courses in the department of computer science are organized into strands focusing on various sub-fields. The strand to which a course belongs can be identified by the middle digit of the three-digit course number. Strands include: Miscellaneous (0), Applied Computer Science (1), Web and Information Management (2), Computational Science and Intelligent Systems (3),

Programming Methods and Tools (4), Theoretical Computer Science (5), Architecture and Organization (8), and Capstone and Independent Study (9).

CPTR 108 - THE ART AND PRACTICE OF COMPUTER SCIENCE (3)

An overview of computer science as a discipline and profession. Students will understand the historical development of computing and the role of computing in modern society, discuss social and ethical issues in computer science from a Christian world view, and appreciate the role of computer science professional organizations. Students will contribute to an open source project and will understand the importance of portfolio building and internships in preparing to enter the workforce. Prerequisite: CPTR 141.

CPTR 130 - INTRODUCTION TO DATA SCIENCE (4)

Introduction to the computational thinking skills, processes, and tools needed to reason about the world around us using data. Students will experience the complete data science life-cycle, including data collection, cleaning and processing, exploration and visualization, analysis, and prediction. By exploring case studies in a variety disciplines, students will learn to think critically and ethically about data in all forms. Through the completion of hands-on projects, students will develop the ability to professionally communicate a compelling story with data. Does not apply toward a major or minor in computer science.

CPTR 141 - FUNDAMENTALS OF PROGRAMMING I (4)

Introduction to computer programming in-the-small using the Python language for students with little or no experience. Students will write, debug, and execute programs utilizing variables, flow control (sequencing, selection, and repetition), file I/O, lists, dictionaries, and functions.

CPTR 142 - FUNDAMENTALS OF PROGRAMMING II (4)

Continuation of CPTR 141. Students will write object-oriented programs in Python with special attention given to gaining insight through data manipulation. Students will also write programs utilizing arrays and pointers in the C++ programming language. The course culminates in a team programming project in C++ requiring design specifications, version control, and a presentation. Prerequisite: CPTR 141.

CPTR 210 - DATA COMMUNICATIONS AND NETWORKS (3)

Introduction to the concepts and tools needed to set-up and maintain a secure computer network. Students will be able to describe the OSI model, configure wired and wireless local area networks utilizing switches and routers, set-up IP address spaces including sub-nets, configure network services such as DHCP and DNS, troubleshoot network problems, and understand best practices for security and reliability. Offered odd years. Prerequisite: CPTR 141. Cross-Listed as: CIS 210.

CPTR 211 - LINUX AND WINDOWS SYSTEM ADMINISTRATION (3)

Introduction to the concepts and skills needed to work as a professional system administrator in both Linux and Windows environments. Students will install and configure operating system software, set-up and manage user accounts and shared resources, configure resource permissions in complex scenarios, plan and perform backups and other disaster-preparedness tasks, monitor servers for security breaches and other issues, troubleshoot common problems, and automate repetitive processes. Offered even years. Prerequisite: CPTR 142.

CPTR 220 - WEB APPLICATION DEVELOPMENT (4)

Overview of the tools and techniques required to develop single page web applications. Students will design user-friendly, accessible, websites using HTML and CSS, add interaction to those websites using JavaScript and AJAX, and connect the website to web APIs. Offered even years Prerequisite: CPTR 142.

CPTR 230 - COMPUTING FOR INSIGHT (4)

Introduction to computing as a tool for fields outside of Computer Science. Students will develop basic skills in Python programming while gaining an understanding of the role computation can play in solving problems. By assembling existing software packages and writing their own small programs, students will be able to manipulate data and gain insight, while weighing the tradeoff between human- and machine-efficiency. As a final project, students will use computation to solve a useful problem in their own discipline, with special attention given to transparency and reproducibility. Does not apply toward a major or minor in computer science.

CPTR 241 - OBJECT-ORIENTED MOBILE APPLICATION DEVELOPMENT (4)

In-depth study of object-oriented design methodology in the context of developing multi-platform mobile applications. Students will write object-oriented programs that appropriately utilize data abstraction, encapsulation, inheritance, and polymorphism. Students will also learn mobile-related concepts such as network independence, responsive GUI design, and how to utilize the camera and GPS features available on many mobile devices. Offered odd years. Prerequisite: CPTR 142.

CPTR 242 - SEQUENTIAL AND PARALLEL DATA STRUCTURES AND ALGORITHMS (4)

Introduction to advanced data structures and the algorithms that manipulate them. Students will create

and manipulate linked lists, stacks, queues, graphs, trees, and hash tables. Students will also search and sort using various common algorithms, both sequentially and in parallel. Prerequisite CPTR 142.

CPTR 245 - DEVOPS (4)
Overview of the fundamental tools and methodologies used in modern, test-driven, team software development. Students will gain a deep understanding of distributed version control systems and use such a system to manage team development projects. Students will also engage in test-driven development and configure and utilize continuous integration to automate the building, testing, and deployment processes. Corequisite: CPTR 142.

CPTR 280 - COMPUTER ORGANIZATION AND ASSEMBLY LANGUAGE (3)
Introduction to the internal organization of digital computer hardware. Students will be able to describe how data is represented and manipulated at the hardware level. Students will write assembly language programs to store and manipulate data. Prerequisite CPTR 141.

CPTR 308 - SOCIAL, LEGAL, AND ETHICAL ISSUES FOR COMPUTING TECHNOLOGY (4)
Examination of the role of computing in modern society with a focus on social and ethical issues from a Christian world view. Topics may include copyright, privacy, computer crime, constitutional matters, ethical issues relating to computer gaming, risks of computer failures, evaluating reliability of computer models, trade and communications in the global village, computers in the workplace, responsibilities of the computer professional. Cross-Listed as: CIS 308.

CPTR 320 - WEB SERVICES AND CLOUD COMPUTING (4)
Practical introduction to web services and the distributed computing concepts behind cloud computing. Students will develop a web application which utilizes public web service APIs, will understand the motivation for cloud computing and the role that virtualization plays, and will develop and deploy a web service on a public cloud computing platform. Offered even years. Prerequisite: CPTR 220.

CPTR 330 - MACHINE LEARNING FOR DATA SCIENCE (4)
Introduction to machine learning as a tool for the data scientist. Students will apply and implement regression, classification, tree-based, and other statistical learning methodologies for the analysis of large data sets. Additionally, students will construct ensembles and tune their models to improved accuracy. Offered even years. Prerequisite: CPTR 142 or CPTR 230; MATH 215 or MATH 315.

CPTR 352 - OPERATING SYSTEMS (4)
Rigorous introduction to the principles and practice of modern operating systems. Students will be able to explain the process and thread models used in modern operating systems, implement and utilize synchronization primitives, compare and contrast strategies for handling deadlock and resource scheduling, explain modern memory organization and management techniques, and describe the structure of modern file systems. Prerequisite CPTR 242, CPTR 280.

CPTR 354 - COMPILERS AND LANGUAGES (4)
Introduction to modern compilers and programming language paradigms. Students will describe the formal language hierarchy, implement parsing algorithms for basic languages using a modern parser generator, and discuss symbol table organization. Students will also discuss the history of programming language development and write basic programs in representative languages from the functional and logic paradigms. Prerequisite CPTR 242.

CPTR 355 - COMPUTER GRAPHICS (4)
Introduction to computer graphics modeling, animation, and rendering. Students will use modern graphics libraries to perform basic geometric transformations, texture mapping, ray tracing, modeling of curves and surfaces, shading, and 2-D and 3-D object manipulation and animation. Students will write an interactive video game showcasing these features. Offered odd years. Prerequisite: CPTR 141.

CPTR 380 - COMPUTER ARCHITECTURE (4)
Study of the organization and architecture of computer systems. Students will understand how to measure computer performance, the basics of instruction set design, computer arithmetic including floating point algorithms, classical and modern data path and control architectures, and basic memory design including cache and virtual memory systems. Students will complete their choice of a research project, a VHDL implementation of a custom instruction set, or a software project involving an assembler or compiler for a custom instruction set. Offered odd years. Prerequisite: CPTR 280, ENGR 354.

CPTR 396 - INTERNSHIP AND CAREER READINESS SEMINAR (1)
Overview of the process for transitioning from college to a career in computing. Students will craft a targeted resume and cover letter, learn strategies to identify and obtain internships that align with career goals and personal interests, develop and learn to maintain a professional portfolio, and prepare for coding interviews. Students will also engage in and reflect upon a service-learning experience in the field of computing as they prepare for a lifetime of generosity

in service. Prerequisite: CPTR 242 or permission of instructor.

CPTR 405 - CURRENT TOPICS IN COMPUTER SCIENCE (4; 8)

Selected topic of current interest in computer science. Topics are chosen from such areas as bioinformatics, compiler design, data mining, distributed computing, human computer interaction, neural networks, robotics, and video game design. May be repeated as topics vary. Offered even years. Prerequisite: Permission of Instructor.

CPTR 420 - INTRODUCTION TO DATABASE SYSTEMS (4)

Overview of modern database design techniques and management systems with a focus on relational database theory. Students will conduct a requirement analysis, model the required data with an ER diagram, translate the ER diagram into a relational schema, implement the schema as an SQL database, and utilize functional dependencies and normal forms to refine the schema. Students will also write complex queries in relational algebra and SQL. Students will further be able to explain tree- and hash-based indices, the algorithms used for query processing (sorts, joins, and aggregation), query optimization, and database tuning. Finally, students will understand how transaction managers handle concurrency and recovery. Offered odd years. Prerequisite: CPTR 142 or permission of instructor.

CPTR 430 - ARTIFICIAL INTELLIGENCE (4)

Survey of foundational concepts of artificial intelligence and their applications. Students will describe methods for representing knowledge, logical inference, and effective searches; and will discuss social and ethical implications of artificial intelligence in the context of a Christian world view. Students will explain production systems, robotics, fuzzy logic, and belief networks; and will program intelligent agents, heuristic searches, and genetic algorithms. As a final research project students will explore artificial intelligence in a specific application area. Offered odd years. Prerequisite: CPTR 242.

CPTR 440 - COMPUTER SECURITY (4)

Survey of the tools and practices used to secure information both on a computer system and traveling over a computer network. Students will discuss security standards, write and implement security policies, design secure systems, describe and utilize both secret and public key cryptography, and conduct penetration testing. Offered even years. Prerequisite: Suggested Prerequisite: CPTR 141, MATH 250. Cross-Listed as: CIS 440.

CPTR 450 - SOFTWARE ENGINEERING (3)

Overview of the processes used to design, develop, and maintain complex software systems in preparation for the senior project sequence. Students will describe software quality characteristics, the software engineering process, and the development life cycle. Students will also participate in a large team programming project from requirement analysis through deployment and maintenance. Prerequisite: CPTR 242. Corequisite: CPTR 496 or ENGR 496 or permission of instructor.

CPTR 454 - DESIGN AND ANALYSIS OF ALGORITHMS (4)

Design and analysis of efficient algorithms for sorting, searching, and other applications. Students will design algorithms using techniques such as divide-and-conquer, greedy algorithms, and dynamic programming; and give proofs of correctness for their algorithms. Students will also analyze an algorithm's time and space complexity and give examples of NP-complete and NP-hard problems. Prerequisite CPTR 242, MATH 250.

CPTR 456 - COMPUTER NETWORKS (4)

Overview of computer networks in theory and practice. Students will describe the various network protocol layers, write programs using application layer protocols such as HTTP, DNS, and sockets; describe transport layer protocols such as TCP and UDP; explain strategies for congestion control; discuss network layer concepts such as IP addressing, switching, and routing; and implement link layer technologies such as Ethernet, wireless, and virtual LANS. Offered even years. Prerequisite: CPTR 242.

CPTR 480 - PROGRAMMING EMBEDDED AND REAL TIME SYSTEMS (4)

Introduction to programming for embedded platforms running real-time operating systems. Students will use cross-compilers and debuggers to write and optimize code for embedded systems. Students will also write device drivers and other programs which utilize real-time scheduling and inter-task communication. Offered odd years. Prerequisite: CPTR 280.

CPTR 490 - INTERNSHIP (0-4; 4)

Individual contract arrangement involving students, faculty, and cooperating businesses to gain practical experience. A minimum of 30 hours of approved activity/experience must be completed for each credit earned. Internship credit is restricted to the major field of study. See the Internship Program in the Nondepartmental section of the Bulletin. Graded S or NC. (Course fees apply for students enrolled for 0 credit.) Prerequisite: CPTR 242 and departmental approval.

CPTR 493 - CAPSTONE DATA SCIENCE PROJECT (1)

Capstone project for the X+Data certificate program. Students will complete an approved data science project in their major or professional field and present

their findings. Prerequisite: Completion of all other requirements in the X+Data certificate and permission of the instructor.

CPTR 496 - SENIOR PROJECT I (1)
Capstone computer science experience, which includes the selection of a senior project and an overview of using empirical, experience-based patterns to solve typical recurring problems in software projects. Students will propose a software development or research project addressing an existing industry or community need. Students are encouraged to propose projects as groups with preference given to projects involving community service. Graded S/NC. Corequisite: CPTR 450.

CPTR 497 - SENIOR PROJECT II (2)
Continuation of CPTR 496. Students will design, implement, test, document, and present their approved software development or research project proposed in CPTR 496. Students working in groups must be involved in all aspects of the project. Each student is expected to spend a minimum of 120 hours on the project over the two courses. Must be taken in sequence. Prerequisite: CPTR 496.

CPTR 498 - SENIOR PROJECT III (2)
Continuation of CPTR 496. Students will design, implement, test, document, and present their approved software development or research project proposed in CPTR 496. Students working in groups must be involved in all aspects of the project. Each student is expected to spend a minimum of 120 hours on the project over the two courses. Must be taken in sequence. Prerequisite: CPTR 497.

CYBS - CYBERSECURITY

RIZE Cybersecurity Classes:
Classes with a CYBS prefix are offered in collaboration with RIZE, a company that partners with small independent colleges and universities to provide courses to consortium members. Courses taken with a CYBS prefix are offered on a semester schedule. Students enrolling in courses offered in the fall semester will start coursework in August and complete the course in December. Classes offered during the spring semester will begin in January and end in May. The extended duration of these classes means students earn 4.5 credits per class.

CYBS 122 - INTRODUCTION TO CYBERSECURITY (4.5)
In today's world, no one is safe from cyber-attacks, but everyone can be prepared. This course will teach you how malicious actors use social skills and technology to facilitate cyber-attacks and provide you with the tools and information you need to defend against those attacks. Whether you pursue one of the many available jobs in cybersecurity or just want to secure your own privacy, you'll learn how to make the Internet safer. This online class has optional live sessions.

CYBS 223 - MODERN CYBERSECURITY (4.5)
Cybersecurity must evolve to keep pace with constant changes in technology. In this class you will learn about the changing landscape of cybersecurity, emerging technologies that are likely to be targeted, and new forms of cyber-attack being launched. By the end of the course, you will be able to implement the most up-to-date practices in cybersecurity to protect against attacks. This online class has optional live sessions.

CYBS 224 - CYBERCRIME AND GOVERNANCE (4.5)
Cybercrime is one of the biggest threats companies face daily, and they are constantly looking for new hires to help protect them. In this course, you will get a firsthand look at the methods used to commit cybercrimes. You will also learn how governments detect, investigate, and stop these crimes and become familiar with the laws and policies in place to deter cybercriminals. This online class has optional live sessions. Prerequisite: CYBS 122.

CYBS 325 - CYBER FORENSICS (4.5)
When cybercrimes do happen, you need to know how to respond. This course examines the tools and techniques used to perform cyber forensics and conduct investigations into cybercrimes. By the end of the course, you'll be able to gather and analyze important digital evidence and gain skills in analyzing cybercrime that are in demand from companies across the country. This online class has optional live sessions. Prerequisite: CYBS 224.

CYBS 326 - NETWORK AND SYSTEM SECURITY (4.5)
Modern organizations know that even the strongest systems can be vulnerable to cyber-attacks. As a result, jobs in cybersecurity are rapidly expanding as companies look to secure their digital assets. This course will teach you how to secure those assets by identifying and fixing potential security vulnerabilities. By the end of the course, you will be able to identify and remedy common network and systems vulnerabilities. This online class has optional live sessions.

CYBS 497 - ETHICAL HACKING (4.5)
To stop a hacker, you need to be able to think like a hacker. In this course, you will learn hands-on techniques for attacking and penetrating networks and systems. You will be prepped with tools to launch these offensive tactics, and then complete a hands-on project where they are asked to ethically hack a real system. This online class has optional live sessions. Prerequisite: CYBS 326.

DRMA - DRAMA

DRMA 101 - INTRODUCTION TO THEATRE (3)
Introduces the theatre as a fine art with a focus on developing a fundamental understanding and appreciation of the theatrical arts in our society. Explores the related creative arts of the playwright, actor, director, and designer and their collective contributions to the play as it evolves from page to performance.

DRMA 211 - ORAL INTERPRETATION (4)
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 readers' theatre script preparation and presentation.
Cross-Listed as: SPCH 211.

DRMA 242 - ACTING (4)
Exploring and developing the clarity, range, and control of verbal and nonverbal language in creating and effectively communicating dramatic characters, modern and classical. Recommended: SPCH 107.

DRMA 260 - PROFESSIONAL THEATRE CONFERENCE PARTICIPATION (1; 2)
Prepare for, attend, participate in, and reflect on a professional theatre conference. Students research and plan schedule of workshops and events to attend. A journal and paper are required. (Course fees apply.) Prerequisite: Permission of instructor. Cross-Listed as: DRMA 460.

DRMA 336 - DRAMA WRITING (3)
Study of dramatic theory and practice in planning, writing, and revising a play. The focus is primarily on the fundamentals of writing drama. Analysis and discussion of student work. Offered odd years.

DRMA 363 - HISTORY OF THEATRE (4)
Study of the history and development of the theatre from the classical stage to the present. Offered even years.
Cross-Listed as: ENGL 363.

DRMA 364 - DIRECTING I (3)
The theory and practice of direction for stage and film, designed to familiarize the student with the skills necessary to lead a cast and technical crew. Includes the study of elements such as script selection and analysis; collaboration with the cast, designers, production crew or stage managers, and dramaturge; casting and rehearsal technique and management; and aesthetic, ethical, and economic concerns. Prerequisite: DRMA 242.

DRMA 365 - DIRECTING II (3)
Exploration of the fundamentals of directing through the production and direction of a one-act play or short film for public presentation. Prerequisite: DRMA 364, or permission of instructor.

DRMA 394 - DIRECTED DRAMA READING (1-2; 3)
Independent reading for students who wish to broaden their knowledge of history, biographies, classics, professional and/or trend literature in drama.

DRMA 442 - ADVANCED ACTING (4)
Refinement of performance skills for upper-division students who wish to build on acting fundamentals learned in DRMA 242 and continue broadening their acting techniques. Prerequisite: DRMA 242.

DRMA 445 - DIRECTED DRAMA WRITING (1-2; 3)
Refinement of drama writing skills through a writing project adapted to the student's professional interest and chosen in consultation with the instructor. Admission by permission of instructor. Prerequisite DRMA 336 or COMM 205.

DRMA 460 - PROFESSIONAL THEATRE CONFERENCE PARTICIPATION (1; 2)
Prepare for, attend, participate in, and reflect on a professional theatre conference. Students research and plan schedule of workshops and events to attend. A journal and paper are required. (Course fees apply.) Prerequisite: Permission of instructor. Cross-Listed as: DRMA 260.

DRAMA PRODUCTION COURSES

All students participating in a drama production must enroll in DRMA 252 or DRMA 253 (or, when appropriate, in DRMA 452 or DRMA 453) for either credit or zero credit. Graded S or NC for 0 credit. Graded A-F for credit. These courses may be repeated for additional credit. Enrollment in DRMA 252, DRMA 253, DRMA 452, or DRMA 453 is by audition or by invitation.

DRMA 252 - PERFORMANCE (0-2; 4)
Analysis, rehearsal, and performance of a role under the supervision of instructor. May be taken only by permission of the instructor. Course fees apply when selecting the 0-credit option. Non-drama minors may enroll in a maximum of 9 hours selected from DRMA 252 or DRMA 452.

DRMA 253 - TECHNICAL PRODUCTION (0-2; 4)
Design, construction, and/or coordination of a technical aspect of the production of a play chosen by the instructor. May be taken only by permission of the instructor. Course fees apply when selecting the 0-credit option.

DRMA 452 - ADVANCED PERFORMANCE (0-2; 4)
Analysis and rehearsal of a complex or leading role that requires the student to critically read and analyze

a substantial text in preparation for performance. Course fees apply when selecting the 0-credit option. Prerequisite: 2 hours of DRMA 252 or permission of instructor.

DRMA 453 - ADVANCED TECHNICAL PRODUCTION (0-2; 4)
Refinement of technical production skills. Substantial production work in design, stage management, direction, or construction of a play. Course fees apply when selecting the 0 credit option. Prerequisite: 2 hours of DRMA 253 or DRMA 365 or permission of instructor.

DSGN - DESIGN

DSGN 110 - DESIGN PRINCIPLES I (4)
Introduction to 3-dimensional design with emphasis on sketching, modeling, ideation, visualization, principles and elements of design. Students will be given hands-on abstract design exercise with an emphasis on exploring the properties of space and form. Students will be working both individually and collaboratively, in a studio environment. Open to Product Design majors only. (Course fees apply.)

DSGN 111 - DESIGN PRINCIPLES II (4)
Overview of the conceptual and manual skills designers use when creating design concepts. Critical thinking is the primary focus of this course. 3-dimensional form will be explored through the use of sketching and modeling. Emphasis is placed on effective communication of student ideas and their projects. Students learn to frame questions, solve problems, and iterate design solutions. Open to Product Design majors only. (Course fees apply.) Prerequisite: DSGN 110.

DSGN 121 - FUNDAMENTALS OF CAD (2)
Fundamentals of computer aided drafting/design and its application, with emphasis on the varied features of a CAD system. One lecture and three laboratory hours per week. Open to Product Design and Automotive majors only. (Course fees apply.)

DSGN 215 - DESIGN THEORY, HISTORY, AND CRITICISM (4)
An overview of the varied approaches to the study of design theory and philosophy from classical to contemporary is applied to the evolving design field. A study of common theories, applied with proper reasoning, is integrated into student projects. Includes the history of product/industrial design, graphic design and new media. Consideration will be given to the period developments. Brings together cultural, business, and technical perspectives. Students will critically analyze work done by other designers and theorists. Students will develop skills that foster perception, comprehension, and design of meaningful products and spaces. Open to Product Design and Automotive majors only. (Course fees apply.) Prerequisite: DSGN 110.

DSGN 226 - ARCHITECTURAL DESIGN (3)
Study of the fundamentals of designing and drawing house plans including architectural drafting standards, area planning, floor plans, elevations, sections, schedules, and specifications. Open to Product Design and Automotive majors only.

DSGN 312 - DESIGN STRATEGIES AND METHODOLOGIES (4)
This course provides a context where students can participate in a design studio setting where teams develop designs from a design strategy/ design thinking perspective. Students will explore several strategies and methodologies underlying product design, assess product design for viability and marketability, and examine design processes and insight development, including ideation, prototyping, need finding, process documentation, project brief, proof of concept, and team member roles. Open to Product Design and Automotive majors only. (Course fees apply.) Prerequisite: DSGN 215.

DSGN 370 - FUNDAMENTALS OF PACKAGING (4)
Study and application of packaging design for consumer products. Common packaging practices with an emphasis on two- and three-dimensional elements of packaging concepts. Emphasis on project-based learning. Prerequisite: GRPH 262. Corequisite: GRPH 370.

ECON - ECONOMICS

ECON 210 - PRINCIPLES OF MICROECONOMICS (4)
Covers basic concepts in microeconomics. Topics include the theory of rational consumer behavior, application of the factors of production, labor markets, and the implication of market failures.

ECON 211 - PRINCIPLES OF MACROECONOMICS (4)
Covers basic concepts of macroeconomics. Topics include the concept of supply and demand, the U.S. financial system, aggregate economic activities such as the level of employment, price levels, and the gross national product. The course also covers fiscal and monetary policies of the U.S. government and the impact on the economy. Recommended: ECON 210.

ECON 220 - PRINCIPLES OF GLOBAL DEVELOPMENT (4)
An introduction to the major theories of economic and humanitarian development, including historical background, and the policies and strategies for meeting contemporary challenges. Addresses the major

concerns of emerging economies in the context of faith-based approaches. Offered alternate years.

ECON 359 - THE AMERICAN ECONOMY (4)
Development of the American economy and business systems from the colonial era to the present. It traces the transformation of key United States institutions (the firm, market, government) and themes (strategy, finance, organization) across the centuries, addressing their relevance to current debates. Offered alternate years. Prerequisite: A general studies history course. Cross-Listed as: HIST 359.

ECON 441 - FINANCIAL MARKETS AND INSTITUTIONS (4)
Study of the U.S. Federal Reserve system, interest rates, and the money, bond, mortgage, stock, and derivative markets. An introduction to U.S. financial institutions, including commercial banks, thrifts, credit unions, finance companies, investment banks, mutual funds, insurance companies, and pension funds. Credit cannot be earned for both FINA 440 and ECON441/FINA 441. Prerequisite: ECON 211 and FINA 351. Cross-Listed as: FINA 441.

ECON 488 - INTERNATIONAL TRADE AND FINANCE (4)
Study of alternative theories on trade, theoretical impact of trade on employment, economic growth and welfare, and the implications of protectionism on the economy; also covers the foreign exchange systems, and the conduct of monetary policy in an open economy. Offered alternate years. Prerequisite: ECON 211. Cross-Listed as: FINA 488.

EDUC - EDUCATION

EDUC 211 - INTRODUCTION TO AND FOUNDATIONS OF EDUCATION (4)
An introduction to education including social and historical foundations, models, theories, philosophy, special education, and legal and ethical issues that form the basis for education in a culturally and academically diverse society. University students will be required to complete a criminal background check by the Washington State Patrol and fingerprinting by the FBI. Field experience required.

EDUC 223 - RESEARCH AND WRITING IN EDUCATION AND PSYCHOLOGY (WD) (3)
An exploration of evaluation and interpretation of current research in education and psychology, research writing process and techniques, as well as ethics and style as documented by the American Psychological Association. Requires a major documented research paper related to education or psychology, dependent on declared major, and aimed at a scholarly audience. Also includes practice in the elements of professionalism required to manage and complete such a project. Fulfills the Writing in the Disciplines Requirement (WD). (Course fees apply.)
Cross-Listed as: PSYC 223.

EDUC 250 - INTRODUCTION TO TEACHING PRACTICES AND TECHNOLOGY (2)
Candidates will be introduced to initial unit and lesson planning, including the use of integrated technology, and prepare for classroom field experience. Emphasis is placed on Universal Design for Learning to provide candidates with the ability to adapt technology, instruction, and assessment to meet the needs of all students. (Course fees apply.) Prerequisite: EDUC 211 or permission of instructor. Corequisite: EDUC 211 or permission of instructor.

EDUC 280 - EXPERIENTIAL LEARNING (0)
Departmentally approved teaching and learning environment that includes items such as direct instruction and documentable alignment with education endorsement area components. Application to School of Education and Psychology required including location, job description, and expected duration. Corequisite: EDUC 211 or permission of instructor.

EDUC 350 - LANGUAGE DEVELOPMENT IN YOUNG CHILDREN (3)
Study of current research-based theories, methods, and strategies needed to effectively teach and support early literacy from birth through beginning reading. Field experience required. Cross-listed as: PSYC 350. Prerequisite: EDUC 250 (or corequisite), PSYC 217.

EDUC 360 - TEACHING AND LEARNING: INCLUSIVE LITERACY I (4)
Development of literacies, and approaches to teaching reading programs K-8, including media and research-based strategies for building reading comprehension in content areas, using literature, writing, differentiated instruction, and legal/ethical implications. In this context, special attention is given to the diagnosis and remediation of problems in reading. Field experience required. (Course fees apply.) Prerequisite: EDUC 250, EDUC 350, ENGL 374 (or permission of the instructor), and admission to Teacher Certification Program Phase 2. Pre/Corequisite: EDUC 390.

EDUC 361 - TEACHING AND LEARNING: INCLUSIVE LITERACY II (4)
Development of literacies and approaches to teaching reading programs K-8, including media and research-based strategies for building reading comprehension in content areas, using literature, writing, differentiated instruction, and legal/ethical implications. In this course, special attention is given to writing instruction. Field experience required. (Course fees apply.) Prerequisite: EDUC 360 (or permission of instructor) and admission to Teacher Certification Program Phase 2.

EDUC 365 - SECONDARY CLASSROOM MANAGEMENT (4)

Study of research-based models and exemplary practices for teaching in the secondary classroom; emphasis on human dynamics, rules and routines, conflict resolution, motivational techniques, eliciting parental support, student diversity instructional and management strategies, social-emotional learning, and professional growth. Professional Development School field experience required. Prerequisite: EDUC 250, EDUC 390, and admission to Teacher Certification Program Phase 2.

EDUC 373 - TEACHING AND LEARNING: MATHEMATICS (4)

Survey of the curriculum, media, and research-based strategies used in teaching elementary mathematics. Introduction to integrated STEM education practices at the elementary level with an emphasis in mathematics. Field experience required. Prerequisite EDUC 250, EDUC 390, and admission to Teacher Certification Program Phase 2.

EDUC 381 - METHODS OF TEACHING K-12 RELIGION (3)

Survey of the curriculum, media, and interdisciplinary strategies used in teaching Bible in elementary and secondary classrooms; emphasis on building and maintaining relationships in an environment that nurtures the student's spiritual growth. Includes North American Division Encounter Bible Curriculum training for elementary and secondary. Field experience required. Prerequisite: Admission to Teacher Certification Program Phase 2 and declared Adventist Education Certification.

EDUC 382 - METHODS OF TEACHING K-12 SOCIAL STUDIES AND HISTORY (4)

Survey of the curriculum, media, and research-based strategies used in teaching K-12 social studies and history, with special attention paid to developing pedagogical content knowledge and use of Curriculum Based Assessments. Includes experience with Washington State curriculum requirements such as *Since Time Immemorial Tribal Sovereignty in Washington State* and Washington State *Holocaust Education Best Practices*. Field experience required. Recommended that EDUC 386, GEOG 252, and HIST 386 completed prior to enrollment. (Course fees apply.) Prerequisite: EDUC 250, EDUC 390 and admission to Teacher Certification Program Phase 2.

EDUC 383 - TEACHING AND LEARNING: SCIENCE AND ENGINEERING (4)

Survey of the curriculum, media, and research-based strategies used in teaching elementary science. Introduces integrated STEM education practices at the elementary level with an emphasis in science and engineering. Field experience required. (Course fees apply.) Prerequisite: EDUC 250, EDUC 373 (or permission of instructor), and admission to Teacher Certification Program Phase 2.

EDUC 386 - SEMINAR IN WASHINGTON STATE SOCIAL SCIENCES RESOURCES (1)

An introduction to and practice teaching with Washington State social science resources and curriculum requirements such as *Since Time Immemorial: Tribal Sovereignty in Washington State* and Washington State *Holocaust Education Best Practices*. Corequisite: HIST 386.

EDUC 390 - MEASUREMENT AND EVALUATION IN EDUCATION (3)

Designing and interpreting criterion-referenced objective and performance assessments; interpretation of norm-referenced examinations; concepts of reliability and validity; item analysis; grading and reporting classroom performance. Includes development of mastery-based units and assessments. (Course fees apply.) Corequisite: EDUC 250 (or permission of instructor).

EDUC 392 - METHODS OF TEACHING K-12 ART (3)

Study of the objectives for and methods of teaching art in grades K-12. Includes an introduction to the principles of design and an exploration of the materials and techniques appropriate for K-12 students. (Course fees apply.)

EDUC 395 - SECONDARY METHODS OF INSTRUCTION I (2)

Introduces state certification requirements and lesson strategies. Field experience required. Prerequisite: EDUC 250, EDUC 365, and admission to Teacher Certification Program Phase 2.

EDUC 396 - SECONDARY METHODS OF INSTRUCTION II (3)

Survey of the curriculum, media, and research-based strategies used in teaching secondary classrooms. Field experience required. (Course fees apply.) Offered as needed. Prerequisite: EDUC 250 and admission to Teacher Certification Program Phase 2. Corequisite: EDUC 395.

EDUC 405 - ELEMENTARY CLASSROOM ORGANIZATION AND MANAGEMENT (4)

In-depth examination of various models, techniques, laws, and ethics for the management of all learners within the classroom, home, and community. Introduces social-emotional learning, including standards and benchmarks, resources, and culturally responsive practices. Field experience required. Prerequisite EDUC 250 and admission to Teacher Certification Program Phase 2.

EDUC 410 - PHILOSOPHY OF EDUCATION (3)

Study of educational thought and practice from a philosophical perspective: the aims, principles, and theories of education, with special reference to Christian schools. Cross-listed as: PHIL 410

EDUC 425 - LEGAL AND ETHICAL ASPECTS OF EDUCATION (2)

Issues of law and ethics with direct application to the teaching profession, including educational structure and governance, church/state relations, students' rights, teachers' rights and responsibilities, and tort liability.

EDUC 444 - CULTURAL DIVERSITY IN EDUCATION (3)

Study of human diversity and its impact on the educational process; emphasis on instructional and management strategies that demonstrate respect for cultural, ethnic, and language differences through differentiated instruction. Includes experience with Washington State curriculum requirements such as *Since Time Immemorial Tribal Sovereignty* in Washington State. Cross listed as: PSYC 444. (Course fees apply.) Prerequisite: EDUC 211, EDUC 250 (or corequisite).

EDUC 450 - INTRODUCTION TO STUDENT TEACHING: CLINICAL PRACTICE (1)

Designed to introduce departmental and Washington State certification requirements, as well as classroom teaching practices for student teaching. Prerequisites: Completion of student teaching application packet submitted by the first Friday of December prior to the year in which the candidate plans to enroll for the experience 1. Graded S or NC. Prerequisite: EDUC 250, admission to Teacher Certification Program Phase 2, and completion of student teaching application packet submitted by the first Friday of December prior to the year in which the candidate plans to enroll for the experience.

EDUC 451 - PROGRAM ASSESSMENT PART 1 (1)

Introduction and support for candidates in preparation for the School of Education and Psychology Program Assessment. (Course fees apply.) Prerequisite: EDUC 450 and approval by the School of Education and Psychology. Corequisite: EDUC 460 or EDUC 461.

EDUC 452 - PROGRAM ASSESSMENT PART 2 (1)

Ongoing support for candidates in preparation for completion of the School of Education and Psychology Program Assessment. (Course fees apply.) Prerequisite: EDUC 451. Corequisite: EDUC 470, EDUC 471.

EDUC 453 - PROGRAM ASSESSMENT PART 3 (1)

Continued support for completion of all remaining components of the School of Education and Psychology Program Assessment. Grade A-F. (Course fees apply.) Prerequisite: EDUC 452. Corequisite: EDUC 480 or 481.

EDUC 454 - CONTINUED FIELD EXPERIENCE AND CLINICAL PRACTICE (1)

Ongoing support for field experience and clinical practice. Developed in agreement with professor of record. Graded S or NC. (Course fees apply.) Prerequisite: EDUC 452. Corequisite: EDUC 480 or 481.

EDUC 460 - ELEMENTARY STUDENT TEACHING PART I (2)

Designed to support candidates in the pre-session full-time and fall part-time elementary student teaching experience. Clinical practice hours logged and verified by mentor teacher required. Includes application of technology integration strategies into classroom practice. Offered autumn quarter only. (Course fees apply.) Prerequisite: EDUC 360, EDUC 361, EDUC 373, EDUC 382, EDUC 383, EDUC 405, EDUC 425, EDUC 450, EDUC 495, admission to the Teacher Certification Program Phase 2, approval by the School of Education and Psychology, and completion of one iteration of the NES. Corequisite: EDUC 451.

EDUC 461 - SECONDARY STUDENT TEACHING I (2)

Designed to support candidates in the pre-session full-time and fall part-time secondary student teaching experience. Clinical practice hours logged and verified by mentor teacher required. Includes application of technology integration strategies into classroom practice. Offered autumn quarter only. (Course fees apply.) Prerequisite: EDUC 365, EDUC 395, EDUC 425, EDUC 450, EDUC 495, admission to the Teacher Certification Program Phase 2, approval by the School of Education and Psychology, and completion of one iteration of the WEST-E/NES. Corequisite: EDUC 451.

EDUC 470 - ELEMENTARY STUDENT TEACHING PART II (2)

Designed to support candidates in the winter part-time elementary student teaching experience. Clinical practice hours logged and verified by mentor teacher required. Application of technology integration strategies. (Course fees apply.) Prerequisite: EDUC 451 and EDUC 460.Corequisite: EDUC 452.

EDUC 471 - SECONDARY STUDENT TEACHING II (2)

Designed to support candidates in the winter part-time secondary student teaching experience. Application of technology integration strategies. Clinical practice hours logged and verified by mentor teacher required. (Course fees apply.) Prerequisite: EDUC 451 and EDUC 461. Corequisite: EDUC 452.

EDUC 475 - TEACHING READING SKILLS IN THE CONTENT AREAS (3)

Introduction to diagnosis, vocabulary, comprehension skills, rate variation, management, and study skills in junior high and secondary reading. Field experience required. Prerequisite EDUC 250, EDUC 390, EDUC 495 (or corequisite), and admission to Teacher Certification Program Phase 2.

EDUC 480 - ELEMENTARY STUDENT TEACHING PART III (2-12; 12)

Designed to support candidates in the spring, full-time elementary student teaching experience. Candidates transition to head co-teacher and maintain the daily schedule and responsibilities of the mentor teacher as well as following the host school's academic calendar. Application of technology integration strategies. Clinical practice hours logged and verified by mentor teacher required. Dispositions such as professional communication and consistent attendance are required. Students enrolled in student teaching part III may not register for other courses without written permission of the School of Education and Psychology. Graded A-F. (Course fees apply.) Prerequisite: EDUC 452, EDUC 470 and departmental permission. Corequisite: EDUC 453.

EDUC 481 - SECONDARY STUDENT TEACHING PART III (2-12; 12)

Designed to support candidates in the spring, full-time secondary student teaching experience. Candidates transition to head co-teacher and maintain the daily schedule and responsibilities of the mentor teacher(s) as well as following the host school's academic calendar. Application of technology integration strategies. Clinical practice hours logged and verified by mentor teacher required. Dispositions such as professional communication and consistent attendance are required. Students enrolled in student teaching part III may not register for other courses without written permission of the School of Education and Psychology. Graded A-F. Elementary Education majors completing a secondary content major and/or 45+ credits in a secondary endorsement area who want secondary certification will need to complete secondary certification required courses along with 1-5 credit hours of secondary student teaching and the current Washington state assessment tool(s). (Course fees apply.) Prerequisite: EDUC 452, EDUC 471 and departmental permission. Corequisite: EDUC 453.

EDUC 495 - COLLOQUIUM: CHILD ABUSE (0)

Identification, impact, and prevention of physical, emotional, sexual, and substance abuse. Discussion of teachers' legal responsibilities. Graded S or NC.

EDUC 496 - SEMINAR (1-3; 6)

In-depth examination of a specific topic in education. Topics may include cooperative learning, curriculum reform, small-school pedagogy, media applications, etc. Prerequisite Upper-division major/minor in education or permission of instructor.

EDUC 497 - MULTIGRADE AND RURAL EDUCATION (2)

Theory and application of procedures and practices in multigrade and multiage elementary and secondary classrooms including unique settings such as small or rural schools. Field experience required. These may include unique settings such as small or rural schools. Field experience required. (Course fees apply.) Prerequisite: EDUC 250 and EDUC 390 (or corequisite).

ENGL - ENGLISH

ENGLISH EDUCATION COURSES (ENGL)

For English majors, the following courses apply only toward the English Major with Emphasis in Secondary Teaching.

ENGL 374 - LITERATURE FOR CHILDREN AND YOUNG ADULTS (4)

Study of literature for children and young adults and the methods used in teaching literature in grades K-12. Students read texts in common and choose additional texts to learn the literary and artistic elements of various genres. Applies toward the English major with an emphasis in secondary teaching or the English minor.

ENGL 395 - METHODS OF TEACHING SECONDARY ENGLISH (3)

A study of objectives for and methods of teaching language, composition, literature, drama, and media in grades six through twelve. Students prepare and present lessons, evaluate student work, and create units of study. Applies toward the English major with an emphasis in secondary teaching. Prerequisite: ENGL 284, ENGL 374, and WRIT 389.

GENERAL COURSES

ENGL 490 - INTERNSHIP (0-4)

Practical experience allowing application of classroom learning. Requirements include a minimum of 120 hours of documented work experience. See the Internship Program in the Nondepartmental section of the Bulletin. Graded S or NC. (Course fees apply for students enrolled for 0 credit.) Prerequisite: junior standing.

ENGL 495 - ENGLISH COLLOQUIUM (0)

A series of lectures, programs, discussions, and other activities designed to explore specific issues in literary and language study and enrich the professional preparation of students in English. One colloquium is required each quarter while in residence. Graded S or NC.

GENERAL STUDIES COLLEGE WRITING COURSES (ENGL)

ENGL 121 and ENGL 122 are prerequisites to all upper-division courses. Credit will not be allowed for more than one of the following: ENGL 223 and HONR 243. (HONR classes are open to students who have been accepted into the Honors General Studies Program.)

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

ENGL 121 - INTRODUCTION TO ANALYTICAL WRITING (3)

Teaches close reading, the writing process, a clear writing style, and the basic elements of academic writing, including critical thinking, analysis, and argument. Also emphasizes a theme that promotes the university's commitment to diversity. Students must receive a grade of C- or higher before they can proceed to ENGL 122. (Course fees apply.)

ENGL 122 - INTRODUCTION TO RESEARCH WRITING (3)

Refines students' skills in close reading, critical thinking, and written argumentation with emphasis on the evaluation, integration, and citation of secondary sources. Includes an introduction to information-gathering techniques for both general and academic sources. (Course fees apply.) Prerequisite ENGL 121 with a grade of C- or above.

ENGL 223 - RESEARCH WRITING (WD) (3)

A study of library resources, information-gathering techniques, and research writing, including the ethics and style expected in the academic community. Requires a major documented research paper related to the student's chosen discipline and aimed at a scholarly audience. Also introduces elements of professionalism that are required to manage and complete such a project. Fulfills the Writing in the Disciplines Requirement (WD) (Course fees apply.) Prerequisite: ENGL 121 and ENGL 122 with grades of C- or above and sophomore standing (36 credit hours).

LITERATURE AND LANGUAGE COURSES (ENGL)

For all upper-division literature courses that are not general studies courses, ENGL 234 is a prerequisite.

ENGL 204 - INTRODUCTION TO LITERATURE (4)

Introduction to the art of reading and studying literature, emphasizing the methods of analyzing poetry, stories, and drama. Will not apply toward an English major.

ENGL 210 - SURVEY OF BRITISH AND AMERICAN LITERATURE (4)

A survey of British and American literature and literary history from Anglo-Saxon times to the present. The first quarter examines medieval, Renaissance, and colonial American literature.

ENGL 211 - SURVEY OF BRITISH AND AMERICAN LITERATURE (4)

A survey of British and American literature and literary history from Anglo-Saxon times to the present. The second quarter examines literature from the Restoration in England to the Civil War in America.

ENGL 212 - SURVEY OF BRITISH AND AMERICAN LITERATURE (4)

A survey of British and American literature and literary history from Anglo-Saxon times to the present. The third quarter examines literature from the Victorian era to the present.

ENGL 214 - THEMES IN LITERATURE (4;12)

A thematic approach to the study of literature in a variety of genres. See Class Schedule for the description of specific themes, which vary from quarter to quarter. Will not apply toward an English major. May be repeated for credit when topics vary.

ENGL 234 - LITERARY ANALYSIS (4)

Instruction and practice in close reading, interpretation, and evaluation of literature in the major genres with an introduction to major critical and theoretical approaches to the study of literature. Intended to prepare the student for upper-division literature courses. Prerequisite ENGL 223 or HONR 243 and at least one quarter of Survey of British and American Literature or Western Thought.

ENGL 274 - STUDY TOUR: BRITISH LITERATURE IN CONTEXT (4)

The study of British literature in preparation for and conjunction with the UK History and Literature Tour. Course material will emphasize the role of place and culture in the formation of representative works from major literary periods. Will apply to the English major or minor. Offered even summer quarters.

ENGL 284 - ENGLISH GRAMMAR (4)

The study of grammar with practical application to writing, editing, and teaching. Prerequisite: English major or minor status, or permission of the instructor.

British Literature Before 1830

The following four courses in British literature before 1830 are taught on a four-year rotation with one taught each year.

ENGL 344 - MEDIEVAL LITERATURE (4)

Study of British literature from its origins to about 1500. Examines major writers and their responses to the literary and historical developments of the period. Prerequisite: ENGL 234.

ENGL 345 - RENAISSANCE LITERATURE (4)
Study of British literature from the sixteenth and early seventeenth centuries. Examines major writers and their responses to the literary and historical developments of the period. Prerequisite: ENGL 234.

ENGL 346 - RESTORATION AND ENLIGHTENMENT (4)
Study of British literature from the Restoration and the eighteenth century. Examines major writers and their responses to the literary and historical developments of the period. Prerequisite: ENGL 234.

ENGL 347 - ROMANTIC BRITISH LITERATURE (4)
Study of British Romanticism. Examines major writers and their responses to the literary and historical developments of the period. Prerequisite: ENGL 234.

British and American Literature After 1830
The following four courses in British and American literature after 1830 are taught on a four-year rotation with one taught each year.

ENGL 355 - VICTORIAN LITERATURE (4)
Study of British literature from 1830 to 1901. Examines major writers and their responses to the literary and historical developments of the period. Prerequisite: ENGL 234.

ENGL 356 - TWENTIETH-CENTURY BRITISH LITERATURE (4)
Examination of major British writers of the twentieth century and their responses to the literary and historical developments of the period. Prerequisite: ENGL 234.

ENGL 364 - NINETEENTH-CENTURY AMERICAN LITERATURE (4)
Examination of major American writers of the nineteenth century and their responses to the literary and historical developments of the period. Prerequisite: ENGL 234.

ENGL 366 - TWENTIETH-CENTURY AMERICAN LITERATURE (4)
Examination of major American writers of the twentieth century and their responses to the literary and historical developments of the period. Prerequisite: ENGL 234.

ENGL 358 - CLASSICAL LITERATURE (4)
Study of Greek and Roman literature, emphasizing classical legend and thought in its cultural context. Offered even years.

ENGL 359 - WORLD LITERATURE (4)
Study of selected works outside of the Anglo-American tradition. Offered odd years.

ENGL 360 - SHAKESPEARE FESTIVAL (2)
Study tour to a regional Shakespeare festival. Students read in advance four plays scheduled for performance that season, write preliminary responses, and then attend lectures/discussions and performances of the plays during four days spent at the festival. Offered alternate summer quarters.

ENGL 363 - HISTORY OF THEATRE (4)
Study of the history and development of the theatre from the classical stage to the present. Offered even years.
Cross-Listed as: DRMA 363.

ENGL 394 - DIRECTED READING (1-2; 3)
Independent reading for upper-division students who wish to continue broadening their knowledge of literature in a particular area by extensive reading. Prerequisite General studies literature or ENGL 234; admission by permission of instructor.

ENGL 454 - LITERATURE OF THE BIBLE (4)
Study of biblical poetry and prose from a literary perspective. Offered even years. Prerequisite: General studies literature or ENGL 234. Cross-Listed as: RELB 354.

ENGL 470 - LITERARY AND CRITICAL THEORY (4)
Study of the history, theory, and practice of literary criticism, with an application to selected works of literature. Includes a survey of the principal genres of criticism and representative theoreticians from those genres.

ENGL 474 - STUDY TOUR: TOPICS IN BRITISH LITERATURE (4)
Explores a topic or genre of British literature in conjunction with the UK History and Literature Tour. Will apply to the English major or minor. Offered even summer quarters.

ENGL 496 - SEMINAR IN LITERATURE (0)
During their junior year, English majors with an emphasis in literature will identify a paper from an upper-division literary period course to further develop into a major scholarly paper. Students must submit the Proposal for Seminar in Literature form by the end of spring quarter of their junior year. Graded S/NC.

ENGL 497 - SEMINAR IN LITERATURE (1)
Required in the senior year for English majors with a literature emphasis. Students will be mentored through the completion of the major scholarly paper proposed in ENGL 496.

ENGL 498 - SEMINAR IN LITERATURE (WD) (1)
Required in the senior year for English majors with a literature emphasis. Includes the preparation for and public presentation of the student's major scholarly

paper. Fulfills the Writing in the Disciplines Requirement (WD).

ENGR - ENGINEERING

Students must advance to Phase 2 in the Engineering program before proceeding to any engineering course numbered 221 or higher. See the Engineering Program of Study (p. 87)for more information.

ENGR 120 - INTRODUCTION TO BIOENGINEERING (2)

Introduction to bioengineering and relevant career choices. Includes an overview of key study areas of biomaterials, biomechanics, biomolecular technology, tissue engineering, biofluids, and bioenergetics.

ENGR 121 - INTRODUCTION TO THE PROFESSION OF ENGINEERING (2)

Introduction to the profession of engineering, computer based engineering calculation tools, analysis of team dynamics, teamwork and engineering communications.

ENGR 122 - INTRODUCTION TO CAD (2)

Introduction to Computer Aided Design and Computer Aided Engineering (CAD, CAE). Includes coverage of hand sketching, drafting standards, pictorial representations and principles of descriptive geometry. Covers both 2D and 3D CAD. Discipline specific computer applications will be represented as available. Laboratory work required. Recommended: ENGR 121. (Course fees apply.)

ENGR 123 - INTRODUCTION TO ENGINEERING DESIGN (2)

The design process, systems engineering, principles of project management, applied to a full scale project. Emphasis on teamwork, written and oral communication. (Course fees apply.) Prerequisite: ENGR 121 and ENGR 122 or permission of instructor.

ENGR 197 - FRESHMAN SEMINAR (1)

Application of engineering design methodology. Participation on a senior project team required. Admission by permission of the instructor.

ENGR 208 - ENGINEERING FOR THE LIFE SCIENCES (4)

Introduction to the practice of engineering for students in biology-related programs. Explores the foundations of circuits, microcontrollers, measurement and instrumentation concepts, and lab sensors for scientific applications. Students will gain skills to collaborate effectively with engineers. Will not apply toward an engineering major. Includes laboratory. Prerequisite: CPTR 141.

ENGR 214 - ASEPTIC CELL CULTURE LABORATORY (1)

An introduction to fundamental laboratory methods required for the successful culture of microbial and mammalian cells. Cell maintenance and characterization, media preparation, and proper aseptic technique will be covered.

ENGR 221 - ENGINEERING MECHANICS I (3)

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. A student must have a grade of C- or higher in ENGR 221 before taking ENGR 222, and in ENGR 222 before taking ENGR 223. Prerequisite: MATH 172.

ENGR 222 - ENGINEERING MECHANICS II (3)

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. A student must have a grade of C- or higher in ENGR 221 before taking ENGR 222, and in ENGR 222 before taking ENGR 223. Prerequisite: ENGR 221. Corequisite: MATH 273.

ENGR 223 - ENGINEERING MECHANICS III (3)

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. A student must have a grade of C- or higher in ENGR 221 before taking ENGR 222, and in ENGR 222 before taking ENGR 223. Prerequisite: ENGR 222.

ENGR 228 - CIRCUIT ANALYSIS (4)

Study of circuit variables and parameters; Kirchhoff'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. PHYS 252 recommended prior to this course. (Course fees apply.) Corequisite: MATH 286.

ENGR 235 - ENGINEERING FOR THE LIFE SCIENCES (4)

Introduction to the practice of engineering for students in biology-related programs. Explores the

foundations of circuits, microcontrollers, measurement and instrumentation concepts, and lab sensors for scientific applications. Students will gain skills to collaborate effectively with engineers. Will not apply toward an engineering major. Includes laboratory. Corequisite: CPTR 141.

ENGR 295 - SOPHOMORE COLLOQUIUM (0)
Lectures in support of engineering career planning and internship opportunities. Engineering degree candidates must satisfactorily complete three quarters of colloquium (ENGR 295 and/or ENGR 495). ENGR 295 may count at most once. Graded S or NC.

ENGR 297 - SOPHOMORE SEMINAR (1)
Application of engineering design methodology. Participation on a senior project team required. Admission by permission of the instructor. Prerequisite: Sophomore standing in engineering.

ENGR 312 - PHYSICAL ELECTRONICS (3)
Study of the physical principles of solid state electronics devices. Offered even years. Prerequisite: MATH 274, PHYS 253. Corequisite: ENGR 315. Cross-Listed as: PHYS 312.

ENGR 315 - PHYSICAL ELECTRONICS LABORATORY (1)
Experimental study of the physical principles of solid state electronics devices. Offered even years. (Course fees apply.) Corequisite: ENGR 312. Cross-Listed as: PHYS 315.

ENGR 318 - ELECTROMECHANICAL ENERGY CONVERSION (4)
Study of electromechanical energy conversion principles and their application to electric machines. Topics include magnetic circuits, force and torque, AC and DC motors and generators; performance characteristics and applications. Laboratory work required. (Course fees apply.) Offered odd years. Prerequisite: ENGR 228.

ENGR 321 - MECHANICS OF MATERIALS (4)
Study of stresses and strains, deformations and deflections of posts, shafts, beams, columns; combined stresses; elasticity. Computational and experimental laboratory required. (Course fees apply.) Prerequisite: ENGR 222.

ENGR 322 - ENGINEERING MATERIALS (4)
Introduction to the science of engineering materials including crystal structures, X-ray diffraction, electron transport in solids, phase diagrams, microstructures and properties, strengthening mechanisms, and failure. Laboratory work required. (Course fees apply.) Prerequisite: ENGR 321, CHEM 142.

ENGR 323 - CIVIL ENGINEERING MATERIALS (3)
Study of the engineering properties and applications of asphalt, concrete, plastics, steel, wood, and composites. Laboratory work required. Recommended: ENGR 221. Offered even years. (Course fees apply.)

ENGR 324 - MATERIALS AND PROCESSES IN MANUFACTURING (2)
Introduction to the study of manufacturing processes for metallic, polymer, and composite materials. Emphasizes topics including corrosion of metals, metal casting, powder metallurgy, metal forming and removal processes, material selection, and joining methods. Laboratory work required. (Course fees apply.) Prerequisite: ENGR 322.

ENGR 325 - INSTRUMENTATION (3)
Study of theory and application of modern instrumentation; design of experiments, validation of experimental data. Laboratory work required. (Course fees apply.) Prerequisite: MATH 315, ENGR 228 or permission of instructor.

ENGR 326 - ENGINEERING ECONOMY (4)
Introduction to the business aspects of engineering, including cost accounting, financial decision making, ethics, scheduling, entrepreneurship and project management. Prerequisite Junior standing in engineering.

ENGR 331 - FLUID MECHANICS (4)
Fluid statics and dynamics of fluid motion; conservation of mass, momentum, and energy in laminar and turbulent flow using control volume formulation. Introduction to Navier Stokes equations for fluid flow; inviscid flow; dimensional analysis and similitude; boundary layer flow; lift and drag forces; viscous flow in conduits; open channel flow; flow measurements; introduction to compressible flow. Prerequisite ENGR 222, PHYS 251, MATH 274; Recommended: PHYS 252, MATH 286.

ENGR 332 - THERMODYNAMICS (3)
Introduction to the nature of energy and study of energy transport 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: CHEM 143 or PHYS 253.

ENGR 333 - THERMODYNAMICS AND THERMAL SYSTEMS (3)
Study of thermodynamics for complex systems, detailed analysis of power and refrigeration cycles, thermodynamics, and equilibrium principles of nonreacting and reacting mixtures; application of the principles of global thermochemical energy balances to real power systems. Strongly recommended: ENGR 331. Prerequisite: ENGR 332.

ENGR 341 - GEOLOGY AND SOIL MECHANICS (4)

Introduction to geological structure, process, and weathering; soils properties, classification, and interpretation; subsurface investigation; flow of water through soils. Study of stress distribution and deformation of soils. Laboratory work required. Offered even years. (Course fees apply.) Corequisite: ENGR 321, ENGR 331.

ENGR 342 - HYDROLOGY (3)

Introduction to precipitation; occurrence, measurement, transport, and storage of ground and surface waters; statistical models. Offered even years. Prerequisite: ENGR 331; Recommended: ENGR 341.

ENGR 343 - ENVIRONMENTAL ENGINEERING SYSTEMS (4)

Assessment of gaseous, liquid and solid wastes from commercial, domestic, and industrial sources; quantity and quality; conservation, collection, treatment, disposal, and storage; impact on resources and ecosystems; air, water, and land. Offered odd years. Prerequisite: CHEM 143.

ENGR 344 - CIVIL ENGINEERING ANALYSIS (4)

Analysis of structural, environmental transportation, and other civil engineering problems using computer software; applications involve matrix solution, linear and non-linear least squares, numerical integration, and finite differences. Offered odd years. Prerequisite: CPTR 141, MATH 239; Recommended: MATH 286, MATH 315.

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. Offered odd years. Prerequisite: Junior standing in engineering or permission of instructor.

ENGR 346 - SURVEYING (4)

Use of basic surveying instruments; computational methods for traverses, routes, and earthwork; mapping. Offered odd years. (Course fees apply.) Prerequisite: ENGR 122. Corequisite: MATH 172.

ENGR 347 - STRUCTURAL ANALYSIS I (3)

Study of classical methods for analysis of determinate and indeterminate structures; load-stress-deflection parameters for beams, girders, trusses and frames. Prerequisite ENGR 321. Corequisite: MATH 239.

ENGR 348 - STRUCTURAL ANALYSIS II (3)

Study of matrix methods for analysis of determinate and indeterminate structures; computer applications of matrix methods. Prerequisite CPTR 141, ENGR 321, ENGR 347, MATH 239. Corequisite: MATH 286.

ENGR 350 - LINEAR SYSTEMS ANALYSIS (4)

Introduction to linear systems theory for electrical and mechanical systems with a motivational control systems project using Proportional Integral Derivative (PID) control. Concepts include Fourier series, Laplace transforms, closed loop control systems, and stability, explored from both time and frequency perspectives. Prerequisite: ENGR 223, ENGR 228.

ENGR 354 - DIGITAL LOGIC (3)

Introduction to the fundamentals of information and its encodings in digital logic circuits. Covers binary number systems, CMOS transistors, Boolean algebra and combinational logic, logic minimization, basic sequential logic and state machines.

ENGR 355 - EMBEDDED SYSTEM DESIGN (3)

Design of embedded microprocessor systems; system organization, CPU structures, address decoding and memory design, interrupts, real-time operating systems, input/output; hardware/software codesign. Laboratory work required. (Course fees apply.) Prerequisite: CPTR 280, ENGR 228, ENGR 354.

ENGR 356 - ENGINEERING ELECTRONICS I (4)

Study of characteristics and applications of discrete and integrated solid-state electronic devices and circuits; large-signal analysis, biasing; small-signal analysis, low and high frequency models, classical amplifier circuits, feedback amplifiers, operational-amplifier circuits; integrated-circuit electronics and superheterodyne receiver circuits. Laboratory work required. (Course fees apply.) Corequisite: ENGR 350.

ENGR 357 - ENGINEERING ELECTRONICS II (4)

Application of radio frequency electronics, power electronics, electronic feedback, and other topics in the design of a larger-scale project. Students perform research, component selection, circuit design, simulation, PCB design, design review, prototype fabrication, and debugging. Laboratory work required. (Course fees apply.) Prerequisite: ENGR 356.

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. (Course fees apply.) Prerequisite: ENGR 331.

ENGR 365 - MACHINE ELEMENT DESIGN LABORATORY (1)

Study of the design process. Laboratory instruction in machine element design, form, and function. Machine elements studied include gears, shafts, bearings, links, fasteners, and hydraulic components. ENGR 374 recommended prior to this course. (Course fees apply.) Prerequisite: ENGR 321, ENGR 322.

ENGR 366 - VIBRATIONS (3)

Study of periodic excitations and responses in the time and frequency domains; free and forced vibrations of single and multi-degree-of-freedom systems, frequency response functions, normal modes, vibration absorbers, and vibration isolation. Prerequisite: ENGR 350, MATH 239, MATH 286.

ENGR 374 - ADVANCED CAD/MCAE (2)

Fundamental and advanced concepts of Computer Aided Design (CAD) and Mechanical Computer Aided Engineering (MCAE) with emphasis on design applications. Includes parts and assembly creation, drawing layout, geometric dimensioning, tolerancing, design definition, software prototypes, design visualization, animation and interfacing to analysis codes. (Course fees apply.) Prerequisite: Junior standing in engineering or permission of instructor.

ENGR 386 - BIOENGINEERING MATERIALS (4)

Covers major classes of materials used in medical applications, properties, degradation, mechanisms, characterization methods, foreign body response, biocompatibility, and methods to control physiological response to biomaterial surfaces. Examines the role of microstructure properties in the choice of biomaterials and design of artificial organs, implants, and prostheses. Laboratory includes formation, testing, and characterization of biomaterials. Offered even years. (Course fees apply.) Prerequisite: BIOL 142, ENGR 223.

ENGR 390 - ENGINEERING IN A GLOBAL CONTEXT (4)

Practice of engineering in a global context. Student will participate in a design project constrained by local conditions in a chosen geographic region. Considerations may include language and social context; material selection and manufacturing processes; supply chains, labor force, and infrastructure. Engineering students will be responsible for engineering design, business students for business analysis.

Prerequisite Completion of general studies social science and natural science coursework. Cross-Listed as: GBUS 390.

ENGR 391 - THRIVING IN AN ENGINEERING BUSINESS (2)

This course introduces business concepts in an engineering context as well as a grounding in engineering ethics. Topics include construction and personnel management, marketing, engineering reports and correspondence, ethical systems, engineering liability, and entrepreneurship. Prerequisite: Junior standing in engineering.

ENGR 396 - JUNIOR SEMINAR (1)

Preparation for capstone sequence: review of a past project, consideration of scheduling tools, and observation of project presentations. Also provides opportunity to develop and practice skills required to pursue internship, job, and graduate school opportunities. Prerequisite: Junior standing in engineering.

ENGR 397 - JUNIOR SEMINAR (0)

Presentation and discussion of project reports made by students completing the senior seminar sequence. Requires observation of senior project team. Graded S or NC. Prerequisite: ENGR 396.

ENGR 419 - OPTIMIZATION (4)

Modeling and design within a formal optimization environment. Mathematical formulation of optimization problems including decision space parameterization, objective function selection, and constraint definition. Survey of algorithms for unconstrained and constrained optimization; techniques for solving multi-disciplinary and multi-objective problems. Applications to problems in mathematics, physics, and engineering. Credit will not be allowed for both MATH 319 and ENGR 419. Offered odd years. Prerequisite: MATH 274, MATH 239, CPTR 141, and PHYS 253 or permission of instructor. Cross-Listed as: MATH 319.

ENGR 430 - ELECTRIC POWER ENGINEERING (4)

Introduction to the generation, transmission, distribution, and utilization of electric power. Topics include balanced three-phase circuit analysis and power calculations, network calculations and associated numerical algorithms, two port circuits, voltage regulation, power factor correction, and power system operation. Laboratory work required. Offered odd years. Prerequisite: ENGR 228.

ENGR 433 - DIGITAL DESIGN (4)

Analysis and design of synchronous circuits and systems; emphasis on finite state machines and register transfer level circuits; VHDL design and synthesis; implementation using programmable logic devices. Laboratory work required. (Course fees apply.) Prerequisite: ENGR 355.

ENGR 435 - DIGITAL DESIGN II (4)

System oriented digital design using programmable logic with an emphasis on hardware description language (VHDL) methods; simulation; test benches; inter circuit communications; signal integrity; integrated circuit technology considerations.

Laboratory work required. Offered as needed. Prerequisite: ENGR 356, ENGR 433.

ENGR 440 - GROUNDWATER POLLUTION CONTROL (3)
Hydrogeology and computer simulation of groundwater flow and contamination movement. Offered as needed. Prerequisite: ENGR 342.

ENGR 441 - STEEL STRUCTURAL DESIGN (3)
Study of structural steel design, emphasizing the Load and Resistance Factored Design (LRFD) methodology. Topics include design of tension members, bolted and welded connections, compression members, beams and plate girders. Computation Laboratory required. (Course fees apply.) Prerequisite: ENGR 323, ENGR 348.

ENGR 442 - REINFORCED CONCRETE STRUCTURAL DESIGN (4)
Study of ultimate strength design concepts of reinforced concrete members and statically indeterminate frames, including flexure, shear, columns, bar anchorage and serviceability considerations. Computation Laboratory required. (Course fees apply.) Prerequisite: ENGR 323, ENGR 348.

ENGR 443 - TIMBER STRUCTURAL DESIGN (3)
Study of working stress design of timber members and connections for industrial and commercial applications. Computation Laboratory required. (Course fees apply.) Prerequisite: ENGR 323, ENGR 348.

ENGR 444 - STRUCTURAL DESIGN (3)
Study of design concepts as applied to structural systems. Topics include vertical and lateral building system layout, design problems, combinations of structural materials, analysis techniques, structural stability, diaphragms, shear walls, foundations and code applications. Computation Laboratory required. Offered as needed. (Course fees apply.) Prerequisite: ENGR 441, ENGR 442.

ENGR 445 - WATER AND WASTEWATER: TREATMENT AND TRANSPORT I (4)
Unit operation and system design of physical, chemical, and biological treatment processes of water and wastewater treatment. Integrated with analysis and design of water distribution systems, and sanitary and storm sewer collection systems. Laboratory work and computational laboratory required. Offered odd years. (Course fees apply.) Prerequisite: ENGR 331, ENGR 343.

ENGR 446 - WATER AND WASTEWATER: TREATMENT AND TRANSPORT II (4)
Additional depth for unit operation and system design of physical, chemical, and biological treatment processes of water and wastewater treatment. Integrated with analysis and design of water distribution systems, and sanitary and storm sewer collection systems. Laboratory work and computational laboratory required. Offered odd years. (Course fees apply.) Prerequisite: ENGR 445 or permission of instructor.

ENGR 447 - RECEIVING WATER ANALYSIS (3)
Analysis and modeling of surface waters receiving point and nonpoint waste discharges; design of in-stream modifications. Offered odd years. Prerequisite: ENGR 343.

ENGR 448 - ADVANCED WATER AND WASTEWATER DESIGN (3)
Study of advanced water and wastewater treatment processes and practices. Emphasis upon current literature and recent developments in state-of-the-art practices. Offered as needed. Prerequisite: ENGR 446.

ENGR 449 - TRANSPORTATION ENGINEERING (4)
Study of the various modes of transportation that comprise the transportation system. Consideration is given to the planning, design and operation of the system. Introduction to traffic engineering. Offered even years. Recommended: ENGR 341, ENGR 346.

ENGR 450 - GEOTECHNICAL ENGINEERING (3)
Study of stress distribution and deformation of soils; applications to foundation and slope stability. Offered even years. Prerequisite: 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, Faraday induction, and application to transmission lines. Offered even years. Prerequisite: ENGR 228, MATH 274, PHYS 253.

ENGR 454 - CONTROL SYSTEMS (4)
Study of the design and application of control methods to electrical and mechanical systems. Analytical techniques include both transform (classical control) and state-space (modern control) methods. Offered even years. Prerequisite: ENGR 350, MATH 239.

ENGR 455 - SIGNALS AND SYSTEMS (4)
Introduction to continuous and discrete signal and system analysis and design; Fourier series, convolution, Fourier transforms, discrete Fourier transforms, digital filters and other applications. Offered odd years. Prerequisite: ENGR 350, MATH 239.

ENGR 456 - COMMUNICATIONS SYSTEMS (4)
Introduction to analog and digital communication systems, including topics in modulation; baseband and bandpass signals; power spectral density and

bandwidth; random processes; noise, signal-to-noise ratio, and error probability; and system performance and information theory. MATH 315 recommended prior to this course. Offered as needed. Prerequisite: ENGR 455.

ENGR 460 - POWER ELECTRONICS (4)

Applying electronics to energy conversion and control. Emphasis on switching techniques. Topics include switching power supplies, motor drives, DC-DC converters, control, rectifiers, magnetic components, characteristics of power semiconductors and HVDC applications. Laboratory work required. Offered odd years. (Course fees apply.) Prerequisite: ENGR 350, ENGR 356.

ENGR 461 - KINEMATICS (4)

Introduction to 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. Prerequisite ENGR 223; MATH 239, MATH 286.

ENGR 462 - MACHINE DESIGN (4)

Design of machines and machine elements; study of stress failure theories applied to machine elements; industrial design problems; CAD methods. ENGR 374 recommended prior to this quarter. Prerequisite: ENGR 321, ENGR 324, ENGR 365, ENGR 461, ENGR 468.

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. Prerequisite MATH 274, MATH 286, PHYS 252; Recommended: ENGR 331, ENGR 332.

ENGR 466 - HEATING, VENTILATING, AND AIR CONDITIONING DESIGN (4)

Study of design of mechanical systems and controls in air conditioning and heating of buildings. Modern aspects of solar heating and cooling will be included. Offered as needed. Prerequisite: ENGR 332.

ENGR 467 - ROBOTICS (4)

Project-based introduction to robotics with an emphasis on implementation of autonomous mobile robots. Topics include navigation, odometry, sensor implementation and interpretation, and mapping. Offered even years. Prerequisite: CPTR, 141, ENGR 223, ENGR 228.

ENGR 468 - ENGINEERING FINITE ELEMENT METHODS (4)

Introduction to finite element methods for the solution of problems in structures, solid mechanics, heat transfer and fluids. Techniques for obtaining approximate numerical solutions to governing differential equations in the problem areas are covered. Industrial software is applied to a broad range of engineering problems involving analysis and design. Prerequisite MATH 286, ENGR 321 or permission of instructor.

ENGR 470 - COMBUSTION (4)

Thermodynamics and chemistry of reacting systems; chemical equilibrium; mass transfer and droplet evaporation; introduction to chemical kinetics and pollutant formation; characteristics of laminar and turbulent flames; combustor design fundamentals. Offered odd years. Prerequisite: ENGR 331, ENGR 332, MATH 286; Recommended: CHEM 143, ENGR 465. Corequisite: ENGR 333.

ENGR 471 - COMPOSITE MATERIALS (4)

Engineering composite materials; manufacturing processes; micro- and macro-mechanical analysis of a lamina; design and analysis of laminates; damage and failure; advanced simulation tools for composite structures; composite testing. Laboratory work required. Offered odd years. Prerequisite: ENGR 321, MATH 239, or permission of instructor.

ENGR 475 - MECHANICS OF FLIGHT (4)

Study of the fundamentals of flight mechanics including: the standard atmosphere, aerodynamics, lift, drag, aerodynamic shapes, air foil characteristics, aircraft performance, stability of flight vehicles, and propulsion. Historical vignettes and design considerations will be presented. Offered even years. (Course fees apply.) Prerequisite: ENGR 331, ENGR 332.

ENGR 480 - MANUFACTURING SYSTEMS ENGINEERING (4)

Study of the fundamentals of manufacturing with an overview of manufacturing processes, machine tools and equipment; manufacturing systems and material flow. Emphasis on implementation of automated manufacturing systems with pneumatics, hydraulics, electric actuators, PLCs, sensors, factory communications, and human/machine interfaces. Scheduling, resource optimization, material handling, and quality management are discussed. Laboratory work required. (Course fees apply.) Prerequisite: ENGR 324; Recommended ENGR 350.

ENGR 485 - BIOLOGICAL AND CHEMICAL REACTOR DESIGN (4)

Applications of material and energy balances, transport phenomena, chemical reaction engineering, and thermodynamics to problems in biomedical engineering and applied physiology. Rapid overview of relevant microbiology and biochemistry. Design and

analysis of biological reactors. Laboratory includes operation of laboratory bench bioreactors. Offered even years. (Course fees apply.) Prerequisite: CHEM 321, ENGR 214 and ENGR 331 or ENGR 332 or ENGR 465.

ENGR 486 - TISSUE ENGINEERING (4)
Study of tissue functionality and biomaterial design including study of the extracellular matrix and biomimetic biomaterial scaffold design. Examines the basic concepts underlying physiological responses to wounds and foreign materials. Topics include biomaterial scaffolds, relevant cell types, soluble regulators and their genes, therapeutic delivery, mechanical loading, and ethics. Laboratory includes culture with mammalian cells. Offered odd years. (Course fees apply.) Prerequisite: BIOL 381 with C or better, ENGR 214, or permission of instructor. Cross-Listed as: BIOL 486.

ENGR 487 - IMAGING SYSTEMS (4)
Principles and uses of imaging technology with an emphasis on biomedical applications. Resolution and the point-spread function, 2D Fourier transforms and spatial-frequency concepts, tomography (CT), pulse-echo beamforming (ultrasound, radar), MRI, and basic image processing. Offered as needed. Prerequisite: ENGR 455.

ENGR 490 - INTERNSHIP (0-2; 2)
Individual contract arrangement involving students, faculty, and cooperating industries to gain practical engineering experience. A minimum of 30 hours of approved activity/experience must be completed for each credit earned. Internship credit is restricted to the major field of study. See the Internship Program in the Nondepartmental section of the Bulletin. Graded S or NC. (Course fees apply for students enrolled for 0 credit.) Prerequisite: Permission of the Dean of the School of Engineering.

ENGR 495 - COLLOQUIUM (0)
Lectures on current engineering practice and other selected topics related to the engineering profession. Engineering degree candidates must satisfactorily complete three quarters of colloquium (ENGR 295 and/or 495), at most one of which may be ENGR 295 and at least one of which must be during the senior year. Graded S or NC.

ENGR 496 - CAPSTONE ENGINEERING PROJECT (1)
Capstone engineering experience. Each student is required to conduct an approved project with appropriate engineering research, analysis and design content. The scope of the project covers the project life cycle from proposal to final oral and written reports, over the course of three quarters. Each student is required to attend Autumn, Winter, and Spring quarters irrespective of the quarters in which enrollment in Capstone occurs. Must be taken in sequence, and students must receive a grade of C- or higher before they can proceed to the next class in the sequence. Laboratory work required. (Course fees apply.) Prerequisite: Senior standing in engineering, ENGR 396, and ENGR 397.

ENGR 497 - CAPSTONE ENGINEERING PROJECT (2)
Capstone engineering experience. Each student is required to conduct an approved project with appropriate engineering research, analysis and design content. The scope of the project covers the project life cycle from proposal to final oral and written reports, over the course of three quarters. Each student is required to attend Autumn, Winter and Spring quarters irrespective of the quarters in which enrollment in Capstone occurs. Must be taken in sequence, and students must receive a grade of C- or higher before they can proceed to the next class in the sequence. Laboratory work required. (Course fees apply.) Prerequisite: ENGR 496.

ENGR 498 - CAPSTONE ENGINEERING PROJECT (2)
Capstone engineering experience. Each student is required to conduct an approved project with appropriate engineering research, analysis and design content. The scope of the project covers the project life cycle from proposal to final oral and written reports, over the course of three quarters. Each student is required to attend Autumn, Winter and Spring quarters irrespective of the quarters in which enrollment in Capstone occurs. Must be taken in sequence, and students must receive a grade of C- or higher before they can proceed to the next class in the sequence. Laboratory work required. (Course fees apply.) Prerequisite: ENGR 497.

ENGR 499 - CAPSTONE PROJECT COMPLETION (1)
Culmination of the senior seminar project for students choosing the design experience within a depth elective course. Technical and communication work must be polished in consultation with the project advisor and include a written summary and oral presentation. Laboratory work required. Prerequisite: ENGR 496.

ENVI - ENVIRONMENTAL STUDIES

ENVI 385 - ENVIRONMENTAL STEWARDSHIP (4)
Climate change, distribution of clean water, air pollution, and similar topics provoke heated debates and conflicting stances. Through practicing civil debate, students develop an understanding of the state of the natural world from scientific, economic, and

political viewpoints. Through this study and students' personal values regarding justice, ethics, and the value of people and the natural world, they will work to construct a personal environmental ethic.

FILM - FILM

FILM 215 - INTRODUCTION TO FILM LITERATURE (4)
Study of the narrative techniques of film. Intended to develop criteria for analyzing film literature. Will not apply toward an English major.

FILM 318 - FILM STUDIES (4)
An advanced course that explores major genres in film and literature. Students will examine the grammar, theory, history, and literature of film in order to understand film makers' cultural views and ideas as expressed in their visions and craft. May be repeated for credit when topics vary. Will apply as an elective for the English major. Prerequisite: General studies literature, ENGL 234, or FILM 215.

FINA - FINANCE

FINA 101 - PERSONAL FINANCE (4)
Introduction to personal financial planning and Christian stewardship. Topics include career and financial goal setting, budgeting, record-keeping, financial statements, banking, compound interest, income taxes, investing, credit cards, credit scores, student and consumer loans, renting or buying a home, insurance and risk management, and retirement and estate planning.

FINA 325 - INVESTMENTS (4)
Study of the principles necessary to evaluate investment securities, manage portfolios, and assess market risks.

FINA 351 - MANAGERIAL FINANCE (4)
Study of the theory and methods of financial management in corporate enterprises. Main topics include financial statement analysis, time value of money, debt and equity valuation, capital budgeting, risk and return, security market efficiency, capital structure, dividend policy, working capital management, derivative securities, and international finance.

FINA 367 - REAL ESTATE PRINCIPLES (4)
Study of the principles of real estate ownership, acquisition, sales, financing, valuation, investment, and property management.

FINA 440 - FINANCIAL MARKETS (2)
Study of the U.S. Federal Reserve system, interest rates, and the money, bond, mortgage, stock, and derivative markets. Credit cannot be earned for both FINA 440 and ECON 441/FINA 441. Prerequisite: ECON 211 and FINA 351.

FINA 441 - FINANCIAL MARKETS AND INSTITUTIONS (4)
Study of the U.S. Federal Reserve system, interest rates, and the money, bond, mortgage, stock, and derivative markets. An introduction to U.S. financial institutions, including commercial banks, thrifts, credit unions, finance companies, investment banks, mutual funds, insurance companies, and pension funds. Credit cannot be earned for both FINA 440 and ECON 441/FINA 441. Prerequisite: ECON 211 and FINA 351. Cross-Listed as: ECON 441.

FINA 488 - INTERNATIONAL TRADE AND FINANCE (4)
Study of alternative theories on trade, theoretical impact of trade on employment, economic growth and welfare, and the implications of protectionism on the economy; also covers the foreign exchange systems, and the conduct of monetary policy in an open economy. Offered alternate years. Prerequisite: ECON 211. Cross-Listed as: ECON 488.

FINA 490 - INTERNSHIP (0-4; 4)
Practical experience allowing application of classroom learning. Requirements include a minimum of 120 hours of documented work experience. See the Internship Program information in the Nondepartmental section of the Bulletin. Graded S or NC. (Course fees apply for students enrolled for 0 credit.)

FREN - FRENCH

FREN 101 - ELEMENTARY 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. This course is designed for non-native speakers of French or students with no French heritage. Language laboratory and tutoring required. Does not count towards a minor in French.

FREN 102 - ELEMENTARY 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. This course is designed for non-native speakers of French or students with no French heritage. Language laboratory and tutoring required. Prerequisite: FREN 101 or permission of instructor.

FREN 103 - ELEMENTARY 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. This course is designed for non-native speakers of French or students with no French heritage. Language laboratory and tutoring required. Prerequisite: FREN 102 or permission of instructor.

FREN 201 - INTERMEDIATE FRENCH (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. Language laboratory required. Must be taken in sequence. Offered as needed. Prerequisite: FREN 103 or equivalent or permission of instructor.

FREN 202 - INTERMEDIATE FRENCH (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. Language laboratory required. Must be taken in sequence. Offered as needed. Prerequisite: FREN 201.

GBUS - GENERAL BUSINESS

GBUS 160 - INTRODUCTION TO BUSINESS (4)
An overview of the business environment (i.e., forms of business, economics, law, regulation, and ethics) and the key functions areas within a business (i.e., marketing, operations, accounting, finance, human resources, and information systems). Not open to junior and senior business, automotive management, aviation management, or information systems majors.

GBUS 190 - FREE ENTERPRISE PRACTICUM (0-1; 3)
An elective course in which students obtain practical knowledge and experience in using the power of entrepreneurial action to enable human progress. As participants in the "Entrepreneurial Action Us" (ENACTUS) organization, students plan and implement entrepreneurial projects that transform lives and shape a better, more sustainable world. Graded S or NC. May be repeated for up to 3 credit hours. (Course fees apply for students enrolled for 0 credit.)

GBUS 270 - BUSINESS COMMUNICATION (4)
Study of the strategies for effective and ethical oral and written business communication. Emphasis is placed on writing letters, memos, reports, and proposals. Additional topics include individual and team communication, intercultural communication, and job-seeking skills. Prerequisite ENGL 122.

GBUS 361 - BUSINESS LAW I (4)
An introduction to the judicial system, sources of law, and the legal environment in which individuals and businesses operate. Subjects include contracts, property, constitutional law, torts, legal ethics, wills and estates.

GBUS 362 - BUSINESS LAW II (4)
Study of the legal environment with emphases on the Uniform Commercial Code, sales, commercial paper, business organizations, agency, credit, bankruptcy, and governmental regulation of business. Recommended: GBUS 361

GBUS 390 - ENGINEERING IN A GLOBAL CONTEXT (4)
Practice of engineering in a global context. Student will participate in a design project constrained by local conditions in a chosen geographic region. Considerations may include language and social context; material selection and manufacturing processes; supply chains, labor force, and infrastructure. Engineering students will be responsible for engineering design, business students for business analysis. Prerequisite: Completion of one course in the Culture and Business requirement of the Global Humanitarian Engineering and general studies natural science coursework. Cross-Listed as: ENGR 390.

GBUS 490 - INTERNSHIP (0-4; 4)
Practical experience allowing application of classroom learning. Requirements include a minimum of 120 hours of documented work experience. See the Internship Program in the Nondepartmental section of the bulletin. Graded S or NC. (Course fees apply for students enrolled for 0 credit.)

GBUS 495 - COLLOQUIUM (0)
Lecture series on current business practice. Graded S or NC.

GDEV - GAME DEVELOPMENT

Rize Game Development Classes:
Classes with a GDEV prefix are offered in collaboration with RIZE, a company that partners with small independent colleges and universities to provide courses to consortium members. Courses taken with a GDEV prefix are offered on a semester schedule. Students enrolling in courses offered in the fall semester will start coursework in August and complete the course in December. Classes offered during the spring semester will begin in January and end in May.

GDEV 122 - INTRODUCTION TO GAMES (4.5)
Games sit at the intersection of technology, art, and culture, so success within the games industry requires you to understand all three. This course explores why we love games, what role they play in society, and the industry that produces them. You'll also learn the

basics of game development. This course was developed in partnership with Unity and the IGDA to help everyone interested in the games industry start on the right foot. This online class has optional live sessions.

GDEV 223 - CONTENT AND SYSTEMS DESIGN (4.5)
If you've ever enjoyed the experience of playing a video game, you've had a first-hand lesson in how important content and systems design are. The experience of a game is driven by four major components: content, systems, narrative, and user experience. This class will help you learn to design all four components and build a deeper understanding of the game development process while introducing concepts in scripting. This online class has optional live sessions.

GDEV 324 - UNITY I, WORKING WITH UNITY (4.5)
The Unity engine powers nearly 50% of all games and nearly 75% of mobile games. This course, built in collaboration with Unity and the IGDA, will introduce you to developing games in Unity. By the end of this course, you'll learn how to build a fully functioning game within the Unity system, including all key elements. This online course has optional live sessions.

GDEV 325 - C# PROGRAMMING (4.5)
C# is a modern, general-purpose, object-oriented programming language with a range of uses, most notably creating desktop applications, web applications, web services and building games using the Unity engine. This course is intended to give students a working knowledge of the C# programming language and the .NET framework, as well as an understanding of C#'s application to the Unity Game Development Engine. Prerequisite: CPTR 242.

GDEV 426 - UNITY II, ADVANCED UNITY PROGRAMMING (4.5)
This course is intended to provide students with the skills and knowledge to bring their mastery of the Unity game engine and C# programming up to a professional standard. Students will learn how to perform a range of vital code-based tasks within the Unity platform and will grow their skills in building core gameplay functionality, supporting systems and platform-specific optimizations. This online class has optional live sessions. Prerequisite: GDEV 122, GDEV 223, GDEV 324, and GDEV 325.

GEOG - GEOGRAPHY

GEOG 252 - WORLD GEOGRAPHY (4)
Study of the world geography as a system of interactions between geographic features and human cultures. This course introduces geographical representations and geospatial technology as used to study human populations and the interactions between humans and environments. It also surveys the global context of current issues and events.

GNRL - GENERAL

GNRL 101 - UNIVERSITY EXPERIENCE (1)
Interactive classes and activities designed to prepare entering new students for their transition to Walla Walla University life. These classes promote development of academic and social skills as well as critical thinking and decision-making, which are essential to a balanced lifestyle of our collegiate environment. Students will also be assisted in a personalized approach to religion coursework in order to enhance their spiritual development. Graded S or NC. (Course fees apply.)

GNRL 102 - ON COURSE (3)
Study of strategies to optimize performance academically, professionally, and personally. Students will practice learned skills including effective goal setting, self-management, interdependence, emotional intelligence, cultural awareness, and community service. Due to its unique nature, permission of the Academic Standards Committee is required to withdraw from the course once a term has started. Open to all students as an elective.

GNRL 401 - POST-COMMENCEMENT CONTINUING ENROLLMENT (0)
A continuation course for students who have participated in commencement but have not completed degree requirements. (Course fees apply.)

GNRL 405 - PRE-COMMENCEMENT CONTINUING ENROLLMENT (0)
A continuation course for students with an approved degree application who completed all required coursework, generally during fall or winter term, but have outstanding requirements that need to be met prior to commencement. Only open to students who have not previously marched at commencement. Enrollment limited to no more than three quarters.

GREK - GREEK

GREK 231 - GREEK I (4)
Introduction to the elements of New Testament Greek with experience in translation. Language laboratory required. Prerequisite Successful completion of ENGL 122.

GREK 232 - GREEK I (4)
Introduction to the elements of New Testament Greek with experience in translation. Language laboratory required. (Course fees apply.) Prerequisite: GREK 231.

GREK 331 - GREEK II (4)

Continued reading in Koine Greek with emphasis on intermediate level syntax and practice in translating selected passages from the Gospels, Acts, the New Testament Epistles, Revelation, and the Apostolic Fathers. (Course fees apply.) Prerequisite: GREK 232 or equivalent.

GREK 332 - GREEK II (4)
Continued reading in Koine Greek with emphasis on intermediate level syntax and practice in translating selected passages from the Gospels, Acts, the New Testament Epistles, Revelation, and the Apostolic Fathers. Prerequisite: GREK 331.

GREK 342 - READINGS IN THE GREEK NEW TESTAMENT (2; 8)
Reading in selected sections of the Greek New Testament. Offered on request. Prerequisite: Permission of the School of Theology.

GREK 344 - THE GREEK OLD TESTAMENT (2)
Translation of selected narrative portions from the Septuagint and comparison with the Masoretic Text. Also includes translation of selected portions of Hebrews with attention to Old Testament citations. Offered on request.

GRMN - GERMAN

GRMN 101 - ELEMENTARY GERMAN (4)
Introduction to the study of German with elementary practice in the skills of understanding, speaking, reading, and writing; includes grammatical terminology and the sound system of German, plus basic grammar and vocabulary at the elementary level. This course is designed for non-native speakers of German or students with no German heritage. Language laboratory and tutoring required. Must be taken in sequence. Offered odd years.

GRMN 102 - ELEMENTARY GERMAN (4)
Introduction to the study of German with elementary practice in the skills of understanding, speaking, reading, and writing; includes grammatical terminology and the sound system of German, plus basic grammar and vocabulary at the elementary level. This course is designed for non-native speakers of German or students with no German heritage. Language laboratory and tutoring required. Must be taken in sequence. Offered odd years. Prerequisite: GRMN 101.

GRMN 103 - ELEMENTARY GERMAN (4)
Introduction to the study of German with elementary practice in the skills of understanding, speaking, reading, and writing; includes grammatical terminology and the sound system of German, plus basic grammar and vocabulary at the elementary level. This course is designed for non-native speakers of German or students with no German heritage. Language laboratory and tutoring required. Must be taken in sequence. Offered odd years. Prerequisite: GRMN 102.

GRMN 314 - GERMAN CIVILIZATION (4)
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, and reports. Offered as needed

HEBR - HEBREW

HEBR 331 - HEBREW I (4)
An introductory course to the grammar and vocabulary of Biblical Hebrew intended to enable the student to use the original language as a tool in Biblical studies.

HEBR 332 - HEBREW II (4)
Study of Hebrew grammar and syntax advancing to reading of selected biblical passages. Prerequisite: HEBR 331.

HEBR 451 - READINGS IN HEBREW (2; 8)
Selected reading in the various sections of the Hebrew Bible. Offered on request. Prerequisite: HEBR 332, permission of the School of Theology.

HIST - HISTORY

HISTORY GENERAL COURSES

HIST 320 - ARCHAEOLOGY AND EMPIRE (4)
The early practitioners of archaeology developed their methods and research questions in the context of European and American imperialism in the 19th and 20th centuries. This course explores the interaction of the colonial framework and the development of archaeology in the Mediterranean and the Americas.

HIST 335 - THE WORLD WARS (4)
Study of World War I, the interwar period, and World War II in both the European and Pacific theaters. The course also explores the rise of totalitarianism and nationalism within the context of global imperialism. Offered alternate years.

HIST 355 - THE ATLANTIC WORLD: LIBERTY, BONDAGE, AND REVOLUTION (4)
Set within the context of the Atlantic World, this course explores the struggle between liberty and bondage from the English Revolution through the framing of the American Constitution. Topics covered include, the Glorious Revolution, the Atlantic slave trade, European colonialism, colonial slavery, the American Revolution, the French Revolution, and the Haitian Revolution.

HIST 382 - HISTORICAL BIOGRAPHY (4; 12)

Biographical and autobiographical studies of distinguished as well as lesser-known figures throughout history. May be repeated for credit as topics vary.

HIST 394 - DIRECTED READING (1-3; 3)
Independent reading for students who wish to continue broadening their knowledge of history by extensive reading; admission by department approval.

HIST 395 - 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 towards a major or minor in history. Offered alternate years.

HIST 440 - HISTORY OF SOCIAL AND POLITICAL PHILOSOPHY (4)
Examines major philosophical views on the origin and justification of political obligation. Includes readings in political theory from classical philosophers such as Plato, Aristotle, and Augustine from the classical period; Kant, Rousseau, Hobbes, Locke, Spinoza, and Mill from the modern period; and Rawls, Mills, and Pateman from the twentieth century. Topics will include the origin of the state, the authority of the state over the individual, and the consent of the governed. Offered alternate years. Prerequisite: PHIL 204 or PHIL 205 or permission of instructor. Cross-Listed as: PHIL 440.

HIST 490 - EXPERIENTIAL LEARNING (0-2)
Individual contract arrangement involving students, faculty, and cooperating businesses to gain practical experience in a non-classroom setting. Allows the student to apply advanced classroom learning. A minimum of 30 hours of approved activity/experience must be completed for each credit earned. Internship credit is restricted to the major field of study. See the Internship Program in the Nondepartmental section of the Bulletin. Graded S or NC. (Course fees apply for students enrolled for 0 credit.) Prerequisite: Approval by department.

HIST 495 - COLLOQUIUM (0)
A series of lectures, discussions, and other activities that address historical and professional issues for history students. For each quarter that a student fails to complete the colloquium requirement as stated for the major, there will be a fee to be paid before an alternative colloquium will be approved. Graded S or NC.

AMERICAN HISTORY COURSES

HIST 221 - HISTORY OF THE UNITED STATES (4)
American history from the pre-Columbian period to the present. The first quarter covers through Reconstruction; the second quarter covers Reconstruction to the present.

HIST 222 - HISTORY OF THE UNITED STATES (4)
American history from the pre-Columbian period to the present. The first quarter covers through Reconstruction; the second quarter covers Reconstruction to the present.

HIST 283 - LATIN AMERICA (4)
The history of pre-contact Latin America to the present with an emphasis on the themes of exploration and conquest, colonialism, independence, post-colonialism, nationalism, and revolution. Offered alternate years.

HIST 337 - BASEBALL AND AMERICAN CULTURE (4)
The development of baseball and its impact on American popular culture, with an emphasis on baseball literature, music, and films. Will not satisfy general education history requirement. Offered alternate years. (Course fees apply.)

HIST 354 - AMERICAN HISTORY AND VISUAL CULTURE (4)
Relationships between historical events and visual representation, including media such as fine arts, prints, political cartoons, photography, and film, from the Revolutionary period to the present.

HIST 357 - THE AFRICAN-AMERICAN EXPERIENCE (4)
African-American contributions to American history and culture from the colonial period to the present. Offered alternate years.

HIST 359 - THE AMERICAN ECONOMY (4)
Development of the American economy and business systems from the colonial era to the present. It traces the transformation of key United States institutions (the firm, market, government) and themes (strategy, finance, organization) across the centuries, addressing their relevance to current debates. Offered alternate years.
Cross-Listed as: ECON 359.

HIST 386 - CULTURES OF THE PACIFIC NORTHWEST (4)
Culture and history of the Pacific Northwest and its inhabitants from the time before Euro-American contact with the Native Peoples to the present, with an emphasis on the region's geographical, environmental, economic, political, racial, and cultural boundaries. Prerequisite: EDUC 211, EDUC 250, or permission of instructor.

HIST 436 - RELIGION IN AMERICAN HISTORY (4)
A historical examination of American Religions and their role in the social, political, and economic life of the nation. The course will also survey the theologies, institutional forms, and the artistic and emotional expressions of religions that have developed on the United States. Offered alternate years.

HIST 445 - THE CIVIL WAR AND RECONSTRUCTION (4)
The sectional crisis, the war, and its impact on postwar political, economic, and social development. Offered alternate years.

HIST 448 - BECOMING AMERICA: CITIZENSHIP AND EXCEPTIONALISM FROM 1877-1941 (4)
America from the end of Reconstruction through the Great Depression. Focuses on themes of American exceptionalism and imperialism, citizenship and equality, migration and immigration, belonging and reform.

HIST 449 - RECENT AMERICAN HISTORY (4)
American society, politics, and culture from the end of World War II to the present. Offered alternate years.

HIST 450 - UNITED STATES FOREIGN POLICY (4)
United States foreign policy since 1945.

HISTORY RESEARCH COURSES

HIST 391 - INTRODUCTION TO SCHOLARSHIP (WD) (4)
Introduction to the methods, materials, and problems of historical research; students choose the topic for their senior papers, commence research, and write a proposal. Fulfills the Writing in the Disciplines Requirement (WD)

HIST 496 - SEMINAR (2)
Preparation and presentation of the senior paper. Open only to senior history majors. Must be taken in sequence. Prerequisite: HIST 391.

HIST 497 - SEMINAR (2)
Preparation and presentation of the senior paper. Open only to senior history majors. Must be taken in sequence. Prerequisite: HIST 391.

HIST 498 - SEMINAR (1)
Preparation and presentation of the senior paper. Open only to senior history majors. Must be taken in sequence. Prerequisite: HIST 391.

WORLD HISTORY COURSES

HIST 121 - THE WEST AND THE WORLD (4)
A survey of the social, economic, and political ideologies that shaped European history from the Middle Ages to the present. Students will read primary sources that give insight into major moments and movements from the perspective of contemporary individuals, especially in regard to Europe's interaction with the world. HIST 121 covers the 5th to the 18th centuries. HIST 122 covers the 19th century to the present.

HIST 122 - THE WEST AND THE WORLD (4)
A survey of the social, economic, and political ideologies that shaped European history from the Middle Ages to the present. Students will read primary sources that give insight into major moments and movements from the perspective of contemporary individuals, especially in regard to Europe's interaction with the world. HIST 121 covers the 5th to the 18th centuries. HIST 122 covers the 19th century to the present.

HIST 240 - CITIES AND CULTURES IN MIDDLE EASTERN HISTORY (4)
The city provides the starting point for investigating over a thousand years of Middle Eastern history. From the medieval centers of empire to the holy cities of Islam, each has been home to diverse peoples and cultures. Students will read the stories of pilgrims and scholars, of traders and leaders, of everyday women and men, to understand major cultural and political developments from the 7th century to the present.

HIST 242 - MODERN EAST ASIAN HISTORY (4)
East Asian history since 1800. Major themes include the cultural and historical patterns present in East Asia (China, Korea, and Japan), nationalism, imperialism, modernization, revolution, and women in society. Offered alternate years.

HIST 254 - HISTORY OF CHRISTIANITY (4)
Christian history from the early church to the present. The course will focus on the theological, political, and cultural development of Christianity around the world.

HIST 257 - VOICES IN AFRICAN HISTORY (4)
A survey of African history through a variety of voices from prehistory to the present. Archaeological remains speak of ancient kingdoms that flourished on trade. Oral histories sing of the creation of a west African empire. Manuscripts record the navigation of diverse identities in medieval Timbuktu. Modern literature discusses the experiences of colonization and decolonization.

HIST 305 - ANCIENT NEAR EASTERN EMPIRES (4)
The region stretching from the Nile to the Tigris and Euphrates Rivers, and beyond, produced some of the most formidable empires of the ancient world. This course discusses and compares how these empires expanded, legitimized, and organized their power as

political, religious, and economic entities. Primary sources, written and archaeological, will allow students to explore how people experienced and interacted with imperial power in their everyday lives.

HIST 414 - TOPICS IN ASIAN HISTORY (4; 8)
Seminar in Asian History explores themes in Asian history as selected by the instructor. Offered alternate years.

HIST 415 - TOPICS IN ANCIENT HISTORY (4; 8)
Seminar in Ancient History explores themes in the ancient world as selected by the instructor. Offered alternate years.

HIST 274 - STUDY TOUR: ENGLISH HISTORY IN CONTEXT (4)
History of medieval and early modern England offered in conjunction with the UK History and Literature Tour. The course will bring together an investigation of historic places, documents, art, music, theatre, and architecture in order to provide a window into the English past and present. Offered even years during the summer.

HIST 275 - HISTORY OF ENGLAND (4)
Development and expansion of the English nation from the earliest times to the present.

HIST 306 - CLASSICAL GREECE AND ROME (4)
Classical Greece and Rome have served as a model for political, social, and cultural ideas throughout modern history. What were the Greek polis and the Roman Republic really like? Who had a say in government and who was left out? How did both Greek and Roman societies change when they expanded their empires across the Aegean and Mediterranean? This course investigates these questions through the evidence left behind by contemporary writers and by everyday people in the archaeological record.

HIST 307 - REFORM AND REVOLT (4)
Course will explore the development of Christian history from the era of the Reformation to the American & French Revolutions (1500 to 1800). The emphasis will be on how the reform movements of the sixteenth century fractured the Christian Church, shaped theological developments, and set the stage for modern political and religious identity.

HIST 360 - SCIENCE AND THE ENLIGHTENMENT (4)
History of the scientific revolution and enlightenment thought in Early Modern Europe. Offered alternate years.
Cross-Listed as: HMNT 360.

HIST 437 - MEDIEVAL AND RENAISSANCE EUROPE (4)
History of religious, political, social, intellectual, and artistic developments from Middle Ages through the Italian Renaissance. Offered alternate years.

HIST 434 - WOMEN IN THE ANCIENT WORLD (4)
Women in the ancient world are often seen as powerless and invisible members of society. Yet we know of startling examples where women took the foremost positions of power, such as Hatshepsut, who became king of Egypt in the 15th century BC, and Zenobia, who declared herself Empress of Rome in the 3rd century AD. What roles did women play in ancient Mediterranean societies and what was the basis for their rise to power in ancient states? How do ancient perceptions of female power still influence our own views of women in leadership today? Textual and archaeological sources will help us answer these questions as we study the lives of women, royal and common, in the context of their ancient societies.

HIST 463 - WOMEN AND SOCIETY IN EARLY MODERN EUROPE (4)
Examines the transformation in European ideas about the role of women in family, society, and culture during a crucial period of social and intellectual change (1450 - 1800). Students will gain an understanding of how the reformation, new economic forces, educational reforms, systematic violence against women, professionalization, the scientific revolution, and new ideas about gender affected the structure of society. Focuses especially on women who demanded that society listen to female voices. Offered alternate years.

HIST 474 - STUDY TOUR: ENGLISH REFORMATION (4)
History of the long English Reformation from Wycliffe to the "Glorious" Revolution in 1688. Offered in conjunction with the UK History and Literature Tour. The course will examine such political issues as the reign of Henry VIII, Queen Elizabeth I, and the English Civil War, as well as social and intellectual issues ranging from theological developments to the religious practices and views of the people. Offered even years during the summer.

HLTH - HEALTH

HLTH 110 or permission of instructor is a prerequisite to all upper division health science courses.

HLTH 110 - WELLNESS FOR LIVING (3)
Survey course covering current health issues; emphasizes the promotion of personal well-being. (Course fees apply.)

HLTH 205 - SURVEY OF HEALTH (2)

Survey of the development of health. Includes secular, biblical and Seventh-day Adventist history and current topics.

HLTH 210 - ETHICS IN THE HEALTH SCIENCES (2)

Study of the ethical concepts, language, and methods in the fields of Health Science and Exercise Science. Application of principles and theories to a variety of topics including ethical/moral dilemmas, professional conduct, and patient/client relationships.

HLTH 217 - FIRST AID (2)

Preparation for earning Standard American Red Cross and Cardiopulmonary Resuscitation certificates; prepares the student to deal effectively with minor emergencies, sudden illness, and traumatic injuries. Lecture and laboratory. (Course fees apply.)

HLTH 220 - HUMAN NUTRITION (4)

Study of fundamental principles and basic vocabulary of nutritional science; interpretation and application of those principles through practical experiences. Covers the many factors associated with food and the digestion of food and the evaluation of current nutrition controversies.

HLTH 315 - ETIOLOGY OF SELECTED DISEASES (3)

Critical review of the morphology, pathogenesis, and epidemiology of major degenerative diseases. Major emphasis is on prevention, identification of high-risk groups, and early detection with applications to personal and community control programs. (Course fees apply.) Prerequisite: HLTH 110, HLTH 220; BIOL 105 or BIOL 121 or BIOL 141.

HLTH 328 - BASIC THERAPY (2)

Study of simple, nondrug therapeutic health practices; includes legal implications. (Course fees apply.)

HLTH 331 - CONSUMER HEALTH (3)

Study of advertising techniques and claims concerning a variety of health care products. Analysis will also be made of quackery, various health care services, and the role of the FDA, FTC, and other governmental agencies in protecting the consumer. Offered even years.

HLTH 350 - INTERNSHIP PLACEMENT ORIENTATION (0)

An internship placement orientation seminar intended to make students aware of agency possibilities, application and evaluation procedures, contracts and the internship learning process. Graded S or NC.

Cross-Listed as: PETH 350.

HLTH 370 - HEALTH PSYCHOLOGY (3)

The study of learning, motivation, and psychological theories as related to health decisions and practices. Topics include the psychology of addictive behavior, behavioral health, and the relationship between stressful life events, social support, and wellness.

Cross-Listed as: PSYC 370.

HLTH 471 - HUMAN SEXUALITY (3)

Study of resources, research, anatomy and physiology, and personal values clarification on human sexuality. Emphasis will be on the interactions between biology, cognition, emotions, socialization, and culture. Prerequisite: PSYC 130 or SOCI 204. Cross-Listed as: SOWK 471.

HLTH 490 - INTERNSHIP IN HEALTH SCIENCE (1-4; 4)

Individual contract arrangement between students, faculty, and cooperating professionals to gain experience in a non-classroom professional setting. Internship credit is restricted to the major field of study. See the Internship Program in the Nondepartmental section of the Bulletin. Graded S or NC. Prerequisite: Approval by department.

HLTH 495 - COLLOQUIUM (0)

A series of lectures, discussions, and practical experiences designed to involve and engage students in the health and exercise science, and physical education professions. Two quarters required for every year in residence as a Health Science, Exercise Science, or Sports Management and Coaching major. Alternate colloquiums accepted with departmental pre-approval only.

Cross-Listed as: PETH 495.

HLTH 496 - SENIOR SEMINAR (3)

Review of current topics in health and exercise science. Students will engage in seminar discussions, write, and present on multiple topics related to their course of study in the health and exercise science fields. Prerequisite: Senior standing in Health Science or Exercise Science. Cross-Listed as: PETH 496.

HMNT - HUMANITIES

HMNT 360 - SCIENCE AND THE ENLIGHTENMENT (4)

History of the scientific revolution and enlightenment thought in Early Modern Europe. Offered alternate years. Prerequisite: One general studies history class, or permission of instructor. Cross-Listed as: HIST 360.

HMNT 391 - INTRODUCTION TO SCHOLARSHIP (WD) (4)

Introduction to the methods, materials, and problems of academic research; students choose the topic for their senior projects, commence research, and write a proposal. Fulfills the Writing in the Disciplines Requirement (WD).

HMNT 490 - EXPERIENTIAL LEARNING (0-2)

Practical experience allowing application of classroom learning in the student's primary area of study and taking into account the student's future career objectives. Specific learning programs and outcomes will be determined by the student in consultation with an academic advisor. Experiential learning can take a wide variety of forms, including a formal internship, volunteer work, or assistance on a professional or academic research project. Requirements include a minimum of 120 hours of documented work experience. See the Internship Program in the Nondepartmental section of the Bulletin. Graded S or NC.

HMNT 496 - SEMINAR (2)

Preparation and development of the senior project. Open only to senior Humanities and Multidisciplinary Studies majors. Must be taken in sequence. Prerequisite: HMNT 391.

HMNT 497 - SEMINAR (2)

Preparation and development of the senior project. Open only to senior Humanities and Multidisciplinary Studies majors. Must be taken in sequence. Prerequisite: HMNT 496.

HMNT 498 - SEMINAR (1)

Completion and presentation of the senior project. Open only to senior Humanities and Multidisciplinary Studies majors. Must be taken in sequence. Prerequisite: HMNT 497.

HONR - HONORS

HONR 243 is a prerequisite to all upper-division honors courses.

HONR 131 - WESTERN THOUGHT (4)

Integration of Western history and literature with added emphasis on philosophical concepts and their relationships to events. Completion of all three quarters satisfies Ways of Knowing: Humanities, Ways of Knowing: History, and Engaging History & Philosophy; completion of 8 hours satisfies Ways of Knowing: Humanities and Ways of Knowing: History; completion of 4 hours satisfies either Ways of Knowing: Humanities or Ways of Knowing: History.

HONR 132 - WESTERN THOUGHT (4)

Integration of Western history and literature with added emphasis on philosophical concepts and their relationships to events. Completion of all three quarters satisfies Ways of Knowing: Humanities, Ways of Knowing: History, and Engaging History & Philosophy; completion of 8 hours satisfies Ways of Knowing: Humanities and Ways of Knowing: History; completion of 4 hours satisfies either Ways of Knowing: Humanities or Ways of Knowing: History.

HONR 133 - WESTERN THOUGHT (4)

Integration of Western history and literature with added emphasis on philosophical concepts and their relationships to events. Completion of all three quarters satisfies Ways of Knowing: Humanities, Ways of Knowing: History, and Engaging History & Philosophy; completion of 8 hours satisfies Ways of Knowing: Humanities and Ways of Knowing: History; completion of 4 hours satisfies either Ways of Knowing: Humanities or Ways of Knowing: History.

HONR 141 - WRITING SEMINAR: IDENTITY, RESPONSIBILITY, AND CITIZENSHIP (3)

Exploration of identity, responsibility, and citizenship through the lens of the American Memoir, with emphasis on practicing the conventions and expectations that come with being part of a community of writers and scholars. Open to students in the WWU honors general studies program. Fulfills the GS requirement for both ENGL 121 and ENGL 122. (Course fees apply.)

HONR 243 - HONORS RESEARCH WRITING (3)

A study of library resources, information-gathering techniques, and research writing, including ethics and style expected in the academic community. Includes a major documented research paper that incorporates arguments, texts, and strategies studied in College Writing. Public presentation of the final papers is required. (Course fees apply.) Prerequisite: HONR 141.

HONR 281 - THE BIBLE AND ITS ENVIRONMENTS (4)

Study of selected biblical themes in light of the text and its contemporary culture and thought. This course satisfies four hours of RELB general studies religion credit.

HONR 349 - RELIGION IN A SOCIAL CONTEXT (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. Includes case studies from the history of Christianity and the history of Seventh-day Adventism. Satisfies 4 hours of general studies social science or 4 hours religion.

HONR 392 - HONORS PORTFOLIO (1)

Guided development of a portfolio that includes reflection on the impact of the honors general studies program on each student's social, spiritual, academic, and professional development. The portfolio will include a philosophy of learning, reflection on the integration of curricular and co-curricular activities, and a reflective essay. The portfolio will also include professional development components such a resume, statement of purpose, and writing samples.

HONR 393 - DIRECTED READING: (1; 3)
Independent reading for upper-division students who wish to continue broadening their knowledge of literature in a particular area by extensive reading. Prerequisite: General studies literature or ENGL 234; admission by permission of instructor. Cross-Listed as: ENGL 393.

HONR 394 - HONORS DIRECTED READING (1-2; 3)
Independent reading for students who wish to continue broadening their interdisciplinary course work by intensive reading; admission by Honors Program director approval. Prerequisite: HONR 132 or HONR 133 and HONR 243.

HONR 479 - HONORS DIRECTED RESEARCH (1-4; 6)
Interdisciplinary research supervised by a mentor in the student's major or minor. One hour of credit granted represents 30 hours of directed research. May be repeated for credit, up to 6 hours, in the Honors elective category. Graded S or NC. Prerequisite: Permission of instructor and research supervisor.

HONR 496 - HONORS SEMINAR: FAITH AND LEARNING (1)
This course seeks to integrate learning and religious faith. Students present formal papers based on reading, research, and dialogue with faculty. Applies to the general studies religion requirement. Prerequisite: Completion of 32 hours of HONR classes or senior standing.

HONR 497 - HONORS SEMINAR: FAITH AND LEARNING (1)
This course seeks to integrate learning and religious faith. Students present formal papers based on reading, research, and dialogue with faculty. Applies to the general studies religion requirement. Prerequisite: Completion of 32 hours of HONR classes or senior standing.

HONR 498 - HONORS SEMINAR: FAITH AND LEARNING (1)
This course seeks to integrate learning and religious faith. Students present formal papers based on reading, research, and dialogue with faculty. Applies to the general studies religion requirement. Prerequisite: Completion of 32 hours of HONR classes or senior standing.

JOUR - JOURNALISM

JOUR 244 - TECHNICAL WRITING (WD) (3)
Study and practice of principles of technical communication, including the analysis of purpose and audience, clarity of writing and editing, selection of visual elements, and developing a level of skill appropriate for a beginning professional technical writer. Fulfills the Writing in the Disciplines Requirement (WD). Prerequisite: ENGL 122.

JOUR 245 - MEDIA WRITING (4)
Introduction to writing in the styles and forms required in journalism, broadcast, advertising and public relations, and new media. Students will practice skills including form and content required for various media. Prerequisite: ENGL 122.

JOUR 247 - COPY EDITING (3)
Introduction to the roles and responsibilities of a copy editor. Course includes practice in editing copy for content and style to meet generally accepted journalism standards and Associated Press style.

JOUR 257 - INTRODUCTION TO PHOTOJOURNALISM (2)
Introduction to the basic principles and practices of photojournalism for online media, newspapers, magazines and corporate publications, using still photographs to tell the story. A DSLR camera is required. Two lectures and one laboratory per week. (Course fees apply.) Prerequisite: VISD 156.

JOUR 315 - DIGITAL WRITING (4)
Teaches strategic writing and presentation for a wide range of digital and social media platforms. Provides students practice in creating content that meets organizational objectives, and in applying communication theory and persuasion techniques. Learners develop content for advertising, PR, and corporate communications.

JOUR 341 - FEATURE WRITING (4)
Analysis of publication markets, fundamentals of gathering materials for feature articles, and preparation of manuscripts for publication.

JOUR 345 - SPECIALIZED WRITING (3)
Study and practice in specialized writing styles that are used across various media platforms and driven by an understanding of situation and audience. Course may be repeated as topics vary. Prerequisite: JOUR 245.

JOUR 346 - REPORTING METHODS (3)
Basic training in the use of interviewing and other social research techniques for the gathering and reporting of news. Prerequisite: JOUR 245.

JOUR 394 - DIRECTED READING: (1-2; 3)
Independent reading for students who wish to broaden their knowledge of major literature of the field, including biographies and classics. Offered alternatively with COMM 394 and SPCH 394.

JOUR 445 - DIRECTED MEDIA WRITING (1-3)
The refining of writing skills through a program adapted to the student's professional interest. Submission of writing samples and permission of instructor required.

LANG - LANGUAGE

LANG 205 - INTRODUCTION TO NATURAL LANGUAGE AS A SECOND LANGUAGE (3)
Provides students with fundamental insights into the nature of human language, structure and usage in society within the Second Language (L2) frame of reference. Covers elements of linguistics and sociolinguistics as applied to L2.

LANG 395 - METHODS OF TEACHING LANGUAGES (3)
Study of principles and methods of teaching languages in K-12. Observation, demonstration, and class presentation are required.

LANG 406 - LANGUAGE AND CULTURE (3)
Study of the inter-dynamics of language and culture. Focuses on the role of language as a socio-cultural phenomenon. Covers topics such as language variation, multi-linguism, language contact, cultural products, cultural perspectives, cultural practices, social behavior and social issues.

LANG 490 - INTERNATIONAL INTERNSHIP (0-4; 4)
Individual contract arrangement involving students, faculty, and cooperating regional or organizations to gain practical experience using a foreign language in an off-campus setting. This is an immersive experiential internship to be completed in a community where the language of study is spoken. Requirements include a minimum of 75 hours of documented work experience. Open only to majors and minors in this field of study. Graded S or NC. (Course fees apply for students enrolled for 0 credit.) Prerequisite: Approval of the department.

LATN - LATIN

LATN 211 - LATIN I (4)
Introduction to the elements of classical Latin with experience in translation. Prerequisites: A score of 50 percentile on the ACT composite score and 50 percentile on the ACT English scores or successful completion of ENGL 121, ENGL 122.

LATN 212 - LATIN I (4)
Introduction to the elements of classical Latin with experience in translation. Prerequisites: A score of 50 percentile on the ACT composite score and 50 percentile on the ACT English scores or successful completion of ENGL 121, ENGL 122. Prerequisite: LATN 211.

LATN 213 - LATIN I (4)
Introduction to the elements of classical Latin with experience in translation. Prerequisites: A score of 50 percentile on the ACT composite score and 50 percentile on the ACT English scores or successful completion of ENGL 121, ENGL 122. Prerequisite: LATN 212.

LATN 311 - LATIN II (4)
Continued reading in Latin authors with emphasis upon grammar and syntax. Offered as needed. Prerequisite: LATN 213.

LATN 312 - LATIN II (4)
Continued reading in Latin authors with emphasis upon grammar and syntax. Offered as needed. Prerequisite: LATN 311.

LATN 313 - LATIN II (4)
Continued reading in Latin authors with emphasis upon grammar and syntax. Offered as needed. Prerequisite: LATN 312.

LAW - LAW

LAW 320 - LEGAL ANALYSIS (2)
An introduction to legal arguments through case reading, analysis and persuasive writing. This course also includes tips for studying for the LSAT and law school applications.

LAW 490 - INTERNSHIP (0-6; 6)
Individual contract arrangement involving students, faculty, and cooperating businesses to gain practical experience in off-campus setting. Allows the student to apply advanced classroom learning. A minimum of 30 hours of approved activity/experience must be completed for each credit earned. If taken to satisfy the internship requirement for business majors, a minimum of 120 hours of approved experience must be completed, regardless of the number of credits earned. Internship credit is restricted to the major field of study. See the Internship Program in the Nondepartmental section of the Bulletin. Prerequisite: Approval by department. Graded S or NC. (Course fees apply for students enrolled for 0 credit.)

MATH - MATHEMATICS

Students must meet the University entrance requirement in mathematics, pass a departmental placement test, or pass MDEV 003 with a grade of C- or higher before enrolling in mathematics courses numbered above 100. Before enrolling in any mathematics course, students must have grades of C- or higher in all prerequisite courses. Credit from transfer mathematics courses beyond that granted for equivalent courses at Walla Walla University will not be counted towards a major or minor in mathematics.

MATH 105 - MATH FOR THE LIBERAL ARTS (4)
Designed to give the liberal arts student an overview of the various ways mathematics is used in a modern society. Topics include the mathematics of finance, logic, sets and counting, probability, and descriptive

statistics. Additional topics are selected from linear equations and systems of linear equations, matrices, linear programming, and game theory. Designed to meet the general studies requirement for the baccalaureate degree, but does not apply towards a major or minor in mathematics. Completion of MATH 121 or higher precludes subsequent enrollment in this course. Prerequisite: MDEV 003 or satisfactory departmental placement.

MATH 106 - INTRODUCTION TO STATISTICS (4)

Designed for students in health-related majors, the social sciences, business, or other fields in which a basic knowledge of statistical methods is required. Topics include sampling, descriptive statistics, probability, the normal and binomial distributions, confidence intervals and hypothesis testing for means and proportions, and chi-square tests. Additional topics may include simple linear regression, simulation, and one-way analysis of variance. Computer-based lab activities are required. Meets the general studies requirement for the baccalaureate degree but does not apply towards a major or minor in mathematics. Prerequisite: MDEV 003 or satisfactory departmental placement.

MATH 112 - MATHEMATICS FOR ELEMENTARY TEACHERS I (3)

Designed to help the prospective elementary school teacher develop a deep understanding of topics typically covered in the K-8 mathematics curriculum. Topics include problem solving strategies; sets; numeration systems; arithmetic for whole numbers, integers, rational numbers, and real numbers using multiple algorithms; elementary number theory; proportions; and percentages. Emphasizes constructing concrete models for these concepts, and lab work is required. This course does not apply towards a major or minor in mathematics, but it does apply towards the general studies requirement for the baccalaureate degree and the minor in mathematics for middle school teachers. Offered odd years.

Prerequisite MDEV 003 or satisfactory departmental placement.

MATH 113 - MATHEMATICS FOR ELEMENTARY TEACHERS II (3)

A continuation of MATH 112. Topics include algebraic and functional reasoning, graphing, coordinate geometry, the geometry of shapes, measurements, transformations and symmetry, congruence and similarity, descriptive statistics, and an introduction to probability. Emphasizes constructing concrete models for these concepts and lab work is required. This course does not apply towards a major or minor in mathematics, but it does apply towards the general studies requirement for the baccalaureate degree and the minor in mathematics for middle school teachers. Offered odd years. Prerequisite: MATH 112.

MATH 121 - PRECALCULUS I (4)

Designed for students majoring in scientific or technical fields who need a knowledge of college algebra, or for students preparing to take Calculus I. Topics include integer, rational, real, and complex numbers; solving equations and inequalities; and algebraic, exponential, and logarithmic functions and their graphs. The course is designed to meet the general studies requirement for the baccalaureate degree, but does not apply towards a major or minor in mathematics. Prerequisite: MDEV 003 or satisfactory departmental placement.

MATH 122 - PRECALCULUS II (4)

A continuation of MATH 121. Topics include trigonometric functions and their graphs, trigonometric identities, matrices, determinants, sequences, mathematical induction, and the binomial theorem. The course is designed to meet the general studies requirement for the baccalaureate degree, but does not apply towards a major or minor in mathematics. Prerequisite: MATH 121 or satisfactory departmental placement.

MATH 171 - CALCULUS I (4)

Designed for students majoring in mathematics, engineering, or the physical sciences, or for those seeking a rigorous introduction to Calculus with early transcendentals. Topics include limits, continuity, derivatives, and applications. Includes formal definitions and proofs. Meets the general studies requirement for the baccalaureate degree. Prerequisite: MATH 122 or satisfactory departmental placement.

MATH 172 - CALCULUS II (4)

A continuation of MATH 171. Topics include definite and indefinite integrals, L'Hôpital's rule, techniques and applications of integration, and an introduction to differential equations. Includes formal definitions and proofs. Meets the general studies requirement for the baccalaureate degree. Prerequisite: MATH 171.

MATH 215 - DATA ANALYSIS (4)

Designed to introduce the students to the process of statistical investigation and the use of statistical software. Topics include visualization methods: basic probability, sampling, estimation and hypothesis testing, simple and multiple linear regression models, simple machine learning techniques, and linear time series models. Prerequisite: MATH 121, MATH 171, or satisfactory departmental placement; recommended prerequisite: CPTR 141 or CPT 230.

MATH 239 - INTRODUCTION TO LINEAR ALGEBRA (4)

Designed to introduce students majoring in mathematics, computing, engineering, or the physical

sciences to the concepts of linear algebra. Topics include systems of linear equations, matrices, linear transformations, determinants, eigenvalues and eigenvectors, vector spaces, basis and dimension, and Euclidean n-space. Additional topics may include the inner product, orthogonal projections, and least squares. Prerequisite MATH 171.

MATH 250 - DISCRETE MATHEMATICS (4)
Designed to introduce students in the mathematical and computational sciences to discrete mathematical structures and to act as a transition to higher mathematics and computer science courses. Topics include an introduction to set theory, combinatorics, symbolic logic and proofs, recursion, recurrence relations, graph theory, and the theory of computation. Additional topics selected from number theory, relations, and functions. Emphasizes mathematical reasoning and proof writing. Prerequisite MATH 171.

MATH 273 - CALCULUS III (4)
A continuation of MATH 172. Topics include sequences, series, tests for convergence, Taylor and Maclaurin series, polar coordinates, parametric equations, and vector calculus. Includes formal definitions and proofs. Prerequisite: MATH 172.

MATH 274 - CALCULUS IV (4)
A continuation of MATH 273. Topics include differential and integral calculus of multi-variable functions, line and surface integrals, Green's theorem, the divergence theorem, and Stokes' theorem. Includes formal definitions and proofs. Prerequisite: MATH 273.

MATH 286 - ORDINARY DIFFERENTIAL EQUATIONS (3)
Designed to introduce students majoring in mathematics, engineering, or the physical sciences to ordinary differential equations. Topics include linear and non-linear first order equations and systems of equations, higher order linear equations, elementary phase plane analysis, and Laplace transform techniques. Additional topics may include elementary numerical techniques, nonlinear dynamics, power series methods, and modeling. Prerequisite MATH 239, MATH 273.

MATH 315 - PROBABILITY AND STATISTICS (4)
Designed for students majoring in mathematics, engineering, or the physical sciences, or for those seeking a calculus-based survey of probability and statistics. Topics include combinatorics, probability distributions and densities, mathematical expectation, functions of random variables, sampling distributions, interval estimation, hypothesis testing, linear regression, and analysis of variance. Prerequisite: MATH 274.

MATH 316 - MATHEMATICAL STATISTICS (4)
A continuation of MATH 315. Topics include decision theory, methods of estimation and properties of estimators, the theoretical underpinnings of hypothesis testing, multiple linear regression, the design and analysis of experiments, and nonparametric statistical tests. Offered odd years. Prerequisite: MATH 315.

MATH 319 - OPTIMIZATION (4)
Designed to give students majoring in mathematics, engineering, the physical sciences, or business an introduction to the practice and theory of optimization. Topics include constrained and unconstrained optimization, optimality conditions, convexity, and duality. Additional topics may include semidefinite programming, integer programming, combinatorial optimization, and stochastic optimization. Applications of optimization will be explored in a variety of disciplines. Students will implement standard algorithms as well as utilize commercial solvers. Offered odd years. Prerequisite: MATH 239, MATH 274; recommended prerequisite: CPTR 141 or CPTR 230. Cross-Listed as: ENGR 419.

MATH 321 - SURVEY OF GEOMETRIES IN THEIR HISTORICAL CONTEXTS (4)
Designed to give students an overview of the axiomatic development and history of Euclidean and non-Euclidean geometries. Topics include Euclidean geometry, analytic geometry, hyperbolic geometry, spherical geometry, and transformations. Additional topics may be selected from affine, finite, fractal, and projective geometries and impossible constructions. Gives special attention to the contributions of diverse cultures to the field. Offered even years. Prerequisite: MATH 273.

MATH 341 - NUMERICAL ANALYSIS (4)
Designed to give students majoring in mathematics, computing, engineering, or the physical sciences an overview of numerical methods of analysis with computer applications. Topics include numerical solutions of nonlinear equations, numerical solutions of differential equations, and numerical integration. Other topics may include interpolation and numerical solutions to systems of equations. Prerequisite: CPTR 141 or CPTR 230, MATH 239, and MATH 286; or permission of instructor.

MATH 351 - MATHEMATICAL MODELING (4)
Designed to give students majoring in mathematics, computing, engineering, or the physical sciences an introduction to mathematical modeling and its applications. Topics may include discrete- and continuous-time deterministic and stochastic models, linearization, bifurcations, chaos, computer simulation and others. Areas of application may include biology, business, engineering, physics, or others chosen by the

instructor. Prerequisite CPTR 141 or CPTR 230, MATH 239, and MATH 286; or permission of instructor.

MATH 389 - LINEAR ALGEBRA (4)

Designed to provide the mathematically inclined student with a theoretical understanding of linear algebra. Topics include general vectors spaces, linear transformations, inner-product spaces, generalized eigenspaces, and the spectral theorem. Special attention is given to singular value decomposition and its applications. Includes formal definitions and proofs of standard theorems. Offered odd years. Prerequisite: MATH 239.

MATH 397 - JUNIOR MATHEMATICS SEMINAR (0)

Designed to prepare students majoring in mathematics for the Senior Mathematics Seminar sequence. Students will attend and reflect upon the presentations given by the mathematics faculty and other students as a part of MATH 497. Graded S or NC. Corequisite: MATH 250.

MATH 413 - PARTIAL DIFFERENTIAL EQUATIONS (4)

Designed to give students majoring in mathematics, engineering, or the physical sciences an overview of solution methods for and applications of partial differential equations. Topics include first- and second-order PDEs, boundary-value problems and Fourier series. Offered even years. Prerequisite: MATH 239, MATH 286.

MATH 414 - SPECIAL TOPICS IN MATHEMATICS (3; 6)

Designed to provide advanced students the opportunity to study topics of interest from outside the typical undergraduate mathematics curriculum. Topics are chosen from areas such as mathematical biology, combinatorics, Lie theory, non-parametric statistics, number theory, set theory, stochastic processes, and topology. May be repeated as topics vary. Offered odd years. Prerequisite: Permission of instructor. Offered: Odd years.

MATH 435 - MATHEMATICAL PHYSICS (4)

Designed to provide students majoring in mathematics or physics an in-depth study of the mathematical foundations of physics and their applications to physical problems. Particular attention is paid to the theory of linear vector spaces in developing tensor analysis group theory and Hilbert Space theory. This course is recommended for students planning to attend graduate school in physics or who have a strong interest in the applications of mathematics to the physical world. Offered odd years.

Cross-Listed as: PHYS 435.

MATH 451 - REAL ANALYSIS I (4)

Designed to provide students majoring in mathematics with an introduction to real analysis. Topics include the development of the real number system, the completeness axiom, basic point-set topology, sequences and series, continuity, differentiation, integration, sequences of functions, and uniform and pointwise convergence. Offered odd years. Prerequisite: MATH 250, MATH 274.

MATH 452 - REAL ANALYSIS II (4)

Designed to provide students majoring in mathematics with an introduction to real analysis. Topics include the development of the real number system, the completeness axiom, basic point-set topology, sequences and series, continuity, differentiation, integration, sequences of functions, and uniform and pointwise convergence. Offered odd years. Prerequisite: MATH 451.

MATH 461 - ABSTRACT ALGEBRA I (4)

Designed to provide students majoring in mathematics with an introduction to abstract algebra. Topics include sets and relations, groups, subgroups, permutation groups, cosets and factor groups, direct products, homomorphisms, rings, integral domains, ideals, fields, field extensions, and geometric constructions. Additional topics may include the Sylow theorems, simplicial complexes and homology groups, or Galois theory. Offered even years. Prerequisite: MATH 239, MATH 250.

MATH 462 - ABSTRACT ALGEBRA II (4)

Designed to provide students majoring in mathematics with an introduction to abstract algebra. Topics include sets and relations, groups, subgroups, permutation groups, cosets and factor groups, direct products, homomorphisms, rings, integral domains, ideals, fields, field extensions, and geometric constructions. Additional topics may include the Sylow theorems, simplicial complexes and homology groups, or Galois theory. Offered even years. Prerequisite: MATH 461.

MATH 476 - PUTNAM PROBLEM SOLVING (1; 2)

Designed to prepare students to participate in the William Lowell Putnam Mathematical Competition. Topics include problem solving, with an emphasis on both oral and written communication. Students are required to take the William Lowell Putnam exam, held annually in early December, as a part of the class. Graded S or NC. Prerequisite: Permission of the Department of Mathematics.

MATH 490 - INTERNSHIP (0-4; 4)

Designed for advanced mathematics majors who wish to have a practical experience in an off-campus setting. Requires an individual contract involving students, faculty, and cooperating employers. A minimum of 30 hours of approved activity/experience must be

completed for each credit earned. See the Internship Program in the Nondepartmental section of the Bulletin. Graded S or NC. (Course fees apply for students enrolled for 0 credit.) Prerequisite: MATH 274, minimum cumulative GPA of 3.0 in college mathematics courses and all college sources, and departmental approval.

MATH 496 - SENIOR MATHEMATICS SEMINAR I (1)

Designed for senior mathematics majors as the capstone experience in the major. Students will read and discuss a scholarly paper of current interest in the instructor's field of mathematics, identify potential career paths resulting from a degree in mathematics, and select a topic for investigation in MATH 497. Prerequisite: MATH 397.

MATH 497 - SENIOR MATHEMATICS SEMINAR II (1)

Continuation of MATH 496. Each student will conduct an independent investigation in some field of mathematics in consultation with an assigned faculty research supervisor. Students will additionally observe and reflect on mathematics presentations given by the faculty as they prepare their own oral report on their research. Prerequisite: MATH 496. Prerequisite: MATH 496.

MATH 498 - SENIOR MATHEMATICS SEMINAR III (WD) (1)

Continuation of MATH 497. Students will critique the oral reports given in MATH 497, expand on their research if necessary, and prepare a professionally formatted scholarly paper in consultation with their assigned faculty research supervisor. Fulfills the Writing in the Disciplines Requirement (WD). Prerequisite: MATH 497.

MDEV - DEVELOPMENTAL MATHEMATICS

MDEV 001 - ELEMENTARY ALGEBRA (4)

Designed for students who enter university without having met the mathematics entrance requirement of a one-year course in high school Algebra I. Topics include fractions, radicals, factoring, linear and quadratic equations, and graphing. Credit does not apply toward graduation. (Course fees apply.)

MDEV 003 - INTERMEDIATE ALGEBRA (4)

Designed for students who enter university without having met the mathematics entrance requirements of a one-year course in high school Algebra II. Topics include sets, numbers, exponents, polynomials, factoring rational algebraic expressions, graphs, first and second degree equations, and inequalities. Credit does not apply toward graduation. (Course fees apply.)

MEDU - MATH EDUCATION

MEDU 395 - METHODS OF TEACHING SECONDARY MATHEMATICS (3)

Methods, materials, and techniques of teaching mathematics on the secondary school level; requires observation, demonstration, and class presentation. Will not apply toward General Studies or toward elective credits for a major or minor in mathematics. Offered odd years.

MGMT - MANAGEMENT

MGMT 201 - INTRODUCTION TO HEALTHCARE ADMINISTRATION (2)

Resources to help students in their exploration of the administrative principles and practices within healthcare organizations.

MGMT 366 - OPERATIONS MANAGEMENT (4)

The application of management principles and mathematical techniques to operational problems in manufacturing and service organizations, with special emphases on business intelligence and analytics. Topics include planning and decision-making, business forecasting, production scheduling, inventory management, network models, quality control, and project management.

MGMT 371 - PRINCIPLES OF MANAGEMENT (4)

Introduction to the concepts of effective management in organizational settings. Primary emphases include management functions (planning, organizing, directing, and controlling), levels of management, and managerial skills.

MGMT 373 - ORGANIZATIONAL BEHAVIOR (4)

Study of human attitudes and behaviors in the workplace, especially those influenced by organizational leadership in the global context. Topics include leadership, motivation, group dynamics, personality, organizational development strategies, and other behavioral aspects involved in the effective management of an organization. Cross-listed as: PSYC 373.

Cross-Listed as: PSYC 373.

MGMT 375 - FOUNDATIONS OF ENTREPRENEURSHIP (4)

Study of the ownership, startup, organization, financing, marketing, business plans, and exit strategies of small business enterprises. Topics include how to assess the feasibility of ideas, define a market, meet financing requirements, pitch business ideas, and develop an entrepreneurial team.

Cross-Listed as: MKTG 375.

MGMT 376 - HUMAN RESOURCE MANAGEMENT (4)

Emphasizes the importance of human resource management within organizations. Provides an overview of the human resource environment, acquiring and preparing human resources, assessing performance, employee training and development, and compensation and benefits.

MGMT 463 - BUSINESS ETHICS (4)

The study of philosophical theories and Christian perspectives on ethical decision making for organizations. Students will apply these theories and perspectives to business related issues, with a strong focus on leadership, organizational justice, corporate social responsibility, and environmental issues and responsibility.

MGMT 470 - PRINCIPLES OF PROJECT MANAGEMENT (4)

Study of concepts and solutions supporting the planning, scheduling, controlling, resource allocation, and performance measurement activities required for successful completion of a project in both domestic and international environments.

Cross-Listed as: MKTG 470.

MGMT 476 - FOUNDATIONS OF LEADERSHIP (4)

Study of the different approaches to leadership and the ways to practice them more effectively. Through the use of case studies and self-assessments, students deepen their understanding of their leadership styles. Offered alternate years.

MGMT 488 - GLOBAL MANAGEMENT AND MARKETING (4)

An analysis of organizational, operational, and marketing problems associated with managing a business in the global environment. Emphasis is placed on culture, laws, and business practices. Offered alternate years. Recommended: MGMT 371, MKTG 381

Cross-Listed as: MKTG 488.

MGMT 489 - STRATEGIC MANAGEMENT (4)

Study of strategy and its implications in management. Through a project or simulation, students make business decisions, gain management experience, practice business concepts, and develop strategies to achieve organizational goals. Open only to senior business or senior automotive/aviation management majors.

MGMT 490 - INTERNSHIP (0-4; 4)

Practical experience allowing application of classroom learning. Requirements include a minimum of 120 hours of documented work experience. See the Internship Program in the Nondepartmental section of the Bulletin. Graded S or NC. (Course fees apply for students enrolled for 0 credit.)

MKTG - MARKETING

MKTG 333 - STRATEGIES FOR FUNDRAISING (OR PREL 333) (4)

Study of philosophy, role, organization, and strategies of institutional development and fund raising. Includes consideration of annual funds, capital campaigns, special events, and direct mail. Offered even years.

Cross-Listed as: PREL 333.

MKTG 375 - FOUNDATIONS OF ENTREPRENEURSHIP (4)

Study of the ownership, startup, organization, finance, marketing, business plans, and exit strategies of small business enterprises. Topics include how to assess the feasibility of ideas, define a market, meet financing requirements, pitch business ideas, and develop an entrepreneurial team.

Cross-Listed as: MGMT 375.

MKTG 381 - PRINCIPLES OF MARKETING (WD) (4)

An overview of the field of marketing including the marketing mix variables (product, price, promotion, and distribution), market segmentation, marketing strategy, market research, the role of marketing in the economic system, and consumer demand and behavior. Fulfills the Writing in the Disciplines Requirement (WD).

MKTG 383 - PRINCIPLES OF ADVERTISING (4)

A study of the principles of advertising creation and planning, copywriting, media selection, budgeting, layout, and design. The advantages and disadvantages of advertising in-house and through agencies are compared. Recommended: MKTG 381.

MKTG 384 - CONSUMER BEHAVIOR (4)

A study of why, when and how consumption occurs at both individual and group levels. Recommended: MKTG 381, PSYC 130.

MKTG 385 - SALES MANAGEMENT (4)

An introduction to selling and sales management through the study of effective sales techniques. From prospect identification through gaining agreement and customer follow-up, these techniques add value to an organization while resolving customer concerns. Topics include sales forecasting, sales ethics, principles of bidding, negotiation strategy, problem resolution, and the recruitment, selection and training of the sales force. Offered alternate years.

MKTG 415 - DIGITAL MARKETING (4)

An introduction to marketing via digital channels, including social media and mobile platforms, in order to create strategies for managing brand, position, influence, customer relationships, engagement, reach,

feedback, and privacy issues. Recommended MKTG 381.

MKTG 451 - MARKET RESEARCH METHODS (4)
Introduction to collecting market information from secondary and primary sources. The focus of the class will be on the systematic and objective planning, gathering, recording, and analyzing of information in order to develop and communicate recommendations for marketing and business strategies. Prerequisite: MKTG 381 Prerequisite: MKTG 381.

MKTG 470 - PRINCIPLES OF PROJECT MANAGEMENT (4)
Study of concepts and solutions supporting the planning, scheduling, controlling, resource allocation, and performance measurement activities required for successful completion of a project in both domestic and international environments.
Cross-Listed as: MGMT 470.

MKTG 481 - PUBLIC RELATIONS (4)
An overview of public relations from the perspectives of business and communication; includes history, theory, and hands-on examples. Covers the basics of public relations writing and analyzes a firm's public relations in detail.
Cross-Listed as: PREL 481.

MKTG 488 - GLOBAL MANAGEMENT AND MARKETING (4)
An analysis of organizational, operational, and marketing problems associated with managing a business in the global environment. Emphasis is placed on culture, laws, and business practices. Offered alternate years. Recommended: MGMT 371, MKTG 381
Cross-Listed as: MGMT 488.

MKTG 490 - INTERNSHIP (0-4; 4)
Practical experience allowing application of classroom learning. Requirements include a minimum of 120 hours of documented work experience. See the Internship Program in the Nondepartmental section of the Bulletin. Graded S or NC. (Course fees apply for students enrolled for 0 credit.)

MOTC - MOTORBOAT OPERATOR CERTIFICATION

MOTC 350 - MOTORBOAT OPERATION (3)
Introduction to the necessary skills for the safe operation of motor-powered watercraft in a scientific context. Covers legal requirements, preparations, navigation, emergency procedures, and basic seamanship. Course includes classroom learning and on-the-water instruction. Course results in Motorboat Operator Certification.

MUCT - COMPOSITION AND THEORY

MUCT 121 - THEORY I (3)
Intensive study of traditional harmonic concepts up to and including secondary dominants. Includes improvisation and jazz harmony components. Prerequisite: passing of an entrance examination. Corequisite MUCT 131.

MUCT 122 - THEORY I (3)
Intensive study of traditional harmonic concepts up to and including secondary dominants. Includes improvisation and jazz harmony components. Prerequisite: MUCT 121, MUCT 131. Corequisite: MUCT 132.

MUCT 123 - THEORY I (3)
Intensive study of traditional harmonic concepts up to and including secondary dominants. Includes improvisation and jazz harmony components. Prerequisite: MUCT 122, MUCT 132. Corequisite: MUCT 133.

MUCT 131 - EAR TRAINING I (1)
Development of aural skills, including sight singing and ear training. Corequisite: MUCT 121.

MUCT 132 - EAR TRAINING I (1)
Development of aural skills, including sight singing and ear training. Prerequisite: MUCT 121, MUCT 131. Corequisite: MUCT 122.

MUCT 133 - EAR TRAINING I (1)
Development of aural skills, including sight singing and ear training. Prerequisite: MUCT 122, MUCT 132. Corequisite: MUCT 123.

MUCT 221 - THEORY II (3)
Study of music theory, emphasizing melodic and harmonic developments of the late nineteenth and twentieth centuries. Includes an improvisation component. Prerequisite: MUCT 123, MUCT 133. Corequisite: MUCT 231.

MUCT 222 - THEORY II (3)
Study of music theory, emphasizing melodic and harmonic developments of the late nineteenth and twentieth centuries. Includes an improvisation component. Prerequisite: MUCT 221, MUCT 231. Corequisite: MUCT 232.

MUCT 223 - THEORY II (3)
Study of music theory, emphasizing melodic and harmonic developments of the late nineteenth and twentieth centuries. Includes an improvisation component. Prerequisite: MUCT 222, MUCT 232. Corequisite: MUCT 233.

MUCT 231 - EAR TRAINING II (1)

Development of aural skills, including sight singing and ear training. Prerequisite: MUCT 123, MUCT 133. Corequisite: MUCT 221.

MUCT 232 - EAR TRAINING II (1)
Development of aural skills, including sight singing and ear training. Prerequisite: MUCT 221, 231. Corequisite: MUCT 222.

MUCT 233 - EAR TRAINING II (1)
Development of aural skills, including sight singing and ear training. Prerequisite: MUCT 222, MUCT 232. Corequisite: MUCT 223.

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 instrument. Prerequisite: MUCT 223, MUCT 233, or permission of instructor.

MUED - MUSIC EDUCATION

MUED 251 - SINGER'S DICTION (1)
Study of Italian, German, and French phonetics. Required of all voice majors. May be waived by demonstrated proficiency. Offered odd years.

MUED 252 - SINGER'S DICTION (1)
Study of Italian, German, and French phonetics. Required of all voice majors. May be waived by demonstrated proficiency. Offered odd years.

MUED 253 - SINGER'S DICTION (1)
Study of Italian, German, and French phonetics. Required of all voice majors. May be waived by demonstrated proficiency. Offered odd years.

MUED 261 - BRASS TECHNIQUES AND METHODS (1)
Class instruction in the performance and teaching of brass instruments for music education students. Offered as needed. Prerequisite: Fundamental ability on at least one brass instrument and permission of instructor.

MUED 262 - BRASS TECHNIQUES AND METHODS (1)
Class instruction in the performance and teaching of brass instruments for music education students. Offered as needed. Prerequisite: Fundamental ability on at least one brass instrument and permission of instructor.

MUED 271 - WOODWIND TECHNIQUES AND METHODS (1)
Class instruction in the performance and teaching of woodwind instruments for music education students. Offered as needed. Prerequisite: Fundamental ability on at least one woodwind instrument and permission of the instructor.

MUED 272 - WOODWIND TECHNIQUES AND METHODS (1)
Class instruction in the performance and teaching of woodwind instruments for music education students. Offered as needed. Prerequisite: Fundamental ability on at least one woodwind instrument and permission of the instructor.

MUED 281 - STRING TECHNIQUES AND METHODS (1)
Class instruction in the performance and teaching of string instruments for music education students. Offered as needed. Prerequisite: Fundamental ability on at least one string instrument and permission of the instructor.

MUED 282 - STRING TECHNIQUES AND METHODS (1)
Class instruction in the performance and teaching of string instruments for music education students. Offered as needed. Prerequisite: Fundamental ability on at least one string instrument and permission of the instructor.

MUED 291 - PERCUSSION TECHNIQUES AND METHODS (1)
Class instruction in the performance and teaching of percussion instruments for music education students. Offered as needed.

MUED 292 - PERCUSSION TECHNIQUES AND METHODS (1)
Class instruction in the performance and teaching of percussion instruments for music education students. Offered as needed.

MUED 354 - VOCAL TECHNIQUES AND METHODS (3)
Study of vocal production and instruction, including a survey of materials. Offered even years.

MUED 394 - MUSIC IN THE ELEMENTARY SCHOOL (3)
An overview of objectives, procedures, and materials in music education for kindergarten through grade eight. For elementary education majors only.

MUED 395 - ELEMENTARY SCHOOL MUSIC METHODS AND MATERIALS (3)
A comprehensive study of objectives, procedures, and materials in music education for kindergarten through grade eight. Prerequisite: For music majors and minors or permission of instructor. Offered even years.

MUHL - MUSIC HISTORY AND LITERATURE

MUHL 124 - INTRODUCTION TO MUSIC (4)
An experiential survey course that focuses primarily on the Western European art music tradition and introduces the principal musical styles, genres,

composers, and musicians. Explores the ways that music has both mirrored and shaped society, technology, and aesthetic values of its times. May not apply toward a music major.

MUHL 310 - GREAT COMPOSERS (3; 6)

Substantive study of music by a specific composer who has proven to be extremely influential in the history of music and perennially relevant to scholars, performers, and listeners. Key genres will be explored in the context of the composer's time, place, culture, and life experience. See Class Schedule for composer information. May be repeated for credit when subject matter varies

MUHL 321 - HISTORY OF MUSIC (4)

The history and literature of western music from antiquity through the twenty-first century. Required laboratory. Offered even years. Prerequisite: MUCT 123, MUCT 133.

MUHL 322 - HISTORY OF MUSIC (4)

The history and literature of western music from antiquity through the twenty-first century. Required laboratory. Offered even years. Prerequisite: MUCT 123, MUCT 133.

MUHL 323 - HISTORY OF MUSIC (WD) (4)

The history and literature of western music from antiquity through the twenty-first century. Required laboratory. Offered even years. Fulfills the Writing in the Disciplines Requirement (WD). Prerequisite: MUCT 123, 133.

MUHL 479 - DIRECTED RESEARCH/PROJECT (1-2; 6)

As approved by the faculty, an alternative to MUPF 487 Senior Recital (0 credit), and three of the six required upper-division applied music credits in the B.A. degree in music. The credits must be distributed over at least three quarters.

MUPF - MUSIC PERFORMANCE

ENSEMBLES

Membership in the performance groups listed below is by audition or by invitation. Students who participate in an ensemble are required to register for either 0 or 1 credit. Graded S or NC for 0 credit. Graded A-F for 1 credit. These classes may be repeated for additional credit. NOTE: The term "organization" is used in this bulletin to designate a primary departmental music ensemble that fulfills the organization requirement for music majors and minors. Primary music organizations are MUPF 215/MUPF 315 University Singers, MUPF 255/MUPF 355 Wind Symphony, MUPF 256/MUPF 356 Brass/Percussion, and MUPF 266/MUPF 366 Symphony Orchestra.

In addition to meeting the university upper division enrollment policy, music majors and minors must have juried for upper division status to enroll in upper division ensembles and non-majors and minors must audition for UD ensembles (i.e. permission by instructor)

MUPF 215 - UNIVERSITY SINGERS (0-1)

A large choir that performs major choral works and sings for church services. (Course fees apply when taken for zero credit.)

MUPF 245 - ICANTORI (0-1)

A select touring choral group that performs sacred and secular repertoire as well as dramatic musical works from all eras. Participation in MUPF 215 University Singers required. (Course fees apply.) Corequisite: MUPF 215.

MUPF 255 - WIND SYMPHONY (0-1)

A traditional concert band that performs locally on a quarterly basis and occasionally tours. (Course fees apply when taken for zero credit.)

MUPF 256 - BRASS/PERCUSSION (0-1)

A traditional concert band that performs locally on a quarterly basis and occasionally tours. (Course fees apply when taken for zero credit.)

MUPF 266 - SYMPHONY ORCHESTRA (0-1)

An organization that performs representative orchestral literature from the Baroque era to the present. (Course fees apply when taken for zero credit.)

MUPF 283 - BIG BAND (0-1)

A traditional big band, including vocalists, that performs a variety of musical styles including jazz and popular music. (Course fees apply when taken for zero credit.)

MUPF 284 - STEEL BAND (0-1)

A Caribbean style steel band that performs music representative of Caribbean, other world music styles, and classical music in sacred and secular contexts. (Course fees apply when taken for zero credit.)

MUPF 285 - ENSEMBLE (0-1)

Vocal or instrumental duos, trios, quartets, or larger groups under the direction of a music department faculty member. (Course fees apply when taken for zero credit.)

MUPF 285 - ENSEMBLE (1; 6)

Vocal or instrumental duos, trios, quartets, or larger groups under the direction of a music department faculty member. (Course fees apply when taken for zero credit.)

MUPF 315 - UNIVERSITY SINGERS (0-1)

A large choir that performs major choral works and sings for church services. (Course fees apply when taken for zero credit.) Prerequisite: If taken for 1 credit, a minimum of 1 credit in MUPF 215.

MUPF 345 - ICANTORI (0-1)

A select touring choral group that performs sacred and secular repertoire as well as dramatic musical works from all eras. Participation in MUPF 215 or 315 University Singers required. (Course fees apply.) Prerequisite: If taken for 1 credit, a minimum of 1 credit of MUPF 245. Corequisite: MUPF 215 or MUPF 315.

MUPF 355 - WIND SYMPHONY (0-1)

A traditional concert band that performs locally on a quarterly basis and occasionally tours. (Course fees apply when taken for zero credit.) Prerequisite: If taken for 1 credit, a minimum of 1 credit of MUPF 255.

MUPF 356 - BRASS/PERCUSSION (0-1)

A traditional concert band that performs locally on a quarterly basis and occasionally tours. (Course fees apply when taken for zero credit.) Prerequisite: If taken for 1 credit, a minimum of 1 credit of MUPF 256.

MUPF 366 - SYMPHONY ORCHESTRA (0-1)

An organization that performs representative orchestral literature from the Baroque era to the present. (Course fees apply when taken for zero credit.) Prerequisite: If taken for 1 credit, a minimum of 1 credit of MUPF 266.

MUPF 383 - BIG BAND (0-1)

A traditional big band, including vocalists, that performs a variety of musical styles including jazz and popular music. (Course fees apply when taken for zero credit.) Prerequisite: If taken for 1 credit, a minimum of 1 credit in MUPF 283.

MUPF 384 - STEEL BAND (0-1)

A Caribbean style steel band that performs music representative of Caribbean, other world music styles, and classical music in sacred and secular contexts. (Course fees apply when taken for zero credit.) Prerequisite: If taken for 1 credit, a minimum of 1 credit in MUPF 284.

MUPF 385 - ENSEMBLE (0-1)

Vocal or instrumental duos, trios, quartets, or larger groups under the direction of a music department faculty member. (Course fees apply when taken for zero credit.) Prerequisite: If taken for 1 credit, a minimum of 1 credit in MUPF 285.

CONDUCTING COURSES

MUPF 361 - BASIC CONDUCTING (2)

Study of basic techniques and the art of conducting musical ensembles of all kinds. Offered even years.

MUPF 362 - INSTRUMENTAL CONDUCTING TECHNIQUES AND MATERIALS (3)

Study of advanced techniques, rehearsal procedures, repertoire, program building, and administration. Offered even years. Prerequisite: MUPF 361 or permission of instructor.

MUPF 363 - CHORAL CONDUCTING TECHNIQUES AND MATERIALS (3)

Study of advanced techniques, rehearsal procedures, repertoire, program building, and administration. Offered even years. Prerequisite: MUPF 361 or permission of instructor.

MUPF 365 - CONDUCTING PRACTICUM (1-3; 3)

Conducting activities and projects approved by a relevant conducting teacher in consultation with the department chair. Prerequisite: MUPF 361, MUPF 362, or MUPF 363, and permission of instructor.

PERFORMANCE STUDIES COURSES (MUSIC LESSONS)

One to four credit hours of performance studies may be earned each quarter. Nine 30-minute lessons per quarter and daily practice totaling five clock hours a week corresponds to one credit hour. Nine 60-minute lessons per quarter and daily practice will earn two to four hours of credit. May be repeated for additional credit.

MUPF 127 - APPLIED MUSIC (1-2)

Introductory study in an instrument or voice. Subject to approval of music faculty, up to three hours may be used to satisfy requirements for the primary performance area in a music major or minor.

MUPF 127 - APPLIED MUSIC (3)

Introductory study in an instrument or voice. Subject to approval of music faculty, up to three hours may be used to satisfy requirements for the primary performance area in a music major or minor.

MUPF 127 - APPLIED LESSONS (1-2; 3)

Introductory study in an instrument or voice. Subject to approval of music faculty, up to three hours may be used to satisfy requirements for the primary performance area in a music major or minor.

MUPF 227 - APPLIED MUSIC (1-4)

Study in an instrument or voice; satisfies credit requirements for major and minor performance studies. Prerequisite: Approval of music faculty by examination.

MUPF 237 - APPLIED MUSIC (1-4)

Study in instrument or voice; satisfies credit requirements for performance studies in the B.Mus.

degree. Prerequisite: Approval of music faculty by examination.

MUPF 387 - JUNIOR RECITAL (0)
Preparation of repertoire for the junior recital in consultation with the student's applied lesson teacher. Required for the B.Mus. in Music Performance. Graded S or NC.

MUPF 427 - APPLIED MUSIC (1-4)
Advanced study in an instrument or voice; satisfies credit requirements for major and minor performance studies. Prerequisite: MUPF 227, completion of piano proficiency requirements, and approval of music faculty through examination.

MUPF 437 - APPLIED MUSIC (1-4)
Study in an instrument or voice; satisfies credit requirements for performance studies in the B.Mus. degree in Music Performance. Prerequisite: MUPF 237, completion of piano proficiency requirements, and approval of music faculty by examination.

MUPF 487 - SENIOR RECITAL (MUSIC MAJORS ONLY) (0)
Preparation of repertoire for the senior recital as required for the B.A., B.Mus. in Music Performance, and B.Mus. in Music Education degrees, in consultation with the student's applied lesson teacher. Graded S or NC.

NRSG - NURSING

NRSG 100 - DIRECTED NURSING STUDIES (1; 4)
Directed remedial studies for identified deficiencies. Graded S or NC. Credits do not apply toward graduation or the nursing major.

NRSG 201 - INTRODUCTION TO NURSING (3)
Introduction to professional nursing practice to provide a basis for use of the nursing process and therapeutic communication. Includes introduction to the QSEN concepts and concepts integrated into the baccalaureate nursing curriculum. Key topics include historical perspectives, ethical/legal principles, cultural care, patient teaching, current trends, health and wellness, and the health care delivery system. Prerequisite: Official acceptance into the nursing program and completion of all required courses for the campus being attended. Corequisite: NRSG 202.

NRSG 201P - INTRODUCTION TO NURSING (3)
Introduction to professional nursing practice to provide a basis for use of the nursing process and therapeutic communication. Includes introduction to the QSEN concepts and concepts integrated into the baccalaureate nursing curriculum. Key topics include historical perspectives, ethical/legal principles, cultural care, patient teaching, current trends, health and wellness, and the health care delivery system. Prerequisite: Acceptance to the summer entry for the School of Nursing including 80 credits that apply to the nursing major. Corequisite: NRSG 202P, NRSG 204P.

NRSG 202 - FUNDAMENTALS OF NURSING (5)
Introduces basic concepts, knowledge, and skills that lay the foundation of nursing practice. Provides the opportunity for students to develop competencies necessary to deliver basic nursing care to individuals across the lifespan. (Course fees apply.) Prerequisite BIOL 121, BIOL 122, BIOL 123, PSYC 130, HLTH 220; or corequisite: NRSG 201. Corequisite: NRSG 201 (or prerequisite).

NRSG 202P - FUNDAMENTALS OF NURSING (5)
Introduces basic concepts, knowledge, and skills that lay the foundation of nursing practice. Provides the opportunity for students to develop competencies necessary deliver to basic nursing care to individuals across the lifespan. This course it taught in an accelerated format over the summer on the Portland campus only. (Course fees apply.) Prerequisite: Acceptance to the summer entry for the School of Nursing including 80 credits that apply to the nursing major. Corequisite: NRSG 201P and NRSG 204P.

NRSG 203 - HEALTH ASSESSMENT (4)
Introduces physical assessment of populations across the lifespan and throughout the healthcare delivery continuum. (Course fees apply.) Prerequisite: BIOL 121, BIOL 122, BIOL 123, PSYC 130, HLTH 220; NRSG 201, NRSG 202.

NRSG 203P - HEALTH ASSESSMENT (4)
Introduces physical assessment of populations across the lifespan and throughout the healthcare delivery continuum. This course it taught in an accelerated format over the summer on the Portland campus only. (Course fees apply.) Prerequisite Acceptance to the summer entry for the School of Nursing including 80 credits that apply to the nursing major. NRSG 202P. Corequisite: NRSG 201P, NRSG 204P.

NRSG 204 - PATHOPHYSIOLOGY/PHARMACOLOGY I (4)
Uses a concept-based/body systems approach to build on previous human anatomy and physiology courses to compare normal and abnormal physiology of select pathophysiological conditions. Risk factors, pathogenesis, and clinical manifestations are introduced for each selected pathophysiological condition. Pharmacological concepts will be integrated into pathophysiology through exploration of major drug classifications, prototype drugs, mechanisms of action, indications, side effects, and nursing implications. (Course fees apply.) Prerequisite: NRSG 203; BIOL 222 (or corequisite). Corequisite: BIOL 222 (or prerequisite).

NRSG 204P - PATHOPHYSIOLOGY/PHARMACOLOGY I (4)
Uses a concept-based/body systems approach to build on previous human anatomy and physiology courses to compare normal and abnormal physiology of select pathophysiological conditions. Risk factors, pathogenesis, and clinical manifestations are introduced for each selected pathophysiological condition. Pharmacological concepts will be integrated into pathophysiology through exploration of major drug classifications, prototype drugs, mechanisms of action, indications, side effects, and nursing implications. (Course fees apply.) Prerequisite: Acceptance to the summer entry for the School of Nursing including 80+ credits that apply to the nursing major. NRSG 202. Corequisite: NRSG 201 and NRSG 203.

NRSG 233 - TOPICS IN NURSING (2)
Study of current topics of interest in professional nursing. May include papers or other projects. Offered as needed.

NRSG 234 - MEDICAL TERMINOLOGY (2)
Introduction to the medical terminology used in any health career. Study of the basic rules for building, analyzing and pronouncing medical words.

NRSG 235 - TOPICS IN NURSING (2)
Study of current topics of interest in professional nursing. May include papers, tests, or other projects. Offered as needed.

NRSG 290 - LPN VALIDATION (16)
Validation of prior nursing education for licensed practical nurses. Based on successful completion of validation testing, LPNs with a valid current license in any state are granted 16 nursing credits and are exempt from NRSG 201, NRSG 202, NRSG 203, NRSG 213P.

NRSG 291 - RN VALIDATION - PART I (16)
Validation of prior nursing education for licensed practical nurses. Based on successful completion of validation testing, LPNs with a valid current license in any state are granted 16 nursing credits and are exempt from NRSG 201, NRSG 202, NRSG 203, NRSG 213P. NRSG291 and NRSG 391 are both part of the same validation process.

NRSG 304 - PATHOPHYSIOLOGY/PHARMACOLOGY II (4) (4)
A continuation of NRSG 204. Uses a concept-based/body systems approach to build on previous human anatomy and physiology courses to compare normal and abnormal physiology of select pathophysiological conditions. Risk factors, pathogenesis, and clinical manifestations are introduced for each selected pathophysiological condition. Pharmacological concepts will be integrated into pathophysiology through exploration of major drug classifications, prototype drugs, mechanisms of action, indications, side effects, and nursing implications. Prerequisite: NRSG 204 or NRSG 204P.

NRSG 310 - TRANSITIONS (1)
Facilitates the transition of students who transfer into the nursing major at WWU as LPNs, RNs or transfer students from another nursing program, or who have been delayed in the nursing program for 2 or more quarters. Focus is on processes and concepts unique to the WWU nursing curriculum and review of nursing skills necessary to make a successful transition into or continuation in the program.

NRSG 313 - PHARMACOLOGY II (1)
A continuation of NRSG 213P continues the introduction to the major classifications of therapeutic medications. Pharmacological exploration of major drug classifications, prototype drugs, mechanisms of action, indications, side effects, and nursing implications. Designed for LPN students only as part of LPN Validation. Credit not allowed for both NRSG 304 and NRSG 313. Course not available until Fall of 2025.

NRSG 314 - PATHOPHYSIOLOGY II (3)
A continuation of NRSG 213P – Pathophysiology I. Uses a concept-based/body systems approach to build on previous human anatomy and physiology courses to compare normal and abnormal physiology of select pathophysiological conditions. Risk factors, pathogenesis and clinical manifestations are introduced for each selected pathophysiological condition. Designed for LPN students only. Credit not allowed for both NRSG 304 and NRSG 314. Course not available until Fall of 2025. Prerequisite: LPN Validation.

NRSG 321 - NURSING OF THE ACUTELY ILL ADULT (8)
Nursing care of adult clients experiencing multi-system health problems in an acute care facility. Four credit hours of clinical lab included. (Course fees apply.) Prerequisite: NRSG 204 or NRSG 204P. Corequisite: NRSG 354.

NRSG 327 - EVIDENCE-BASED PRACTICE (3)
Focuses on developing skills and competencies in the use of the research process and the implementation of evidence-based practice. Prerequisite: MATH 106 or equivalent, ENGL 223.

NRSG 331 - MENTAL HEALTH NURSING (8)
Nursing care of clients experiencing alterations in psychosocial behavior. Focus is on the predisposing factors, assessment, and evidenced-based nursing care in collaboration with the interdisciplinary team. Four credit hours of clinical lab included. (Course fees

apply.) Prerequisite: NRSG 204 or NRSG 204P. Corequisite: NRSG 354.

NRSG 344 - NURSING OF THE FAMILY (8)
Emphasis is on childbearing and childrearing with focus on the child from conception through adolescence. Application of concepts of growth and development of the child and family is included. Four credit hours of clinical lab includes hospital, community, and outpatient settings. (Course fees apply.) Prerequisite: NRSG 204 or NRSG 204P. Corequisite: NRSG 354.

NRSG 354 - PATHOPHYSIOLOGY (5)
Emphasizes understanding diseases of body systems as a basis for nursing assessment and intervention. Prerequisite: BIOL 121, BIOL 122, BIOL 123; BIOL 222; CHEM 105; NRSG 213.

NRSG 359 - NURSING LICENSURE REVIEW (1; 4)
Provides remediation in preparation for student success on the NCLEX exam. The student will focus on remediation of identified areas of weakness in content mastery. Course may be repeated when content area changes. Graded S or NC.

NRSG 391 - RN VALIDATION - PART II (32)
Validation of prior nursing education for registered nurses. Based on successful completion of validation testing, RNs with a current license in the state of Oregon are granted 31 32 nursing credits and are exempt from NRSG 313, NRSG 321, NRSG 331, NRSG 344, NRSG 354, NRSG 450. NRSG 391and NRSG291 are both part of the same validation process.

NRSG 421 - NURSING OF THE CHRONICALLY ILL (8)
Focuses on developing skills and competencies in nursing care of individuals with complex, chronic disease states across the lifespan. Four credit hours of clinical lab included. (Course fees apply.) Prerequisite: NRSG 321, NRSG 327 (with exception of RN students), NRSG 331, NRSG 344, NRSG 354.

NRSG 431 - LEADERSHIP IN NURSING (3)
Principles of leadership related to professional nursing care. Emphasis is on the application of leadership, management and ethical decision-making process to promote quality health care across diverse practice settings. This course is taught online only. Prerequisite: NRSG 321, NRSG 327 (with exception of RN students), NRSG 331, NRSG 344, NRSG 354.

NRSG 433 - TOPICS IN NURSING (2)
Study of current topics of interest in professional nursing. May include papers or other projects. Graded S or NC. Offered as needed. (Course fees may apply.)

NRSG 435 - TOPICS IN NURSING (2)
Study of current topics of interest in professional nursing. May include papers, tests, or other projects. Offered as needed. (Course fees may apply.)

NRSG 437 - ADVANCED ACUTE NURSING (8)
Advanced nursing care of clients in an acute care setting who are experiencing complex multi-system health problems. Four hours of clinical lab included. (Course fees apply.) Prerequisite: NRSG 321, NRSG 327 (with exception of RN students), NRSG 331, NRSG 344, NRSG 354.

NRSG 441 - COMMUNITY HEALTH NURSING (8)
The study and application of community and population health including examination of social determinants of health across the healthcare delivery continuum. Students explore health promotion and illness prevention to achieve population health goals. Four credit hours of clinical lab included. (Course fees apply.) Prerequisite: NRSG 321, NRSG 327 (with exception of RN students), NRSG 331, NRSG 344, NRSG 354.

NRSG 445 - ISSUES AND TRENDS IN NURSING (3)
Discussion of issues and trends affecting the practice of professional nursing and health care delivery. Prerequisite: NRSG 321, NRSG 331, NRSG 344, NRSG 354.

NRSG 450 - NCLEX REVIEW (3)
Provides a systematic review of nursing material for the NCLEX-RN using a nationally known instructional program. Includes practice on NCLEX style test questions. Designed to be taken during the last quarter of the senior year. (Course fees apply.)

NRSG 475 - INTERPRETING LAB VALUES (2)
Introduction to the basic interpretation of a variety of clinical laboratory studies and diagnostic tests within the framework of the nursing process. Prerequisites: 300 level nursing courses.

NRSG 490 - NURSING PRACTICUM (2; 4)
Individual study arrangement involving students, faculty, and health care agencies to gain additional clinical experience in an area of special interest. Options include global or local health experiences. Only one local practicum per student is allowed. Graded S or NC. Prerequisite: Senior standing with a WWU junior year GPA (nursing and non-nursing courses) of 3.25 or higher. Other limitations apply - see the School of Nursing Handbook for details.

NRSG 494 - COOPERATIVE EDUCATION (0-4; 4)
Individual contract arrangement involving students, faculty, and cooperating health care agencies to gain practical nursing experience. Open to international students only. Graded S or NC. Prerequisite: NRSG 203 and permission of the nursing faculty.

PEAC - PHYSICAL ACTIVITY

PEAC 113 - Beginning Swimming
PEAC 114 - Intermediate Swimming
PEAC 115 - Wakeboarding/Water Activities
PEAC 120P - Strength and Conditioning I
PEAC 121P - Strength and Conditioning II
PEAC 122 - Strength Training
PEAC 123 - Circuit Weight Training
PEAC 127 - Tumbling
PEAC 128 - Jogging
PEAC 130 - Spinning
PEAC 133 - Aerobic Rhythm
PEAC 142 – Badminton
*PEAC 144 - Golf
PEAC 146 - Tennis
PEAC 148 - Pickleball
PEAC 151 - Racquetball
PEAC 155 - Acrobatic Gymnastics
*PEAC 157 - Backpacking
PEAC 159 - Cycling
*PEAC 161 - Rock Climbing
*§PEAC 164 - Downhill Skiing/Snowboarding
PEAC 171 - Basketball
PEAC 173 - Flagball
PEAC 174 - Soccer
PEAC 175 - Softball
PEAC 177 - Volleyball
◊§PEAC 182 - Athletics: Golf
◊§PEAC 183 - Athletics: Soccer
◊§PEAC 185 - Athletics: Volleyball
◊§PEAC 186 - Athletics: Basketball
◊§PEAC 187 - Athletics: Cross Country
PEAC 190 - Independent Activity
*Course fees apply. See the Financial Bulletin.
§Graded S or NC
◊Team membership required to enroll.
* Course fees apply. See the Financial Bulletin.
§ Graded S or NC
◊ Team membership required to enroll.

PETH - PHYSICAL EDUCATION THEORY

PETH 107 - LIFEGUARD TRAINING (2)
Study and practical application water rescue techniques to prepare for Red Cross Lifeguard Certification. Class involves pool and classroom components and includes Basic First Aid, CPR, and AED training. (Course fees apply.)

PETH 145 - PRINCIPLES OF COACHING (2)
Study of the principles of coaching sports activities. Topics include sport psychology, communication, group dynamics, leadership, and skill development.

PETH 205 - WATER SAFETY INSTRUCTOR (2)
Preparation for meeting the requirements of the American Red Cross Certificate to teach swimming classes. (Course fees apply.)

PETH 214 - INTRODUCTION TO EXERCISE SCIENCE AND PHYSICAL EDUCATION (2)
Introduction and orientation to the fields of exercise science and physical education. Includes philosophy, objectives, professional opportunities, responsibilities, and programming in the fields of exercise science and physical education.

PETH 225 - CARE AND PREVENTION OF INJURIES (3)
Methods of prevention, evaluation, recognition, and immediate care and rehabilitation of injuries. Lecture and laboratory. (Course fees apply.)

PETH 253 - COACHING TEAM SPORTS (2)
Study of materials, methods, strategies, and teaching progressions for coaching team sports.

PETH 254 - COACHING INDIVIDUAL SPORTS (2)
Study of materials, methods, strategies, and teaching progressions for coaching individual sports.

PETH 261 - OFFICIATING OF SPORTS ACTIVITIES (2)
Introduction to officiating in a variety of activities covered in the service areas; students are required to officiate in the intramural activities sponsored by the department. Lecture and laboratory.

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 - BIOMECHANICS (4)
Study of joint and muscular mechanism action of muscles involved in fundamental movements; effect of gravity and other forces on motion. Lecture and laboratory. Strongly recommended: BIOL 121, BIOL 122, BIOL 123.

PETH 350 - INTERNSHIP PLACEMENT ORIENTATION (0)
An internship placement orientation seminar intended to make students aware of agency possibilities, application and evaluation procedures, contracts and the internship learning process. Graded S or NC. Cross-Listed as: HLTH 350.

PETH 353 - COACHING STRENGTH AND CONDITIONING (2)
Study of materials, methods, strategies, and teaching progressions for coaching strength & conditioning activities.

PETH 366 - COACHING PRACTICUM (1)
Directed coaching experiences and activities including scouting/player evaluation, practice planning, and event management.

PETH 396 - METHODS OF TEACHING K-12 PHYSICAL EDUCATION AND HEALTH (4)
Study of the methods and techniques of teaching health and physical education at the K-12 level. Includes individual as well as group activities; students are required to observe and demonstrate in class.

PETH 425 - MOTOR LEARNING (4)
Analysis of selected variables which influence the learning of motor skills; includes research methods in physical education. Requires a research paper. Lecture and laboratory. Prerequisite: MATH 106.

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. Lecture and laboratory. Prerequisite: BIOL 121, BIOL 122, BIOL 123 or BIOL 141, BIOL 142, BIOL 143.

PETH 427 - FITNESS EVALUATION TECHNIQUES (3)
The primary focus is to develop and enhance the knowledge and practical skills in health and fitness evaluation. Specific emphasis will be directed toward evaluation techniques of exercise, physiology, nutrition, weight control, exercise programming, health appraisal and fitness, lecture and laboratory. Preparation for meeting ACSM Health/Fitness Instructor Certification. Prerequisite: BIOL 121, BIOL 122, BIOL 123, PETH 426 or permission of instructor.

PETH 479 - DIRECTED RESEARCH/PROJECT (1 - 3; 6)
Additional research or study carried out under the direction of an assigned faculty member.

PETH 484 - ADMINISTRATION OF HEALTH, PHYSICAL EDUCATION, AND RECREATION (2)
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 physical education and recreation programs.

PETH 490 - INTERNSHIP IN EXERCISE SCIENCE (1-4; 4)
Individual contract arrangement between students, faculty, and cooperating professionals to gain experience in a non-classroom professional setting. Internship credit is restricted to the major field of study. See the Internship Program in the Nondepartmental section of the Bulletin. Graded S or NC. Prerequisite: Approval by department.

PETH 493 - HISTORY AND PHILOSOPHY OF PHYSICAL EDUCATION (2)
Study of Physical Education and Recreation from earliest times to the present. Emphasis on the social and religious conditions which determine the character of physical education in a given society. Offered odd years.

PETH 495 - COLLOQUIUM (0)
A series of lectures, discussions, and practical experiences designed to involve and engage students in the health and exercise science, and physical education professions. Two quarters required for every year in residence as a Health Science, Exercise Science, or Sports Management and Coaching major. Alternate colloquiums accepted with departmental pre-approval only. Cross-Listed as: HLTH 495.

PETH 496 - SENIOR SEMINAR (3)
Review of current topics in health and exercise science. Students will engage in seminar discussions, write, and present on multiple topics related to their course of study in the health and exercise science fields. Prerequisite: Senior standing in Health Science or Exercise Science. Cross-Listed as: HLTH 496.

PHIL - PHILOSOPHY

PHIL 204 - ESSENTIALS OF CRITICAL REASONING (4)
Concepts and procedures basic to effective thinking including an introduction to the nature of formal argumentation, with practice constructing logically sound arguments as well as analyzing those of others. Prerequisite: ENGL 121, ENGL 122, or permission of instructor.

PHIL 205 - INTRODUCTION TO PHILOSOPHY (4)
Selected writings from classical and contemporary philosophy.

PHIL 270 - INTRODUCTION TO PHILOSOPHY (4)
An introduction to basic philosophical concepts through the use of film; it is a combination of reading both classical and contemporary philosophical texts about topics such as the nature of reality (metaphysics), the acquisition and justification of knowledge and truth (epistemology), the nature of the good (ethics and moral philosophy), and the origin and justification of political obligation (social and

political philosophy). Course readings are enhanced by watching film–both television and movies–that illustrate these basic philosophical ideas.

PHIL 305 - MORAL PHILOSOPHY (4)
Examines the relativist, objectivist, and absolutist moral theories of classical and contemporary philosophers. Offered odd years.

PHIL 310 - PHILOSOPHY AND THE BIBLE (4)
Designed to compare biblical themes with philosophical themes, including aesthetics, epistemology, metaphysics, ethics, theology, and politics. Philosophical themes are juxtaposed with Biblical accounts of creation, knowledge, revelation, morality, and politics. Includes the philosophical problem of evil in relationship to the book of Job, as well as storytelling for moral purposes in the parables of Jesus. Major philosophers include Kant, Hume, Nietzsche, Heidegger, Levinas, Kierkegaard, Descartes, Plato, and Aristotle. Prerequisite: PHIL 204 or PHIL 205, or permission of the instructor.

PHIL 407 - PHILOSOPHY OF SCIENCE (4)
Contemporary issues in the philosophy of science. These include identifying a scientific theory, distinguishing science from pseudoscience, and considering the scope and limits of scientific knowledge as well as science's relationship with religion. Prerequisite: PHIL 204 or PHIL 205, or permission of the instructor.

PHIL 410 - PHILOSOPHY OF EDUCATION (3)
Study of educational thought and practice from a philosophical perspective: the aims, principles, and theories of education, with special reference to Christian schools. Prerequisite: PHIL 204 or PHIL 205, or permission of the instructor. Cross-Listed as: EDUC 410.

PHIL 412 - PHILOSOPHY OF RELIGION (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. See the History and Philosophy section of this bulletin. Prerequisite: PHIL 204 or PHIL 205, or permission of the instructor. Cross-Listed as: RELT 412.

PHIL 440 - HISTORY OF SOCIAL AND POLITICAL PHILOSOPHY (4)
Examines major philosophical views on the origin and justification of political obligation. Includes readings in political theory from classical philosophers such as Plato, Aristotle, and Augustine from the classical period; Kant, Rousseau, Hobbes, Locke, Spinoza, and Mill from the modern period; and Rawls, Mills, and Pateman from the twentieth century. Topics will include the origin of the state, the authority of the state over the individual, and the consent of the governed. Offered odd years. Prerequisite: PHIL 204 or PHIL 205 or permission of the instructor. Cross-Listed as: HIST 440.

PHIL 496 - SEMINAR (4)
In-depth study of specific areas of philosophical research. Prerequisite: PHIL 204 or PHIL 205, or permission of the instructor.

PHYS - PHYSICS

PHYS 251, PHYS 252, PHYS 253 or equivalent and MATH 172, MATH 273, MATH 274 are prerequisites for all courses numbered PHYS 300 or above.

PHYS 201 - CONCEPTUAL PHYSICS (3)
Investigation, explanation, and understanding of the natural world using the ideas and concepts of physics. Topics include mechanics, properties of matter, heat, sound, electricity and magnetism, light, atomic and nuclear physics, relativity, and astrophysics. Does not apply towards a major or minor. Credit will not be allowed for both PHYS 151, PHYS 152 and PHYS 201, PHYS 202. Corequisite: PHYS 204.

PHYS 202 - CONCEPTUAL PHYSICS (3)
Investigation, explanation, and understanding of the natural world using the ideas and concepts of physics. Topics include mechanics, properties of matter, heat, sound, electricity and magnetism, light, atomic and nuclear physics, relativity, and astrophysics. Does not apply towards a major or minor. Credit will not be allowed for both PHYS 151, PHYS 152 and PHYS 201, PHYS 202. Corequisite: PHYS 205.

PHYS 204 - CONCEPTUAL PHYSICS LABORATORY (1)
Laboratory work integrated with PHYS 201, PHYS 202. Does not apply towards a major or minor. (Course fees apply.)

PHYS 205 - CONCEPTUAL PHYSICS LABORATORY (1)
Laboratory work integrated with PHYS 201, PHYS 202. Does not apply towards a major or minor. (Course fees apply.)

PHYS 211 - GENERAL PHYSICS (3)
Introduction to mechanics, heat, sound, light, electricity, atomic and nuclear physics, elementary particles, quantum mechanics, and special relativity; designed primarily for non-physics majors to acquaint them with the ideas and methods of physics for possible application to problems in other areas of human endeavor. Must be taken in sequence. Prerequisite: MATH 121, MATH 122, or equivalent. Corequisite: PHYS 214.

PHYS 212 - GENERAL PHYSICS (3)

Introduction to mechanics, heat, sound, light, electricity, atomic and nuclear physics, elementary particles, quantum mechanics, and special relativity; designed primarily for non-physics majors to acquaint them with the ideas and methods of physics for possible application to problems in other areas of human endeavor. Must be taken in sequence. Prerequisite: MATH 121, MATH 122, or equivalent. Corequisite: PHYS 215.

PHYS 213 - GENERAL PHYSICS (3)

Introduction to mechanics, heat, sound, light, electricity, atomic and nuclear physics, elementary particles, quantum mechanics, and special relativity; designed primarily for non-physics majors to acquaint them with the ideas and methods of physics for possible application to problems in other areas of human endeavor. Must be taken in sequence. Prerequisite: MATH 121, MATH 122, or equivalent. Corequisite: PHYS 216.

PHYS 214 - GENERAL PHYSICS LABORATORY (1)

Laboratory work integrated with PHYS 211, PHYS 212, PHYS 213. (Course fees apply.)

PHYS 215 - GENERAL PHYSICS LABORATORY (1)

Laboratory work integrated with PHYS 211, PHYS 212, PHYS 213. (Course fees apply.)

PHYS 216 - GENERAL PHYSICS LABORATORY (1)

Laboratory work integrated with PHYS 211, PHYS 212, PHYS 213. (Course fees apply.)

PHYS 251 - PRINCIPLES OF PHYSICS (3)

A calculus-based introduction to classical mechanics, waves, thermodynamics, electromagnetism, optics, relativity, and nuclear physics; designed to provide the science and engineering major with an intuitive and a mathematical understanding of fundamental physical concepts. Must be taken in sequence. Prerequisite: MATH 172. Corequisite: PHYS 254.

PHYS 252 - PRINCIPLES OF PHYSICS (3)

A calculus-based introduction to classical mechanics, waves, thermodynamics, electromagnetism, optics, relativity, and nuclear physics; designed to provide the science and engineering major with an intuitive and a mathematical understanding of fundamental physical concepts. Must be taken in sequence. Corequisite: PHYS 255.

PHYS 253 - PRINCIPLES OF PHYSICS (3)

A calculus-based introduction to classical mechanics, waves, thermodynamics, electromagnetism, optics, relativity, and nuclear physics; designed to provide the science and engineering major with an intuitive and a mathematical understanding of fundamental physical concepts. Must be taken in sequence. Corequisite: PHYS 256.

PHYS 254 - PRINCIPLES OF PHYSICS LABORATORY (1)

Experimental exploration and study of the fundamental concepts of physics integrated with PHYS 251, PHYS 252, PHYS 253. (Course fees apply.)

PHYS 255 - PRINCIPLES OF PHYSICS LABORATORY (1)

Experimental exploration and study of the fundamental concepts of physics integrated with PHYS 251, PHYS 252, PHYS 253. (Course fees apply.)

PHYS 256 - PRINCIPLES OF PHYSICS LABORATORY (1)

Experimental exploration and study of the fundamental concepts of physics integrated with PHYS 251, PHYS 252, PHYS 253. (Course fees apply.)

PHYS 307 - ASTROPHYSICS (4)

An introduction to planetary systems, stars, and stellar evolution, stellar remnants (white dwarfs, neutron stars, and black holes), galaxies and cosmology. Offered odd years. Prerequisite: PHYS 253 or the permission of instructor.

PHYS 310 - MODERN PHYSICS I (3)

Study of the basic principles of quantum theory and their application to atomic and molecular properties. Corequisite: PHYS 314.

PHYS 311 - MODERN PHYSICS II (3)

Study of special relativity, elementary particles, and nuclei. Offered odd years. Prerequisite: PHYS 310. Corequisite: PHYS 316.

PHYS 312 - PHYSICAL ELECTRONICS (3)

Study of the physical principles of solid state electronics devices. Corequisite: PHYS 315. Cross-Listed as: ENGR 312.

PHYS 313 - THERMODYNAMICS (4)

An introduction to thermodynamics using the tools of statistical mechanics. Topic include ideal gases; van der Waal gases; paramagnets; Einstein solids; work, energy, and heat; entropy; the laws of thermodynamics; and classical and quantum distributions. Applications include heat engines, phase transitions, blackbody radiation, and properties of solids. ENGR 332 can be counted toward a physics degree when paired with PHYS 259: Independent Study: Thermodynamics for one credit.

PHYS 314 - MODERN PHYSICS LABORATORY I (1)

Laboratory activities integrated with PHYS 310 Modern Physics. Corequisite PHYS 310.

PHYS 315 - PHYSICAL ELECTRONICS LABORATORY (1)

Experimental study of the physical principles of solid state electronics devices. (Course fees apply.) Corequisite: PHYS 312. Cross-Listed as: ENGR 315.

PHYS 316 - MODERN PHYSICS LABORATORY II (1)

Laboratory activities integrated with PHYS 311 Modern Physics. Offered odd years. Corequisite: PHYS 311.

PHYS 323 - MODERN OPTICS (3)

Study of optical phenomena and its technological applications beginning with their basis in Maxwell's equations. Includes the phenomena of reflection, refraction, dispersion, diffraction, interference, coherence, polarization, scattering, and their role in the operation of modern devices. Non-linear effects in materials, lasers, and device applications in fiber optics and photonics. Offered even years. Corequisite: PHYS 324.

PHYS 324 - MODERN OPTICS LABORATORY (1)

Laboratory work integrated with the topics of PHYS 323. Offered even years. Corequisite: PHYS 323.

PHYS 331 - INTRODUCTION TO NANOTECHNOLOGY (3)

Covers material properties and technology at the nanoscale. Applications involving material science, optical and semiconductor technology, and organic materials are introduced. Offered odd years. Corequisite: PHYS 332.

PHYS 332 - INTRODUCTION TO NANOTECHNOLOGY LABORATORY (1)

Laboratory work integrated with the topics of PHYS 331 emphasizing current industrial technologies. Offered odd years. Corequisite: PHYS 331.

PHYS 340 - INTRODUCTION TO MATLAB AND MATHEMATICA (2)

An introduction to two of the prevailing computing tools used in physics, engineering, and other disciplines. Offered alternate years.

PHYS 401 - ELECTRICITY AND MAGNETISM (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. Offered even years.

PHYS 402 - ELECTRICITY AND MAGNETISM (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. Offered even years.

PHYS 414 - EXPERIMENTAL PHYSICS I (1)

An introduction to the tools of modern experimental physics. Topics include experiment design, instrumentation, data acquisition, and data analysis. Offered odd years

PHYS 415 - EXPERIMENTAL PHYSICS II (1)

An introduction to the tools of modern experimental physics. Topics include experiment design, instrumentation, data acquisition, and data analysis. Offered odd years.

PHYS 419 - GRADUATE REVIEW (1)

An integrated review of the main concepts and problems of lower and upper-division physics. The review prepares students for taking the Physics Subject Test of the Graduate Record Exam during their senior year.

PHYS 420 - CLASSICAL MECHANICS (3)

Study of kinematics and dynamics of particles and rigid bodies, harmonic and orbital motion, using the methods of Newton, Lagrange, and Hamilton. Offered even years.

PHYS 421 - CLASSICAL MECHANICS (3)

Study of kinematics and dynamics of particles and rigid bodies, harmonic and orbital motion, using the methods of Newton, Lagrange, and Hamilton. Offered even years.

PHYS 422 - QUANTUM MECHANICS (3)

Study of the experimental and theoretical foundations of modern atomic and sub-atomic physics. Topics include wave mechanics, matrix mechanics, perturbation theory, and particle physics. Offered odd years.

PHYS 423 - QUANTUM MECHANICS (3)

Study of the experimental and theoretical foundations of modern atomic and sub-atomic physics. Topics include wave mechanics, matrix mechanics, perturbation theory, and particle physics. Offered odd years.

PHYS 435 - MATHEMATICAL PHYSICS (4)

In-depth study of the mathematical foundations of physics and their applications to physical problems. Particular attention is paid to the theory of linear vector spaces in developing tensor analysis group theory and Hilbert Space theory. This course is recommended for students planning to attend graduate school in physics, or having a strong interest in the applications of mathematics to the physical world. Offered odd years. Cross-Listed as: MATH 435.

PHYS 470 - BIOPHYSICS (4)

Study of the structure and function of biological systems from the perspective of the physical sciences. Offered even years. Prerequisite: BIOL 143; PHYS 213

or PHYS 253; MATH 171; or permission of instructor. Cross-Listed as: BIOL 470.

PHYS 479 - DIRECTED RESEARCH/PROJECT (1-3)
See Uniform Course Numbers.

PLSC - POLITICAL SCIENCE

PLSC 224 - AMERICAN GOVERNMENT (4)
The principles, organization, and development of American national, state, and local government.

PRDN - PRODUCT DESIGN

PRDN 120 - MODELS AND PROTOTYPES (3)
In a studio and laboratory environment, students will gain experience with a variety of hand tools, materials and techniques, to develop scale models. Students will learn to construct study models using appropriate materials and learn to use the model to evaluate and communicate product design concepts. Open to Product Design majors only. (Course fees apply.) Prerequisite: To be completed or acquired prior to or concurrently with this course: TECH 220 or permission of instructor.

PRDN 130 - 3-D DESIGN I (3)
Introduction to 3-D modeling using surface modeling software. Course emphasis is on design intent, generation and manipulation of surfaces, addition of and modification of basic materials and texture maps, and output of finished rendered images in formats compatible with other graphic software. Open to Product Design majors only. (Course fees apply.) Prerequisite: DSGN 121.

PRDN 210 - PRODUCT DESIGN STUDIO (4)
Application of a number of multiple problem-solving techniques and procedures related to product design. Students are encouraged to use innovative techniques to achieve workable solutions to selected design problems for team and special projects. Open to Product Design majors only. (Course fees apply.) Prerequisite: DSGN 111 or permission of instructor.

PRDN 230 - 3-D DESIGN II (3)
Continued study of 3-D modeling using parametric solid-modeling software. This course emphasizes the editing of solid-modeling features, importing/exporting of design information, assembly modeling and graphic output techniques. Open to Product Design majors only. (Course fees apply.) Prerequisite: PRDN 130.

PRDN 266 - PRESENTATION GRAPHICS FOR PRODUCT DESIGN (4)
Introduction to basic principles and techniques for graphically communicating the product design process for posters, presentations, process books, and portfolio pieces. Students will learn basic aesthetic principles for graphic design, essential technical skills for creating presentation graphics (using tools in the Adobe suite and other software), and essential concepts for visual storytelling and communication. (Course fees apply.) Prerequisite: GRPH 124 or permission of instructor.

PRDN 310 - PRODUCT DESIGN STUDIO (4)
Application of a number of multiple problem-solving techniques and procedures related to product design. Students are encouraged to use innovative techniques to achieve workable solutions to selected design problems for team and special projects. (Course fees apply.) Prerequisite: DSGN 111 or permission of instructor.

PRDN 330 - 3-D DESIGN III (3)
This course explores the use of rendering software. Emphasis is on the integration and generation of images created with software used in GRPH 136, PRDN 130, PRDN 230 and others, to make photo realistic rendered images, appropriate for printed and virtual presentations. Open to Product Design majors only. (Course fees apply.) Prerequisite: PRDN 230.

PRDN 345 - ENVIRONMENT DESIGN (4)
Application of design thinking and problem-solving skills with special attention given to the location or place. Focus on placemaking and identity where designers create experiences that connect people to the place through research, ideation, installation, user observation, testing, and assessment. Open to Product Design majors only. (Course fees apply.) Prerequisite: PRDN 210. Cross-Listed as: GRPH 345.

PRDN 410 - PRODUCT DESIGN STUDIO (4)
Application of a number of multiple problem-solving techniques and procedures related to product design. Students are encouraged to use innovative techniques to achieve workable solutions to selected design problems for team and special projects. Open to Product Design majors only. (Course fees apply.) Prerequisite: DSGN 111 or permission of instructor.

PRDN 411 - SENIOR PROJECT STUDIO (4)
Capstone Product Design experience to prepare the student for TECH 499, Senior Project. Each student is required to conduct an approved project with appropriate research, analysis, and design content. The scope of the project covers the project life cycle from proposal to final presentation accomplished in TECH 499. Open to Product Design majors only. (Course fees apply.) Prerequisite: PRDN 210, PRDN 310, PRDN 410, and senior standing in Product Design or permission of instructor.

PRDN 490 - INTERNSHIP (0-4; 4)
Practical experience in the areas of product design and manufacturing. May include web design and UI/UX development. The student works under the direction

of professionals in participating agencies and the department. Requirements include a minimum of 30 hours of documented work experience. Open only to majors in this field of study. See the Internship Program in the Non-departmental section of the Bulletin. Graded S or NC. Open to Product Design majors only. (Course fees apply for students enrolled for 0 credit.) Prerequisite: Instructor's permission must be obtained one quarter before registration.

PREL - PUBLIC RELATIONS

PREL 333 - STRATEGIES FOR FUNDRAISING (4)
Study of the philosophy, role, organization, and strategies of institutional development and fund raising. Includes consideration of annual funds, capital campaigns, special events, and direct mail. Cross-Listed as: MKTG 333.

PREL 337 - ADVERTISING COPYWRITING (3)
Instruction and practice in the art and craft of ad copywriting, with an emphasis on the critical thinking, concept development and writing skills needed to produce persuasive advertising messages for traditional and digital media. Students learn about the creative process, including how to generate ideas, develop rough layouts, and extend ideas across media in a single campaign. Students also gain presentation experience.

PREL 349 - SOCIAL MEDIA STRATEGIES (3)
An introduction to contemporary social media and the specific tools and best practices for social media use in public relations. Students will learn to develop strategic content to reach brand objectives and study the influences of contemporary social media on how we think, learn, and interact.

PREL 350 - WRITING FOR PUBLIC RELATIONS (3)
An application of news writing and public relations principles. Course includes preparing press releases and in-depth analysis of public information strategies, crisis management, special event planning, and press relations. Prerequisite: JOUR 245.

PREL 451 - PUBLICATION DESIGN AND EDITING (4)
Instruction and practice in communicating effectively in print and digital publications. The course emphasizes the strategy of selecting the appropriate medium for a message, and then crafting key messages tailored to specific audiences and organizational objectives. Students will develop skills through various projects including producing the annual departmental newsmagazine. (Course fees apply.) Prerequisite: GRPH 124.

PREL 481 - PUBLIC RELATIONS (4)
An overview of public relations from the perspectives of business and communication; includes history, theory, and hands-on examples. Covers the basics of public relations writing and analyzes a firm's public relations in detail.
Cross-Listed as: MKTG 481.

PSYC - PSYCHOLOGY

PSYC 120 - INTRODUCTION TO THE PSYCHOLOGY MAJOR (0)
A required seminar offering practical information regarding taking Psychology as a major. Topics include possible career options, strategies to excel as a major, and tips for professional conduct. Graded S or NC.

PSYC 130 - GENERAL PSYCHOLOGY (4)
Survey emphasizing the scientific bases of psychological investigation. Introduction to the fundamental vocabulary, methodologies, established facts, and sound principles of psychology. Intended for non-psychology majors and minors. Credit will not be allowed for both PSYC 130 and PSYC 140.

PSYC 140 - INTRODUCTION TO PSYCHOLOGY: SOCIAL FOUNDATIONS (4)
An introduction to the scientific study of behavioral processes and mental states. The course includes an overview of several psychology topics including historical information, research methods, human development, personality, social psychology, stress, and health, psychological disorders, and treatment. Credit will not be allowed for both PSYC 130 and PSYC 140.

PSYC 141 - INTRODUCTION TO PSYCHOLOGY: BIOLOGICAL FOUNDATIONS (4)
An exploration of the scientific study of basic behavioral processes and mental states. The course includes an overview of issues in psychology related to neuroscience, sensation and perception, consciousness, memory, learning, emotion and motivation, language, thinking, and intelligence.

PSYC 215 - DEVELOPMENTAL PSYCHOLOGY (4)
An overview of the individual development across the lifespan. Emphasis is placed on the physical, cognitive, and psychosocial development of the individual.

PSYC 217 - PSYCHOLOGY OF LEARNING AND DEVELOPMENT (4)
An introduction to the theories of child and adolescent development and learning. Covers psychological theories of human development from early childhood through the adolescent years, theories of learning and motivation, and concepts of diversity, and their application to educational practice. Will not apply toward a psychology major or minor.

PSYC 223 - RESEARCH AND WRITING IN EDUCATION AND PSYCHOLOGY (WD) (3)

An exploration of evaluation and interpretation of current research in education and psychology, research writing process and techniques, as well as ethics and style as documented by the American Psychological Association. Requires a major documented research paper related to education or psychology, dependent on declared major, and aimed at a scholarly audience. Also includes practice in the elements of professionalism required to manage and complete such a project. Fulfills the Writing in the Disciplines Requirement (WD). (Course fees apply.)

Cross-Listed as: EDUC 223.

PSYC 225 - MARRIAGE AND FAMILY LIFE (OR SOCI 225) (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.

Cross-Listed as: SOCI 225.

PSYC 247 - INTRODUCTION TO FORENSIC PSYCHOLOGY (4)

This course is designed to introduce the student to forensic psychology in a social psychology context. It includes interactive components of law and law enforcement, an exploration of the criminal mind, investigation techniques, eyewitnesses and criminal profiling. Offered even years.

PSYC 266 - LEARNING AND BEHAVIOR (3)

Basic learning phenomena in animals and humans, including classical and operant conditioning and more complex learning. The application of these phenomena in human and animal behavior change is also addressed. Emphasis will be placed on behavioral approaches. Prerequisite: PSYC 130 or PSYC 140 and PSYC 141.

PSYC 271 - RESEARCH METHODS AND STATISTICS I (4)

The study of statistical methods and research design in psychology. Prerequisite: PSYC 140 (or equivalent).Corequisite: Pre/Corequisite: ENGL 223 and PSYC 141 or equivalent.

PSYC 272 - RESEARCH METHODS AND STATISTICS II (4)

Application of research design and statistical methods to a research problem. Includes data gathering, statistical analysis and reporting of research results. (Course fees apply.) Prerequisite: PSYC 271.

PSYC 278 - APPLIED PSYCHOLOGICAL RESEARCH (1; 3)

The student will work with a departmental advisor on research activities such as literature search, experimental design, data collection, data analysis, and preparation of written or presentation materials. Graded S or NC.

PSYC 344 - SOCIAL PSYCHOLOGY (4)

The dynamics of social interaction and interpersonal behavior with application to contemporary society. Prerequisite: PSYC 130 or PSYC 140 and PSYC 141 or permission of instructor.

PSYC 350 - LANGUAGE DEVELOPMENT IN YOUNG CHILDREN (OR EDUC 350) (3)

Study of current research-based theories, methods, and strategies needed to effectively teach and support early literacy from birth through beginning reading. Field experience required. Prerequisite: PSYC 215.

PSYC 366 - THEORIES OF PERSONALITY (4)

A survey of the principal theories of personality with attention to the experimental methods and findings on which they are based, as well as their applications in everyday life. Prerequisite: PSYC 272 or permission of instructor.

PSYC 370 - HEALTH PSYCHOLOGY (3)

The study of learning, motivation, and psychological theories as related to health decisions and practices. Topics include the psychology of addictive behavior, behavioral health, and the relationship between stressful life events, social support, and wellness. Cross-Listed as: HLTH 370.

PSYC 373 - ORGANIZATIONAL BEHAVIOR (4)

The study of the behavior of individuals and groups in organizations with emphasis on the implications for organizational design and management practice. Topics include motivation, leadership, decision-making, organizational culture, power, and conflict. Recommended: MGMT 371.

Cross-Listed as: MGMT 373.

PSYC 380 - PSYCHOLOGY OF EMOTION AND MOTIVATION (4)

The study of motivation as a multifaceted psychological construct that encompasses underlying processes that initiate, direct, and maintain human behavior. Introduces the history, theories, and principles of human motivation and emotions. Examines motivation from a variety of perspectives including physiological, psychological, and social perspectives. Prerequisite: PSYC 272 or permission of instructor.

PSYC 390 - COGNITIVE PSYCHOLOGY (4)

Theories and methods in the study of mental processes such as attention, pattern recognition, comprehension, memory, knowledge representation, and problem-solving. Connections to neuroscience and applications to information science are also explored. Prerequisite: PSYC 272 or permission of instructor.

PSYC 425 - PSYCHOLOGY OF RELIGION (3)
Interpretation of religious behavior and motivation from psychological perspectives. Offered odd years. Prerequisite: PSYC 272 or permission of instructor.

PSYC 430 - PSYCHOLOGICAL TESTING (3)
Principles of test selection, administration, and interpretation; consideration of the contributions and limitations of major types of standardized tests and inventories used in the behavioral sciences. (Course fees apply). Offered odd years. Prerequisite: PSYC 272 (or permission of instructor).

PSYC 434 - PERSPECTIVES IN PSYCHOLOGY (1-3; 6)
Discussion of current issues, theories, and practices in psychology. Elective credit. Prerequisite: PSYC 272 or permission of instructor.

PSYC 444 - CULTURAL DIVERSITY IN EDUCATION (3)
Study of human diversity and its impact on the educational process; emphasis on instructional and management strategies that demonstrate respect for cultural, ethnic, and language differences through differentiated instruction.
Cross-Listed as: EDUC 444.

PSYC 447 - ADVANCED FORENSIC PSYCHOLOGY (4)
An advanced course in selected topics in forensic psychology, criminal justice, and criminology. Focuses on the application and practice of psychology in the areas of police and investigative psychology, family forensic psychology, psychology of crime and delinquency, consulting, and correctional psychology. Offered odd years. Prerequisite: PSYC 247, PSYC 272, or permission of instructor.

PSYC 455 - HISTORY AND SYSTEMS OF PSYCHOLOGY (4)
Historical development of the various systems and theories of psychology. Prerequisite: PSYC 130 or PSYC 140 and PSYC 141.

PSYC 464 - INTRODUCTION TO COUNSELING (4)
A systematic, comprehensive, and balanced survey of the leading counseling approaches, including an analysis of each system's perspective on personality, abnormal behavior, clinical methods, and the helping relationship. Course is designed for all those interested in the helping professions. Prerequisite: PSYC 272 or permission of instructor.

PSYC 466 - BIOLOGICAL PSYCHOLOGY (4)
The study of the physiological, developmental, and functional explanations of behavior. This includes sensory and motor mechanisms, as well as motivated behaviors, learning, memory, and language. The biological basis for mental disorders and the behavioral effects of brain damage are also addressed. Prerequisite: BIOL 121 or BIOL 141; PSYC 272 or permission of instructor.

PSYC 478 - APPLIED PSYCHOLOGICAL RESEARCH (1-3; 4)
The student will work with a departmental advisor on research activities such as literature search, preliminary experiments, data collection, data transcription, or data analysis. Graded S or NC. Prerequisite: PSYC 272 or permission of instructor.

PSYC 492 - ABNORMAL PSYCHOLOGY (4)
An overview of the major categories of abnormal behavior, including clinical description and classification, as well as recent research on etiology and approaches to treatment. Prerequisite: PSYC 272 or permission of instructor.

PSYC 493 - PSYCHOLOGY PRACTICUM (3)
A volunteer experience utilizing psychological skills within a community service agency/organization that provides the student with relevant experience in the field of psychology, or a psychology-related field. A minimum of 60 on-site hours within the service setting is required along with coordination with the practicum coordinator and designated on-site supervisor. Graded S or NC. Prerequisite: PSYC 495, senior status and permission of instructor.

PSYC 495 - COLLOQUIUM: ORIENTATION TO DEGREE COMPLETION (0)
Preparation for degree completion including practicum, senior project, and senior thesis as well as an overview of career and graduate school options available to psychology majors. A review of typical graduate school and employment prerequisites and application procedures. Required during spring term of junior year.

PSYC 496 - SEMINAR (2-3; 6)
In-depth examination of a specific topic in psychology. Topics may include motivation, sensation and perception, mental health, human sexuality, etc. Prerequisite: Upper-division major/minor in psychology or permission of instructor.

PSYC 498 - SENIOR PROJECT IN PSYCHOLOGY (2)
Exploration of a topic of interest related to the Psychology Practicum experience. Students will complete a written report that includes a summarization of the practicum experience, and a research question guiding the completion of an in-depth literature review. Prerequisite: PSYC 493 or permission of the instructor.

PSYC 499 - SENIOR THESIS IN PSYCHOLOGY (2)

An original independent research study in psychology. Must be submitted for presentation at a professional conference or for publication in a scientific journal. Prerequisite: PSYC 272.

RELB - BIBLICAL STUDIES

RELB classes that fall into the 300 range are focused on the Old Testament while RELB classes in the 400 range are New Testament.

RELB 104 - THE MINISTRY OF JESUS (4)

Survey of Christ's life in its historical setting as a basis for determining Christian action. Not open to students with senior standing.

RELB 105 - THE SERMON ON THE MOUNT (2)

Study of the Sermon on the Mount as it relates to the needs of the Christian. Not open to students with senior standing.

RELB 106 - THE PARABLES OF JESUS (2)

Exegetical study of Jesus' parables; considers literary structure, historical context, and relevance for today. Not open to students with senior standing.

RELB 111 - MESSAGES OF THE OLD TESTAMENT (4)

Survey of basic themes of the Old Testament. Not open to students with senior standing.

RELB 200 - SEVEN CHURCHES OF REVELATION (4)

An exploration of the Biblical text and historical sites of the Seven Churches of Revelation chapters 2 and 3 and the Island of Patmos with a special emphasis on lessons for the modern church.

RELB 231 - EXPLORING THE NEW TESTAMENT (4)

An introduction to the New Testament Scriptures and the faith of the earliest Christians. The course will focus on Jewish and Greco-Roman background, the nature and message of the gospels, the life and ministry of Jesus and the ministry and theology of Paul, and the later developments that transformed the church from a first-century Jewish sect into a separate movement that spread around the world.

RELB 274 - STUDY TOUR: THE HOLY LANDS AND ITS PEOPLE (4)

An examination of the cultural, historical, geographical, and theological dimensions of the Old and New Testament scriptures in conjunction with the Bible Lands Study Tour. Primary attention is given to the teachings of the Old and New Testaments and the significance these scriptures continue to have within Judaism, Christianity, and Islam. Offered odd years during the summer.

RELB 302 - PENTATEUCH (4)

Exegetical examination of significant passages in the first section of the Hebrew Bible (Old Testament); considers the historical setting, authorship, time, circumstance of writing, and other literary and theological questions.

RELB 303 - OLD TESTAMENT PSALMS, STORIES, AND WISDOM (3)

Introduction to the third section of the Hebrew Bible; considers authorship, the time and circumstance of writing, and other literary and theological questions.

RELB 304 - HEBREW PROPHETS (4)

A study of the ministry and messages of selected pre-exilic, exilic and post-exilic prophets in Israel including consideration of their relevance for today.

RELB 306 - THE BIBLE AND ITS TRANSLATIONS (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.

RELB 307 - CREATION IN THE BIBLE (2)

A study of the Biblical Creation passages and their contribution to a Christian understanding of God, the purpose and meaning of life, creation care, work, and Sabbath rest. Attention is given to the ancient Near Eastern context of the Biblical texts and interpretation for the contemporary reader.

RELB 312 - DANIEL AND JEREMIAH (4)

An exegetical study of selected passages from the prophetic books of Daniel and Jeremiah within their historical and literary contexts with special attention to their significance for Christian Eschatology.

RELB 313 - REVELATION (4)

A study of the apocalyptic book of Revelation within its historical context, with special attention to its connection to the prophetic material in Daniel and to its significance for Christian Eschatology.

RELB 333 - BIBLICAL PERSPECTIVES ON HEALING (4)

A survey of the various ways biblical writers describe restoration to wholeness of life and of how these biblical views have been understood in prominent Christian traditions down to modern times. Offered on Portland campus. Offered as needed.

RELB 337 - JESUS AND THE GOSPELS (4)

An examination of the gospels, attending to the background and purpose, literary composition, theology, ethics, and relevance to contemporary issues and life.

RELB 339 - LUKE-ACTS (4)

An examination of the Gospel of Luke and of Acts with attention to background and purpose, literary

composition, theology, ethics, the development of early Christianity, and relevance to contemporary issues.

RELB 340 - ACTS & NEW TESTAMENT LETTERS (4)
An examination of the life and thought of the early Christian church as found in the book of Acts and in Pauline Epistles, Hebrews, and the General Epistles with attention to background and purpose, literary composition, theology, ethics and relevance to contemporary issues. May be taught with specific emphasis on a particular book or theme.

RELB 345 - BIBLICAL NARRATIVES (4)
The Bible is considered the primary rule for faith and practice within Christianity. However, many narratives within the Bible appear strange and seem to make little practical sense, or worse, paint a picture of God that is disturbing. Explores some of the "weirdest" narratives in the Bible in a way that helps students learn good interpretive principles, gain cultural understandings, obtain insights into practical Christian living, and see how even the weirdest tale is still "God-breathed" and "useful" (1 Tim.3:16-17)

RELB 354 - LITERATURE OF THE BIBLE (4)
Study of biblical poetry and prose from a literary perspective. Prerequisite: General studies literature or ENGL 234. Cross-Listed as: ENGL 454.

RELB 362 - PAUL AND THE GOSPEL (4)
An examination of I and II Thessalonians, I and II Corinthians, Galatians, and Romans with attention to background and purpose, literary composition, theology, ethics, and relevance to contemporary issues and life.

RELB 382P - NEW TESTAMENT BIOGRAPHIES (3)
An examination of major and minor figures in the New Testament in light of the historical and cultural context of the world in which they lived and how their stories highlight the theological and ethical message of Christianity.

RELB 400 - SEVEN CHURCHES OF REVELATION (4)
An exploration of the Biblical text and historical sites of the Seven Churches of Revelation chapters 2 and 3 and the Island of Patmos with a special emphasis on lessons for the modern church.

RELB 408 - THE BIBLE AND THE HUMAN CONDITION (4)
Focused attention on select theological themes that touch on different aspects of the human condition. Considers the development of these themes through the Old and New Testaments in the context of Christian reflection and witness. The selection of topics varies with any given course offering and might include some of the following: the meaning of life, birth, body, death, grief, sin, work, language, tragedy, hope, beauty, wealth, land and poverty, wisdom, love, evil, anger, violence, anxiety, technology, society and history.

RELB 410 - WOMEN IN THE BIBLE (2)
An in-depth study of selected texts about women in the Bible with special attention to power dynamics surrounding gender, sexuality, and family structure. Prerequisite: Junior standing.

RELB 421P - INTERPRETING THE BIBLE (4)
Introduction to different approaches to interpreting the Bible and to the procedures and resources for exegesis of biblical texts with a focus on literary forms. (Course fees apply.) Prerequisite: Complete at least one upper-division RELB course.

RELB 474 - STUDY TOUR: THE HOLY LANDS AND ITS PEOPLES (4)
An examination of the cultural, historical, geographical, and theological dimensions of the Old and New Testament scriptures in conjunction with the Bible Lands Study Tour. Primary attention is given to the teachings of the Old and New Testaments and the significance these scriptures continue to have within Judaism, Christianity, and Islam. Offered odd years during the summer.

RELB 496 - SEMINAR IN BIBLICAL HERMENEUTICS (4)
Study of biblical interpretation including history, methods, tools and resources, and application of literary genres. Designed to prepare departmental majors for academic writing in the field of religion.

RELH - RELIGIOUS HISTORY

RELH 205 - BIBLICAL ARCHAEOLOGY (4)
Introduction to the science of archaeology with particular attention to those discoveries which bear on the interpretation of the Biblical text.

RELH 303 - WORLD RELIGIONS (4)
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 mankind, as well as their influence on cultural development.

RELH 425 - PSYCHOLOGY OF RELIGION (3)
Interpretation of religious behavior and motivation from psychological perspectives. Cross-Listed as: PSYC 425.

RELH 455 - HERESY, ORTHODOXY & THE EARLY CHURCH (3)

Study of the rise of Christianity with emphasis on the development of theological concepts. Prerequisite: Permission of instructor.

RELH 457 - HISTORY OF ADVENTISM (3)
Study of the rise and development of the Seventh-day Adventist denomination

RELH 490 - ARCHAEOLOGICAL FIELDWORK (0-4; 4)
Participation in an archaeological expedition. Involves all aspects of dig life - stratigraphic excavation employing the most up-to-date methodologies, careful recording and analysis of data in consultation with experts from a wide range of disciplines. Application to the School of Theology is required by March 1 of the year the course is taken. Offered summers of even years. Graded S or NC. (Course fees apply for students enrolled for 0 credit.) Prerequisite: RELH 205 or permission of instructor.

RELM - MISSIONS

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.

RELP - PROFESSIONAL

RELP 131 - INTRODUCTION TO FAITH AND MINISTRY (4)
Exploration of personal faith and pastoral ministry focusing on spiritual growth, the call to pastoral ministry, the scope of pastoral ministry, and Seventh-day Adventist doctrines. The course includes a required weekend retreat. Open only to theology and religion majors. Not open to students with senior standing. (Course fees apply.)

RELP 236 - CHURCH WORSHIP (2)
A study and application of the theology and choreography of worship. Open only to theology and religion majors. (Course fees apply.) Prerequisite: RELP 131.

RELP 270 - CHAPLAIN MINISTRY (2)
Study and exposure to chaplaincy as an alternative vocational setting to traditional pastoral assignments. Includes hospital, prison, military, school and industrial chaplain work. The basic 2-hour course includes visits by professionals such as administrators, guards, physicians, nurses, and institutional chaplains. The optional hours include an inductive exploration of chaplain ministry through visitation, small group process, and discussion. Offered odd years.

RELP 281 - BIBLICAL PREACHING: FOUNDATIONS (2)
Preparation and delivery of Biblical sermons with a focus on the foundations of Biblical preaching. Laboratories and Sabbath speaking appointments included. Offered odd years. Prerequisite: SPCH 101.

RELP 336 - CHURCH AND PERSONAL MINISTRY (4)
A study of the skills needed for personal and public ministry, including pastoral visitation and counseling, and various forms of evangelism. Combines theory and practice on how to minister to people of both genders and all age groups in church and community. Open only to theology and religion majors. Offered even years. Prerequisite: RELP 131.

RELP 382 - BIBLICAL PREACHING: EXPOSITION (2)
Preparation and delivery of Biblical sermons with a focus on expository preaching. Laboratories and Sabbath speaking appointments included. Offered even years.

RELP 385 - PASTORAL INTERNSHIP (0)
Students in the pastoral ministry and chaplaincy concentration must participate in an internship approved by the School of Theology that exposes them to active ministry in a local church. Students in the pastoral ministry concentration, also participate in a summer internship that exposes them to full-time ministry in an approved church in the North Pacific Union Conference. Graded S or NC.

RELP 400 - GRIEF AND LOSS (2)
The exploration of the ministry of pastoral care in times of loss and grief from various perspectives. Students will learn why and how humans grieve and how grieving is affected by the type of loss, socioeconomic and cultural factors, individual personality, and family functioning. topics include the meaning of death and loss at different ages, as well as personal, spiritual, and cultural understandings of death, grief, and loss with practical application of the role of pastoral care and empathy pertaining to rituals, funerals, and congregational support.

RELP 482 - PASTORAL CARE (2)
Introduction to the principles and practice of pastoral care through the application of counseling techniques, the utilization of the spiritual resources of the Christian community, and theological reflection. Open only to theology and religion majors. Includes practicum. Offered odd years. Prerequisite RELP 131.

RELP 492 - PUBLIC EVANGELISM I (1)
The theory and methodology public outreach of the church; integrating traditional evangelistic techniques, evangelistic preaching, and social ministries. Includes

lab experience in actual outreach. Open only to theology and religion majors.

RELP 492 - PUBLIC EVANGELISM I (1)
The theory and methodology public outreach of the church; integrating traditional evangelistic techniques, evangelistic preaching, and social ministries. Includes lab experience in actual outreach. Open only to theology and religion majors.

RELP 493 - PUBLIC EVANGELISM II (1)
Application of the theory and methodology of the public outreach of the church; integrating traditional evangelistic techniques, evangelistic preaching, and social ministries. Open only to theology and religion majors. (Course fees apply.) Prerequisite: RELP 492.

RELT - THEOLOGY

RELT 110 - INTRODUCTION TO SEVENTH-DAY ADVENTIST BELIEF AND PRACTICE (4)
Designed specifically for students with little or no exposure to Seventh-day Adventist doctrines, this is an introduction to the Adventist community in its historical and contemporary contexts. Adventist students or students graduating from Adventist academies admitted only with prior permission of instructor.

RELT 202 - CHRISTIAN BELIEFS (4)
Introductory overview of Christian teachings and doctrines from a Seventh-day Adventist perspective; explores topics such as revelation, God, creation, Sabbath, human beings and sin, the person and work of Jesus, the nature and purpose of the church, salvation, and the Christian hope of the Second Advent. Prerequisite: One college-level religion course or permission of instructor. Students who take RELT 110 are not eligible to take RELT 202 for credit.

RELT 326 - SPIRITUALITY AND DISCIPLESHIP (4)
Study of the dynamics of the Christian spiritual life as lived individually, in the church community, and in the world. Prerequisite: 6 hours of religion general studies credit.

RELT 340 - SPIRITUAL CARE AND NURSING (3-4)
Study of religion and its major role and function in life along with a practical application of religious ideas and practices as they pertain to people experiencing illness and suffering. Offered on the Portland campus.

RELT 342 - ISSUES OF GOD AND FAITH (3)
An intellectual defense of the Christian faith from a Seventh-day Adventist perspective. Students will look at the philosophical and experiential elements that undergird religious belief.

RELT 342P - ISSUES OF GOD AND FAITH (4)
An intellectual defense of the Christian faith from a Seventh-day Adventist perspective. Students will look at the philosophical and experiential elements that undergird religious belief.

RELT 348 - CHRISTIAN ETHICS (4)
Study of the foundations and application of ethics to contemporary issues such as bioethics, sexuality, economics, violence, discrimination and the environment, with a focus on moral decision-making and behavior. (College Place campus only)

RELT 352 - THE CHRISTIAN AND THE ENVIRONMENT (2)
Exploration of issues, interests, strategies, and implications that arise from the intersection of environmental concerns and biblical creationism.

RELT 402 - HUMAN FORGIVENESS (2)
Biblical Examples, injunctions, invitations and descriptions of forgiving augmented with psychological and relational studies, stories and skills. The course explores the benefits of forgiving, the hazards of not forgiving, and practical suggestions for making forgiveness work.

RELT408 - COMPASSION (4)
Study of the art and science of compassionate living, including biblical foundations for compassion and practical tools for cultivating dynamic, whole-person relationship with self, others, God, and the created world. Credit not allowed for both RELT 408 and RELT 508.

RELT 412 - PHILOSOPHY OF RELIGION (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. See the History and Philosophy section of this bulletin. Cross-Listed as: PHIL 412.

RELT 417 - PROPHETIC INSPIRATION (3)
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. Credit not allowed for both RELT 417 and 517.

RELT 456 - SYSTEMATIC THEOLOGY I (4)
An inquiry from a Seventh-day Adventist perspective into the major themes of Christian theology; introduces students to the process of theological thinking, including systematic reflection of one's own views. Open only to departmental majors. Offered even years.

RELT 457 - SYSTEMATIC THEOLOGY II (4)
An inquiry from a Seventh-day Adventist perspective into the major themes of Christian theology; introduces students to the process of theological

thinking, including systematic reflection of one's own views. Open only to departmental majors. Offered odd years.

RELT 466 - ISSUES IN RELIGION AND CULTURE (4)
Study and discussion of significant issues circulating in the world of Christian thought and their relevance to human life. Some issues will be those of particular interest to Seventh-day Adventists. Credit not allowed for both RELT 466 and RELT 566.

RELT 495 - COLLOQUIUM (0)
Lecture series designed to enrich the professional and spiritual development of students in religion and theology, and create a sense of community within the School of Theology. All Religion and Theology majors must satisfactorily complete twelve colloquiums, at least one of which must be during the senior year. Requirement must be completed at least one quarter before graduation. Graded S or NC. Appropriate adjustments will be made for transfer students.

RELT 568 - WRESTLING WITH GOD IN SUFFERING (4.5)
This course will examine the relationship between suffering and evil from various theological perspectives. It will also explore God's redemptive work in the present and God's creative purpose for the future. Students will get a better sense of their own perspectives on suffering as they develop methods of effectively interacting with other viewpoints. Departmental permission required.

SCDI - SCIENTIFIC DIVING

SCDI 441 - SCIENTIFIC DIVING I (2)
This course, in combination with Scientific Diving II (SCDI 442), meets the training and performance standards for scientific divers as prescribed by the American Academy of Underwater Sciences. Course includes safety training and introduction to underwater scientific methodology. Activities will occur in classroom, confined water, and open water settings. Will not apply to biology major or minor. (Course fees apply.) Prerequisite: Advanced Open Water certification from an internationally recognized agency, WWU Scientific Diving medical examination, swimming evaluation, and permission of instructor.

SCDI 442 - SCIENTIFIC DIVING II (2)
This course, in combination with Scientific Diving I (SCDI 441), meets the training and performance standards for scientific divers as prescribed by the American Academy of Underwater Sciences. Course includes underwater and surface search and rescue, emergency management, advanced underwater scientific methodology, and small boat operations. Activities will occur in classroom, confined water, and open water settings. Will apply to biology major electives, but will not apply to biology minor. (Course fees apply.) Prerequisite: SCDI 441 and permission of instructor.

SERV - SERVICE LEARNING

SERV 291 - PREPARATION FOR COMMUNITY ENGAGEMENT EXPERIENCE (2)
Students will prepare a collegiate "plan of action" and develop SMART goals. Students will receive guest lectures from professionals in the social impact field. Students will participate in discussions and reflections about the course reading materials relating to humanitarian work.

SERV 305 - COMMUNITY ENGAGEMENT FOR CHURCHES (2)
Introduction to community engagement for churches. Explores ways that churches can assess needs and implement meaningful and sustainable service to the community.

SERV 392 - COMMUNITY ENGAGEMENT EXPERIENCE (0)
Students will participate in a minimum of 80 hours of cultural immersion while participating in community impact projects. Students will set goals for their experience and record their activities during their experience. Prerequisite: SERV 291.

SERV 493 - REFLECTION ON COMMUNITY ENGAGEMENT EXPERIENCE (2)
Students will review collegiate "plan of action" and add a section for career goals, developing SMART goals. Students will receive guest lectures from professionals in the social impact field. Students will participate in discussions and reflections about the course reading materials relating to humanitarian work. Prerequisite: SERV 392.

SMTF - STUDENT MISSION TASK FORCE

SMTF 100 - EXPERIENTIAL PROGRAM (12)
Student Missionary Program provides a practical educational experience in a structured environment. Course required for all SM students, but credit will not apply toward class level or graduation requirements. Students with less than 6 hours left to meet degree requirements are not eligible to register for this class. Graded S or NC. Course fees apply.

SOCI - SOCIOLOGY

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 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.
Cross-Listed as: PSYCH 225.

SOCI 234 - CURRENT SOCIAL PROBLEMS (4)
Study of sociological theories, concepts, and terminology to build insight into societal issues. Allows an understanding of social problems within the context of social groups and examines potential solutions. Topics addressed include the economy, overpopulation, health care, education, social class, poverty, race, gender, and the environment. The impact of social problems will be viewed in terms of individuals, groups, institutions, organizations, and society. Assists students to become more aware of issues of social justice and informing their view of the complexity of systemic societal problems. Prerequisite: Recommended: SOCI 204.

SOCI 236 - PRIVILEGE AND OPPRESSION (4)
Study of the construction of contemporary American social categories including mechanisms of privilege and oppression. Examination of the distribution of social resources to groups and individuals, as well as theoretical explanations of how unequal patterns of distribution are produced, maintained, and challenged. Emphasizes how race, culture, ethnicity, gender, sexuality, age, ability, and religion intersect with social class to produce different life experiences. Course will stress the importance of advocating for social justice and equality. Prerequisite: Recommended: SOCI 204 or ANTH 225.

SOCI 394 - DIRECTED READING (1-2; 4)
Independent reading for upper-division students who wish to continue broadening their knowledge of sociology in a particular area by extensive reading. Open to social work majors, social welfare, and sociology minors only.

SOCI 420 - IMMIGRATION AND IDENTITY (4)
Provides an analysis of the political, social, and economic impact of immigration in the United States. Additionally, the class traces how the immigration process reshapes ethnic identity while simultaneously expanding what it means to be "American." Offered alternate years. Prerequisite: SOCI 204 or ANTH 225.

SOCI 437 - DEATH AND DYING (3)
Study of the process of death and dying from four distinct perspectives: cultural, social, personal, and professional.
Cross-Listed as: PSYC 437, SOWK 437.

SOCI 438 - SOCIOLOGY OF HEALTH, ILLNESS, AND HEALTHCARE (4)
Examination of the social context of health, illness, and the healthcare system. Attention given to the impact of social, cultural, political, and economic determinants on health, illness and the delivery of medical care in the United States. The course includes but is not limited to social epidemiology, health/illness behavior, medical facilities, healthcare professionals, insurance, and public policy. Includes more in-depth assignments designed for upper division students. Prerequisite: SOCI 204.

SOCI 451 - RESEARCH METHODS I (4)
Introduction to social science research methods, including qualitative and quantitative practices of inquiry, critical consumption of scholarship, academic writing and ethical dilemmas in the pursuit of knowledge. Statistics highly recommended.

SOCI 452 - RESEARCH METHODS II (4)
Introduction to social science research methods, including qualitative and quantitative practices of inquiry, critical consumption of scholarship, academic writing and ethical dilemmas in the pursuit of knowledge. Statistics highly recommended. Prerequisite: SOCI 451.

SOCI 455 - SOCIAL THEORY (4)
Survey of modern social, political, and economic thought. Emphasizes 19th and 20th century theories and models which have directed contemporary research in the social sciences and have influenced public policy. Offered alternate years. Prerequisite: SOCI 204.

SOCI 490 - CAPSTONE INTERNSHIP (1-6; 6)
Provides students the opportunity to apply theoretical learning to professional experiences in local community organizations. Along with the accrual of clock hours, students will complete a portfolio demonstrating their ability to view experiences through a sociological lens. One credit hour is equivalent to 30 clock hours. Departmental approval and supervision is required.

SOCI 491 - CAPSTONE RESEARCH INTERNSHIP (1-6; 6)
Students will participate in research activities under the supervision of a research faculty member. This capstone experience will vary based on the availability of research projects and the approval of the supervisory research faculty member. Prerequisite: SOCI 451 (or corequisite). Corequisite: SOCI 451 (or prerequisite).

SOCI 496 - SOCIOLOGY SEMINAR (3; 9)
An in-depth seminar that focuses on a particular social issue. Specific subjects studied will vary from quarter to quarter on issues such as poverty, gender, social class, economic opportunity, human rights, and social justice. May be repeated for credit when topics vary.

Prerequisite: SOCI 204, ANTH 225, or permission of instructor.

SOWK - SOCIAL WORK

SOWK 205 - MENTAL HEALTH FIRST AID (1)

Provides knowledge and skills in responding to early stage mental illnesses and how to provide assistance in specific situations. Training focuses on providing comfort, the reduction of distress, promotes recovery and encourages seeking appropriate professional help. Students will be eligible to receive a certificate in the Mental Health First Aid USA training model. (Course fees apply.)

SOWK 260 - HUMAN BEHAVIOR AND THE SOCIAL ENVIRONMENT I (4)

Study of the biological, psychological, and social theories of human development from birth to adolescence. Human development is examined using the underpinning of the ecological system's perspective including the multiple factors that impact development such as; race, class, gender, and religion.

SOWK 261 - HUMAN BEHAVIOR AND THE SOCIAL ENVIRONMENT II (4)

The study of the biological, psychological, and social theories of human development from young adulthood to old age. Human development is examined using the underpinning of the ecological systems perspective including the multiple factors that impact development such as; race, social class, gender, and religion.

SOWK 264 - INTRODUCTION TO SOCIAL WORK (4)

Introduction to the profession of social work including an examination of the knowledge, values, and skills influencing the role of the social worker in a variety of practice settings.

SOWK 265 - SOCIAL WORK HISTORY, ETHICS, AND THEORY (4)

Study of the history of the social work profession, with a focus on economic, social, and political rights. Highlighting the professions' role in maintaining and challenging inequalities. Outlining the development of professional values, theories, and ethical models that center the elimination of structural barriers and anti-oppressive practices. Prerequisite: SOWK 264 or SOCI 204 or permission of instructor. Corequisite: SOWK 264 or SOCI 204 or permission of instructor.

SOWK 266 - SOCIAL WELFARE POLICY (4)

Study of social welfare policies and institutions. Focus on critical evaluation of programs with the goal of assessing their alignment with social, economic, and environmental justice. Evaluate and explore the complexities of working within systems that are not aligned with professional values. Prerequisite: SOWK 264 or SOCI 204 or permission of instructor. Corequisite: SOWK 264 or SOCI 204 or permission of instructor.

SOWK 305 - MENTAL HEALTH SEMINAR (3)

Examines historical and contemporary issues in mental health care and the stigma and discrimination associated with mental illness. Prerequisite: SOWK 205 or a valid Mental Health First Aid Certificate, or permission of instructor. Corequisite: SOWK 205 or a valid Mental Health First Aid Certificate.

SOWK 327 - SUBSTANCE USE DISORDERS AND RECOVERY (3)

This course is a comprehensive overview of the basic aspects of substance use disorders. Students will learn about etiology (origin), epidemiology (incidence and prevalence), intervention and treatment options, basic screening and assessment tools, and early intervention methods for treating substance use disorders. Perspectives incorporated into the course will include the biological, psychological, social and cultural factors involved in drug dependency. By the end of this course, students will have the knowledge and basic skills needed to recognize and understand chemical dependency and the impact it has on the lives of individuals.

SOWK 371 - SOCIAL WORK PRACTICE WITH INDIVIDUALS (4)

Methods course focusing on the knowledge, values, and skills needed for generalist social work practice with individuals. Major subject areas include values and ethics, interviewing, assessment, intervention, termination, evaluation, and documentation. Skill development in Motivational Interviewing offered as an evidence-based model of practice. Framed with a view of clients and social work practice that honors individual strengths and recognizes the impact of societal forces that create opportunities for some and barriers for others. Course includes practice skills lab. Prerequisite: SOCI 204, SOWK 264, or permission of instructor.

SOWK 372 - SOCIAL WORK PRACTICE WITH SMALL GROUPS (4)

Methods course focusing on the knowledge, values, and skills needed for generalist social work practice with groups. Course content includes: assessment of group dynamics, structure, and process, and models of intervention in a variety of settings. Develops an understanding of the typology of groups, the functions and roles of group members, stages of group development, group leadership, and the foundational skills of group facilitation and evaluation. Course includes practice skills lab. Prerequisite: SOWK 371 or permission of instructor.

SOWK 373 - SOCIAL WORK PRACTICE WITH COUPLES AND FAMILIES (4)

Methods course focusing on the knowledge, values, and skills needed for generalist social work practice with couples and families. The course provides mezzo skill development for work with this special population. Includes theoretical and historical and contemporary intervention models specifically designed for work with couples and families. Students will develop practice skills through lab setting activities, role play, supervision and observation. Course includes practice skills lab. Prerequisite: SOWK 371 or permission of instructor.

SOWK 375 - POLICY AND ADVOCACY PRACTICE FOR SOCIAL JUSTICE (3)

Study of social welfare policy and its impact upon clients, social workers, and social services. Introduces students to the process of policy formulation and acquaints them with different frameworks for policy analysis. Includes a study of legislative advocacy, lobbying, and empowerment of clients through social and political action. Encourages student participation in local and national advocacy organizations that seek to further social justice. Prerequisite: SOWK 266 or permission of instructor.

SOWK 383 - TOPICS IN GERIATRIC MENTAL HEALTH (2; 4)

Course examines common mental health issues experienced by older adults. Issues covered will vary from quarter to quarter on topics such as dementia, depression, anxiety, substance abuse, loss, psychopharmacology and physical illness that causes decline in mental functioning. Biopsychosocial assessment and effective treatments will be addressed along with the role of social support and implications for caretaking. May be repeated for credit when topics vary.

SOWK 384 - TOPICS IN SOCIAL WORK LEADERSHIP AND ADMINISTRATION (2)

Course designed to provide social workers with theory, knowledge and skills in administration and management of social service organizations. Topics covered will vary from quarter to quarter including ethics and legal issues, financial management and personnel development. May be repeated for credit when topics vary.

SOWK 394 - DIRECTED READING: (1-2; 4)

Independent reading for upper-division students who wish to continue broadening their knowledge of social work in a particular area by extensive reading. Open to social work majors, social welfare, and sociology minors only.

SOWK 437 - DEATH AND DYING (3)

Study of the process of death and dying from four distinct perspectives: cultural, social, personal, and professional.

Cross-Listed as: PSYC 437, SOCI 437.

SOWK 460 - SERVICES TO FAMILIES WITH CHILDREN (3)

Development of child welfare services, their structure and function today, current challenges facing America in the welfare of its children, the role of social work in child abuse investigations, treatment provisions, and regulation. Prerequisite: SOCI 204 or permission of instructor.

SOWK 465 - SOCIAL WORK PRACTICE WITH ORGANIZATIONS AND COMMUNITIES (4)

Introduction to generalist practice with communities and larger organizations. Study of community organization, organizational analysis, management skills, program planning and evaluation. Enhances students' ability to initiate and implement macro change. Prerequisite: SOWK 371; SOWK 375 (or corequisite), or permission of instructor. Corequisite: SOWK 375 (or prerequisite), or permission of instructor.

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. Prerequisite: SOWK 371 or permission of instructor.

SOWK 471 - HUMAN SEXUALITY (3)

Study of resources, research, anatomy and physiology, and personal values clarification on human sexuality. Emphasis will be on the interactions between biology, cognition, emotions, socialization, and culture. Prerequisite: SOCI 204. Cross-Listed as: HLTH 471.

SOWK 479 - DIRECTED RESEARCH/PROJECTS IN SOCIAL WORK (1-3)

Directed learning experience in a special area of social work or social welfare of particular interest to the student. Projects may include research which is agency organization based and should be chosen in consultation with the advisor. Written report of research/project is required describing the project, the theoretical base, the learning experience and the conclusion. Prerequisite: Social Work Major: SOWK 264, SOWK 371; Social Welfare Minor: SOWK 264, SOWK 266.

SOWK 490 - FIELD EDUCATION (2-12; 12)

Training is completed under a professional social worker in a social service agency. Field Education is offered in various settings such as: medical, mental health, school, corrections, child welfare, and community organization. Field Education may be taken in one quarter (block) or concurrently with course work over two or more consecutive quarters.

Twelve quarter credits (400 clock hours) are required for a social work major. Students with two grades of IP in SOWK 490 are not eligible to register for practicum. Open to social work majors only. (Course fees apply.) Graded S or NC. Prerequisite: SOWK 266, SOWK 371, acceptance to the B.S.W. program, or permission of instructor. SOWK 372, SOWK 373 (or corequisite). Corequisite: SOWK 372, SOWK 373 (or prerequisite).

SOWK 491 - SOCIAL WORK CAPSTONE (2)
Involves demonstration of professionalism, ethical decision making, critical thinking, enhancement of diversity, advancement of social justice, and application of knowledge of human behavior and the social environment. Integrates this set of knowledge, values, and skills in a process of self-examination, reflection, articulation of professional identity, and development of plans for continued growth and development. Open to senior social work majors only. Prerequisite: SOWK 490 (or corequisite), or permission of instructor. Corequisite: SOWK 490 (or prerequisite).

SPAN - SPANISH

SPAN 101 - ELEMENTARY SPANISH (4)
Introduction to the study of Spanish with elementary practice in the skills of understanding, speaking, reading, and writing; includes grammatical terminology and the sound system of Spanish, plus basic grammar and vocabulary at the elementary level. This course is designed for non-native speakers of Spanish or students with no Spanish heritage. Language laboratory and tutoring required. Does not count towards a minor in Spanish.

SPAN 102 - ELEMENTARY SPANISH (4)
Introduction to the study of Spanish with elementary practice in the skills of understanding, speaking, reading, and writing; includes grammatical terminology and the sound system of Spanish, plus basic grammar and vocabulary at the elementary level. This course is designed for non-native speakers of Spanish or students with no Spanish heritage. Language laboratory and tutoring required. Prerequisite: SPAN 101 or permission of instructor.

SPAN 103 - ELEMENTARY SPANISH (4)
Introduction to the study of Spanish with elementary practice in the skills of understanding, speaking, reading, and writing; includes grammatical terminology and the sound system of Spanish, plus basic grammar and vocabulary at the elementary level. This course is designed for non-native speakers of Spanish or students with no Spanish heritage. Language laboratory and tutoring required. Prerequisite: SPAN 102 or permission of instructor.

SPAN 201 - INTERMEDIATE SPANISH (4)
Intermediate study of Spanish, emphasizing oral, writing, and reading skills, and mastery of grammar; designed to prepare students to use Spanish as a research and cultural tool. Prerequisite: SPAN 103 or equivalent or permission of instructor.

SPAN 202 - INTERMEDIATE SPANISH (4)
Intermediate study of Spanish, emphasizing oral, writing, and reading skills, and mastery of grammar; designed to prepare students to use Spanish as a research and cultural tool. Prerequisite: SPAN 201.

SPAN 203 - UPPER-INTERMEDIATE SPANISH THROUGH STORY AND FILM (4)
A conversation course for students who have an intermediate command of the Spanish Language. This course is designed to improve Spanish speaking and writing skills. A heavy focus will be given to language acquisition via literature and film from Spain and Latin America. Prerequisite: SPAN 202 Prerequisite: SPAN 202.

SPCH - SPEECH

SPCH 101 - FUNDAMENTALS OF SPEECH COMMUNICATION (4)
Introduction to public speaking. Emphasis on acquiring ease, a conversational attitude, and reasonable facility in organizing, writing, and delivering content relevant to the audience.

SPCH 207 - SMALL GROUP COMMUNICATION (4)
Study of the nature of group and interpersonal processes; includes leadership, member participation, roles, basic principles of speaking, and general communication strategies. Learned skills are applied in multiple group activities and discussions. Credit not allowed for both SPCH 207 and SPCH 407.

SPCH 210 - INTERPERSONAL AND NONVERBAL COMMUNICATION (3)
Examination of theory and skills, verbal and nonverbal, that characterize interpersonal and relational communication. Analyzes communication processes necessary to adapt communication to specific contexts and situations. Employs readings, discussion, and skill-building strategies to improve understanding of one's interpersonal interactions. Credit not allowed for both SPCH 210 and SPCH 310.

SPCH 211 - ORAL INTERPRETATION (4)
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 readers' theatre script preparation and presentation.
Cross-Listed as: DRMA 211.

SPCH 310 - ADVANCED INTERPERSONAL AND NONVERBAL COMMUNICATION (3)
Examination of theory and skills, verbal and nonverbal, that characterize interpersonal and relational communication. Analyzes communication processes necessary to adapt communication to specific contexts and situations. Employs readings, discussion, research, and skill-building strategies to improve understanding of one's interpersonal interactions. Credit not allowed for both SPCH 210 and SPCH 310.

SPCH 341 - ARGUMENTATION (4)
Examination of contemporary logic to develop higher critical thinking; includes study of claims, evidence, reasoning, and fallacies; application of logic by analyzing current rhetoric debating contemporary issues, and applying presentational skills for professional use. Prerequisite: SPCH 101.

SPCH 394 - DIRECTED READING: (1 - 2; 3)
Independent reading for students who wish to broaden their knowledge of theater and speech classics and professional literature. Offered alternatively with JOUR 394 and COMM 394.

SPCH 395 - 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 given to contemporary methods of presentation in classrooms and therapy sessions; includes observations, demonstration, and class participation. Offered as needed.

SPCH 407 - ADVANCED SMALL GROUP COMMUNICATION (4)
Study of the nature of group and interpersonal processes; includes leadership, member participation, roles, basic principles of speaking, and general communication strategies. Learned skills are applied in multiple group activities and discussions. In addition, students will be required to submit a research paper on the course topic, take a leadership role, and various other class assignments tailored to the student's needs and goals. Credit not allowed for both SPCH 207 and SPCH 407.

SPCH 443 - PERSUASION (4)
Study of motivation and rhetorical strategies as applied in interpersonal, group, organizational and public context; analysis of persuasive texts for their emotional, ethical, and logical value; practice in composing and delivering speeches to influence choice. Prerequisite: SPCH 101.

SPCH 453 - RHETORIC OF WESTERN THOUGHT (3)
Broad historical scope of rhetorical theory from its inception in the classical world, through the Middle Ages, the Renaissance, and the Enlightenment to the present, including contemporary theories, practices, and scholarship. Prerequisite: SPCH 101.

SPCH 483 - ADVANCED PREACHING SEMINAR (1)
This class will focus on improving sermon writing and sermon delivery abilities. Prerequisite: SPCH 381, SPCH 382, or permission of instructor.

SPED - SPECIAL EDUCATION

SPED 210 - INTRODUCTION TO SPECIAL EDUCATION AND INCLUSIVE CLASSROOMS (4)
Examines the social, historical, ethical, and legal foundations of special education and inclusive classrooms. Discusses the full range of student abilities and disabilities, and the strategies for developing the required individualized education program. University students will be required to complete a criminal background check by the Washington State Patrol and fingerprinting by the FBI. Field experience required. Prerequisite: EDUC 211 (or corequisite) or permission from instructor.

SPED 220 - EARLY CHILDHOOD THROUGH ADOLESCENT SPECIAL EDUCATION (4)
Explores service delivery approaches used in special education for early childhood, childhood, and adolescence. Engages participants in applying strategies and developing instructional materials based on evidence-based practices to support the highest levels of achievement and development for students with diverse needs from birth through 21 years of age. Emphasizes the development of individualized family service plans, individualized education plans, and transition planning. Prerequisite: SPED 210.

SPED 222 - METHODS OF TEACHING AND LEARNING IN INCLUSIVE CLASSROOMS (4)
In this course, candidates are exposed to the evidence-based methods, concepts, and skills needed for teachers to be able to include students with exceptional needs in the general education classrooms. Adapting environment, evidence-based instructional methods and the use of assessment to accommodate the needs of diverse student populations are emphasized. Candidates will learn how to use data to make instructional decisions and monitor student growth in content areas (mathematics, science, and social studies). Prerequisite: SPED 210.

SPED 326 - BEHAVIORAL INTERVENTIONS: THEORY, PRINCIPLES, AND TECHNIQUES (4)
This course looks at models of human behavior and strategies for dealing with challenging behavior to aid future teachers in understanding and addressing behavior concerns. It addresses federal legislation related to behavior management and gives special

attention to procedures for Functional Behavioral Assessment (FBA) and Positive Behavior Interventions and Supports (PBIS). Candidates learn about attention deficit hyperactivity disorder, types of emotional and behavioral disorders, and their responsibilities in biophysical interventions, such as medication effects and collaboration with health professionals. Prerequisite: SPED 210.

SPED 327 - ACADEMIC INTERVENTIONS: MILD, MODERATE, AND SEVER DISABILITIES (4)

This course provides a focused exploration of instructional practices for students with disabilities that range from mild to severe. A cross-categorical approach will be utilized to address learning disabilities, intellectual disabilities, autism spectrum disorder, and physical and health impairments. Participants will learn strategies for enhancing social interaction skills and develop skills in instructional methodologies tailored to the diverse needs of students with disabilities. Prerequisite: SPED 210.

SPED 334 - METHODOLOGICAL APPLICATIONS IN SPECIAL EDUCATION (2)

This course is one of two that extensively focuses on practical methods and approaches within the field of special education. Students will learn how to implement different strategies, techniques, and approaches tailored to meet the needs of individuals with special needs. Field experience is required for observation of evidence-based practices, management techniques, intervention planning and implementation, and other aspects of professional practice. Prerequisite: SPED 210.

SPED 430 - PROFESSIONAL SKILLS IN SPECIAL EDUCATION (4)

Provides prospective special education teachers with a foundation in effective assessment and instructional practices. Legal aspects of special education, individualized education plans, roles and responsibilities of teachers, and assessment administration are discussed. Emphasis is placed on issues related to professionalism and ethical practice, including conducting professional activities in compliance with applicable special education laws, policies, and regulations. Prerequisite: SPED 210.

SPED 445 - SERVICE DELIVERY METHODS (3)

This course is one of two that extensively focuses on practical methods and approaches within the field of special education. Students will learn how to implement different strategies, techniques, and approaches tailored to meet the needs of individuals with special needs. Field experience is required for observation of evidence-based practices, management techniques, intervention planning and implementation, and other aspects of professional practice. Prerequisite SPED 210.

SPPA - SPEECH-LANGUAGE PATHOLOGY AND AUDIOLOGY

SPPA 210 - SURVEY OF SPEECH-LANGUAGE PATHOLOGY AND AUDIOLOGY (3)

Survey of communication disorders with major emphasis given to the etiologies, symptomatologies, and the recognition of speech, language, voice, and hearing disorders. Offered even years.

SPPA 250 - SIGN LANGUAGE FOR THE DEAF (3)

Introduction to the basic signs used in communicating with the hearing impaired; includes group practice in signing letters, words, sentences, and songs. (Offered contingent on sufficient enrollment.)

TECH - TECHNOLOGY EDUCATION

TECH 137 - OXYACETYLENE WELDING AND CUTTING (2)

Study of oxyacetylene and oxyfuel applications and practice in developing skills in oxyacetylene welding and cutting with fuel gases. (Course fees apply.)

TECH 138 - SHIELDED METAL ARC WELDING (2)

Study of shielded metal arc welding theory and hands-on laboratory experiences to develop mastery of arc welding processes. (Course fees apply.)

TECH 139 - SPECIALIZED WELDING (2)

Study of gas tungsten arc welding (TIG), gas metal arc welding (MIG), flux core arc welding, and shielded metal arc pipe welding. (Course fees apply.) Prerequisite: TECH 137 and TECH 138 or permission of instructor.

TECH 220 - INTRODUCTION TO BASIC WOODWORKING (2)

Students will learn basic woodworking techniques and the use of woodworking tools. Course will include hand tools, power tools, and stationary power tools. Example projects will be completed in lab. (Course fees apply.)

TECH 223 - INTRODUCTION TO FINE WOODWORKING (2)

Students will learn skills and techniques for building fine woodworking projects like cabinets and furniture. Laboratory work will include skill building tasks and projects. (Course fees apply.) Prerequisite: TECH 220.

TECH 224 - ADVANCED WOODWORKING (2)

Students will learn skills and techniques for designing and building individual wood projects. Laboratory work will include defining the project design, specing, and procuring materials, and building the project. (Course fees apply.) Prerequisite: TECH 223.

TECH 235 - MATERIALS AND PROCESSES (4)

An in-depth look into the material selection and manufacturing processes of products. Students will examine topics concerning material applications, manufacturing industries, lifecycle, and ecological impacts. Laboratory experiences focus on commonly shared processes in raw materials and production through project-based activities. Included are, basic manufacturing processes and techniques used in industry. (Course fees apply.) Prerequisite: DSGN 121 or permission of instructor.

TECH 236 - INTRODUCTION TO PLASTICS (2)

Basic Manufacturing processes and techniques used in the plastics industry. A variety of forming, casting, and reinforced plastic processes will be examined and developed in the lab. (Course fees apply.) Prerequisite: DSGN 121 or permission of instructor.

TECH 241 - FABRICATION AND MACHINING I (2)

Introduction to machining careers and competitive manufacturing. Survey of shop safety, industrial safety, federal law, dimensional measuring tools, and application of skills to metal lathe and milling equipment, including thread forms and fasteners used in industry. (Lab fees apply.)

TECH 242 - FABRICATION AND MACHINING II (2)

Machining operations including chip formation speeds and feeds, and selecting machining tools and cutters for machining operations. Instruction and operation of a variety of pieces of equipment, including the vertical milling machine, drill press, vertical spindle milling machine, reciprocating horizontal band cut off machines, measurement techniques, blade selection, and hand grinding drill-bits, and reaming and sizing holes. (Lab fees apply.)

TECH 280 - PRACTICUM (1 - 6; 6)

Laboratory work chosen in counsel with the supervising laboratory instructor. Six credits maximum. One 3-hour laboratory per week per credit.

TECH 321 - TECHNOLOGY AND SOCIETY (4)

An examination of technological change from historical, artistic, and philosophical perspectives and its impact on human needs and concerns. Students will study the transformative interaction between technology and society and enhance their understanding of its nature and cultural significance. (Course fees apply.) Prerequisite: Junior standing, ENGL 223.

TECH 335 - CNC PROTOTYPING (3)

A study of the applications of computer-controlled design and project development utilizing a variety of materials and equipment. (Course fees apply.) Prerequisite: DSGN 121 or permission of instructor.

TECH 343 - FABRICATION AND MACHINING III (2)

Precision layout practices, including selecting and identification of steals, the practices of hardening, case hardening, tempering, annealing, and stress relieving steals. Instruction on hardness testers, selecting and identification of grinding wheels, truing, and dressing grinding operations. Surface grinder and cylindrical grinder, CNC programmable milling machine, including the review of programmable axis and position. (Course fees apply.) Prerequisite: Programmable machining CAD drawing or instructor approval.

TECH 380 - SPACE PLANNING AND DESIGN (3)

The study of planning and organization of technical facilities and space use. Design includes efficiency in traffic flow, space usage, service systems, storage, building structure, environment control, and architectural drawing software application in a project-based environment. Aesthetic considerations will be explored. (Course fees apply.)

TECH 398 - MACHINE AND TOOL MAINTENANCE (1-2; 2)

Methods of care and maintenance of tools, machines, and supplementary equipment. Selection may be made in any field offered. One laboratory per credit per week. One or two hours any quarter; maximum, two. Prerequisite: Adequate background in chosen fields.

TECH 428 - DESIGN THINKING AND TECHNOLOGY IN THE CLASSROOM (2)

Study of technology for teachers, as applied to the elementary and secondary grades, covering the broad areas of project-based learning, design thinking, and the use of CNC and 3D lab equipment. Emphasis on understanding materials and processes and methods of application. Offered summer only, as needed. (Course fees apply.)

Cross-Listed as: TECH 528.

TECH 480 - ADVANCED PRACTICUM (1-6; 6)

Advanced laboratory work 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.

TECH 490 - INTERNSHIP (0-4; 4)

Individual contract arrangement involving students, faculty, cooperative businesses and organizations to gain experience in a work environment. Allows the student to apply advanced classroom learning. A response paper will be required at the end of the internship experience. A minimum of 30 hours of approved activity/experience must be completed for each credit earned. Internship credit is restricted to the major field of study. See the Internship Program in the Nondepartmental section of the Bulletin. Graded

S or NC. (Course fees apply for students enrolled for 0 credit.) Prerequisite: Approval by department.

TECH 499 - SENIOR PROJECT (1)

A departmental performance experience as part of the Senior Comprehensive Examination. The type of experience is selected by the student in consultation with the advisor and approved by the department faculty. A presentation on completed work may be required. Graded S or NC.

VIS - VISUAL ARTS

VIS 101 - CREATIVE FOUNDATIONS I: SKETCHING (4)

Focus on developing artistic confidence using a variety of dry mediums to both record the visual world and to help visualize ideas. Concepts such as Gesture, Contour, Shading, Resizing, Linear Perspective and Viewpoint will be addressed. (Course fees apply.)

VIS 102 - CREATIVE FOUNDATIONS II: DESIGN (4)

Foundational study of design principles with a focus on exploring one's creative identity and personal approach to the creative process. Explores effective ways of communicating design ideas, adaptability and problem solving, and the ability to work both individually and in groups. (Course fees apply)

VIS 103 - CREATIVE FOUNDATIONS II: TYPOGRAPHY (4)

An introduction to basic practices and experience in the art studio environment within the theme of typography and branding development. Projects will increase in complexity over time, sequenced to evolve from guided inquiry to more open, self-generated methodologies. Collaboration with Art Studio 250 will provide students with inspiration and mentoring opportunities. (Course fees apply.)

VIS 111 - CORE I: VISUAL STORYTELLING (4)

Study of narrative elements including concept development, narrative structure, script- writing, and storyboarding. Students critique, create, and share stories in fine art, design, and film demonstrating techniques of craft influencing story. Reflection and understanding of visual representation as it relates to embedded values in crafting story elements.

VIS 112 - CORE II: PERSONAL EXPRESSION (4)

This course will help the student begin to explore and foster their creative identity. A variety of mediums will be explored with special attention given to the unique intersections between mediums. Topics of discussion to include: The artworld, art and ethics, and art criticism. Students will learn how to present and defend their work. (Course fees apply.)

VIS 113 - CORE III: ELEMENTS OF INDUSTRY (4)

Introduction to a variety professional practices required to work effectively in various visual arts industries. These include professional software competency for the chosen program emphasis, understanding your audience, working together on a project, presentation skills, ethics, the impact of social media, and job market outlook. (Course fees apply)

VIS 250 - ART STUDIO (4; 16)

Art practice within major of study focused on effectively and ethically engaging with society while developing their creativity, craft, and vision. Topics chosen by art professors rotate quarterly and through guided inquiry students work on increasingly complex projects to add to their portfolio and meet major degree competencies.

VIS 260 - PROFESSIONAL FILM FESTIVAL/CONFERENCE PARTICIPATION (0-1; 2)

Preparation for, attending, participating in, and reflecting on a professional film festival/ conference. Students research and plan schedule of workshops and events to attend. A journal and paper are required. (Course fees apply.)

Cross-Listed as: VIS 460.

VIS 271 - DIRECTING CREATIVE PROJECTS (4)

Fundamentals of directing and producing a creative project. Focused on developing an artist's vision and project management towards completing a collaborative creative project in VIS 272 - Art Production.

VIS 272 - ART PRODUCTION (4)

Collaborative art production culminating in a public show. Focus on strong vision communication among team members and producing professional level work as each person refines the director's vision within their collaborative area.

VIS 373 - PORTFOLIO DESIGN (4)

Collection, development, and design of a professional portfolio of student's creative works. Includes creating a complete business system. The final collection of works will focus on the student's major area of study and may include both physical and digital media. (Course fees apply.)

VIS 460 - PROFESSIONAL FILM FESTIVAL/ CONFERENCE PARTICIPATION (0-1; 2)

Preparation for, attending, participating in, and reflecting on a professional film festival / conference. Students research and plan schedule of workshops and events to attend. A journal and paper are required. (Course fees apply.)

Cross-Listed as: VIS 260.

VIS 490 - INTERNSHIP (4)

Practical experience allowing application of classroom learning in the major field of study. One credit hour is equivalent to 30 clock hours of documented work experience. See the Internship Program in the Nondepartmental section of the Bulletin. Graded S or NC. (Course fees apply for students enrolled for 0 credit.)

VIS 496 - SENIOR ART STUDIO (4)

Year long art practice within major of study focused on senior project and demonstrating major degree competencies. Culminates in work that is presented in public art galleries and film festivals. Includes a spring quarter student designed show at the Clyde and Mary Harris Gallery.

VIS 497 - SENIOR ART STUDIO (4)

Year long art practice within major of study focused on senior project and demonstrating major degree competencies. Culminates in work that is presented in public art galleries and film festivals. Includes a spring quarter student designed show at the Clyde and Mary Harris Gallery.

VIS 498 - SENIOR ART STUDIO (4)

Year long art practice within major of study focused on senior project and demonstrating major degree competencies. Culminates in work that is presented in public art galleries and film festivals. Includes a spring quarter student designed show at the Clyde and Mary Harris Gallery.

VISA - VISUAL ARTS - ART

VISA 184 - CERAMICS: HAND BUILDING (2)

Introduction to basic hand building techniques. Aesthetic possibilities and relationships are explored through the acquisition of basic clay skills and processes, increasing craftsmanship, and attention to design, and surface consideration. Exploration of historical context and contemporary expressive use of clay as an art medium. Credit cannot be earned for both VISA 184 and VISA 284. Will not apply to a fine art, film, or graphic design major. (Course fees apply.)

VISA 194 - STILL LIFE PAINTING (4)

This course will focus on exploring the traditional methods of applying wet mediums. Oil, Acrylic, Watercolor, and Gouache will be addressed. Students will also become familiar with: the physical characteristics of the paints, paintings studio practice, and methods for the presentation of work. (Course fees apply.)

VISA 264 - SCULPTURE (4)

The study and application of three-dimensional forms in space using varied media. (Course fees apply.)

VISA 284 - CERAMICS: HAND BUILDING (4)

This is an introductory clay class. Students are introduced to basic hand building techniques. Aesthetic possibilities and relationships will be explored through the acquisition of basic clay skills and processes, increasing craftsmanship, and attention to design, and surface consideration. While exploring material and conceptual concerns, we will also investigate historical context and contemporary expressive use of clay as an art medium. (Course fees apply.)

VISA 285 - CERAMICS: WHEEL THROWING ()

This is an introductory clay class. Students are introduced to basic and intermediate wheel throwing techniques. Aesthetic possibilities and relationships will be explored through the acquisition of basic clay skills and processes, increasing craftsmanship, and attention to design, and surface consideration. While exploring material and conceptual concerns, we will also look into historical context and contemporary expressive use of clay as an art medium. (Course fees apply.)

VISA 294 - PRINTMAKING (4)

Introduction to the art of printmaking. Exploration of linoleum relief, reduction, and multi-block printing. Monoprints, collagraphs, and an introduction to the intaglio method are also addressed. (Course fees apply.)

VISA 374 - Ceramics (2; 4)

Advanced study of the relationship of form, design, and surface concerns to tableware and hand-built, sculptural forms. Includes a discourse on material culture as it applies to clay, fabrication and experimentation with glaze, and developing studio discipline. (Course fees apply.) Prerequisite Either VISA 284 or VISA 285.

VISA 490 - INTERNSHIP (0-4; 4)

Practical experience allowing application of classroom learning in the major field of study. One credit hour is equivalent to 30 clock hours of documented work experience. See the Internship Program in the Nondepartmental section of the Bulletin. Graded S or NC. (Course fees apply for students enrolled for 0 credit.) Prerequisite: Either VISA 284 or VISA 285.

VISD - VISUAL ARTS - DESIGN

VISD 156 - PRINCIPLES OF PHOTOGRAPHY (4)

Introduction to photographic skills and vision. Study of photographic composition and application of basic design principles in photography. Understand basic operation of cameras and learning how to apply the camera settings to achieve desired results. Practice proper post-production techniques to achieve high technical standards. Operational 12 mega-pixel or greater digital camera with interchangeable lenses required. Some rental cameras available. (Course fees

apply.)

VISD 263 - Web Design Studio (4)
Introduction to web design, usability theory, styles-based development, and customization. Includes application of visual editor to combine type and graphics. Use of industry standard CMS (content management system) for development of a personal web site. Students will need to provide their own domain registration (typically less than $20/year). (Course fees apply.)

VISD 356 - ADVANCED DIGITAL FINE ART PHOTOGRAPHY (4)
Explore a photographic genre to focus on one's photographic voice and vision. Special attention is given to refining one's approach to a topic and preparation for delivering a themed gallery-quality series of photographic prints or other approved method for public dissemination. Operational 12 megapixel or greater digital camera with interchangeable lenses required. Prerequisite VISD 156.

VISD 358 - PHOTO ASSIGNMENTS (1-4; 8)
Individualized photography assignments, chosen in consultation with the lead professor. May select work for commercial client, humanitarian efforts, travel destinations and capturing the essence of the place, or, other topic with approval. Students will present their work in a method suitable for the project goals. Prerequisite VISD 156.

VISD 466 - UI/UX DESIGN FUNDAMENTALS (4)
The study of User Interface (UI) and User Experience (UX) design with emphasis on electronic media design. Includes research, development, testing, and implementation strategies. Offered odd years only. (Course fees apply.)

VISF - VISUAL ARTS - FILM

VISF 135 - ESSENTIALS OF FILMMAKING (4)
Basic cinematic language and processes of preproduction (concept, story, planning), production (camera operation, cinematography, directing), and post-production (sound and picture editing). Students create multiple films.(Course fees apply.)

VISF 205 - SCREENWRITING (4)
Students will journey behind the screen to create films from idea to script. Participants will study and write short films to be produced by students in other production or studio courses. Topics include story, analysis, formula, and screenplay formatting.

VISF 240 - CINEMATOGRAPHY AND POST-PRODUCTION (4)
Production focused on operation and creative techniques of cinema cameras, lighting, movement, and visual composition linked to advanced post-production workflow, specialized editing techniques and color grading.

VISF 333 - AUDIO PRODUCTION (4)
Study of the sound medium and procedures for creative sound production in various media. Emphasis on recording, mixing, and effects in sound design for film, media, music, and television. Students create a variety of audio projects.

VISF 425 - INTERACTIVE AND VR STORYTELLING (4)
Exploration of interactive, cross-platform storytelling, and virtual filmmaking. Includes analysis and application of current storytelling technologies and production delivery methods designed to provide greatest impact. Students produce a 360° short film project. Offered even years only. (Course fees apply.)

WRIT - WRITING

WRIT 324 - CREATIVE NONFICTION WRITING (4)
Techniques of writing creative nonfiction in a range of styles for a variety of audiences. Emphasizes intensive revision and the development of critical writing and thinking. Offered even years.

WRIT 333 - POETICS (4)
Introduces students to the fundamentals of prosody and poetics. Students read from a range of literary eras and from a variety of poetic forms, studying the commentary of poets, critics, and theorists. Students will practice the forms studied and write critiques of poems. Offered odd years. Prerequisite: ENGL 234 or HONR 243.

WRIT 334 - POETRY WRITING (4)
A writing course designed to study and apply the basic principles of poetics. Analysis and discussion of student work.

WRIT 337 - STYLISTICS (4)
Examines theories of word choice through linguistic and grammatical exercises and discussions. It will also examine a variety of prose texts with an emphasis on what differentiates one style from another. Students will write papers analyzing prose styles and will produce original work based upon traditional stylistic exercises and mimesis. Offered even years. Prerequisite: ENGL 234 or HONR 243.

WRIT 389 - WRITING THEORY (4)
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.

WRIT 496 - SEMINAR IN CREATIVE WRITING (0)

By the end of spring quarter their junior year, English majors with a creative writing emphasis will submit a portfolio of their creative work following the Guidelines for the Creative Writing Portfolio. Graded S/NC.

WRIT 497 - SEMINAR IN CREATIVE WRITING (1)

Required in the senior year of English majors with an emphasis in creative writing. Students will be mentored through the development and completion of their creative writing portfolio.

WRIT 498 - SEMINAR IN CREATIVE WRITING (WD) (1)

Required in the senior year for English majors with a creative writing emphasis. Includes the preparation for and public presentation of the student's creative work. Fulfills the Writing in the Disciplines Requirement (WD).

FINANCIAL INFORMATION

The Financial Bulletin is published as a detailed guide to finances at Walla Walla University. It contains information about estimated expenses, course fees, student employment, financial aid applications, scholarships, grants, and loan programs. Students and parents should refer to the Financial Bulletin for more specific information about finances.

STUDENT FINANCIAL SERVICES

Members of the Student Financial Services staff work with parents, students, the federal and state governments, the University, and others to make financial arrangements for students to receive an education at Walla Walla University. Students and parents are encouraged to phone, write, or stop by the office for answers to questions about financing a college education.

FINANCIAL COUNSELORS provide help in financial planning. They are responsible for approving all financial arrangements and are available to discuss problems if parents or students have difficulty meeting the terms of the payment plan the family has chosen.
Contact: (509) 527-2815 or (800) 656-2815
Student.financials@wallawalla.edu

FINANCIAL AID COUNSELORS assist with the completion of financial aid applications and with the administration of scholarship programs.
Contact: (509) 527-2315 or (800) 656-2315
Financial.aid@wallawalla.edu

STUDENT EMPLOYMENT assists students in looking for work both on and off campus. Employment personnel neither hires students nor assigns them to particular jobs, but works with students individually to assist them in their employment search.
Contact: (509) 527-2357 or (800) 656-2357
Student.employment@wallawalla.edu

STUDENT LOAN CENTER assists current students with completing student loan applications, promissory notes, and obtaining additional loans to finance educational expenses; also works with borrowers in repayment on Federal Perkins, Nursing, or Institutional Loans.
Contact: (509) 527-2333 or (800) 656-2333
student.loans@wallawalla.edu

EXPENSES

This section of the bulletin is designed to help parents and students anticipate the costs connected with receiving a Walla Walla University education. This list identifies many of the expenses a student may incur. Students may have additional expenses for transportation, personal needs, and other necessities and extras not mentioned here. Parents and students should consider such expenses when making plans to cover the university costs.

Estimated Undergraduate Student Budgets
For 2024-2025

Dormitory Student

	Per Quarter	Per Year
Tuition (full-time, 12-16 hours)	$11,004	$33,012
General Fee (Includes ASWWU Dues)	405	1,215
Room Rent	1,744	5,232
Cafeteria (Meal Plan)	1,472	4,416
Books (average)	255	765
Miscellaneous	600	1,800
TOTAL	$15,480	$46,440

Non-Dormitory Student

	Per Quarter	Per Year
Tuition (full-time, 12-16 hours)	$11,04	$33,012
General Fee (Includes ASWWU Dues)	405	1,215
Books (average)	255	765
Miscellaneous	600	1,800
TOTAL	$12,264	$36,792

Tuition
Undergraduate Student Tuition

	Cost	Rate
Part-time Tuition (1-11 quarter hours)	$917	Per Qtr. Hr.
Full-time Tuition (12-16 quarter hours)	$11,004	Per Quarter
Overload Tuition (above 16 qtr. hours)	$734	Per Qtr. Hr.

Audit Tuition

Undergraduate students are charged for audited hours above or below bracket tuition. Graduate students are charged for all audited credits. The audit tuition rate is $459 per credit hour for both graduate and undergraduate students. See the Academic Information and Policies section of this bulletin for restrictions on audited classes.

Undergraduate students with a WWU cumulative GPA of at least 3.00 and taking at least 12 hours of non-audited classes pay $10 for each audited course instead of the “per quarter hour” charge. This fee is non-refundable after the fourth day of the quarter. Students in their first quarter at WWU are

not eligible for this option because they do not have a WWU cumulative GPA.

Student Missionary Tuition $15 for 12 credits per quarter

Participants in the Student Missionary and Task Force programs are registered as full-time students in the Experiential Program, SMTF 100, provided they meet the Student Missions Office's eligibility criteria and receive financial clearance from Student Financial Services. Registration cannot be retroactive. Contact the Student Missions office for more information.

Graduate Student Tuition	$719 per quarter hour
Master of Engineering Student Tuition	$917per quarter hour
Graduate Doctoral Student Tuition	$925 per quarter hour
Education and Biology Master Student Tuition (with teaching contract	$466 per quarter hour

The balance of the tuition not covered by awarded loans must be paid by the financial clearance deadline.

WWU High School Enrichment Tuition $250 per class hour, limited to 4 credits per quarter

The High School Enrichment Tuition Program provides qualified high school seniors the opportunity to enroll in Walla Walla University courses on a space-available basis. Dual credit may be earned for both the high school diploma (at the discretion of the high school) and a university degree. Courses will appear on the university transcript. Any class fees or lab fees are the responsibility of the students. Please note that high school students do not get a tuition refund after the 4th day into the quarter. This applies for both on and off-campus housing.

Senior Citizen Audit Tuition $100 per quarter

The Senior Citizen Class Program (non-degree seeking) makes it possible for students who are 65 or more years of age to sit in on a class (with the instructor's permission). Class or lab fees are the responsibility of the student.

General Fee--Undergraduate $405 per quarter

All tuition paying undergraduate students registered for 6 or more hours are required to pay this fee. Taskforce, Student Missionaries and ACA students will be exempt. Besides covering the cost of housing club dues, internet access while on campus, Excess Student Accident Insurance, printing the first 100 pages in computer labs, access to the library, gym, and pool, and new technology for classrooms, etc., the General Fee includes the ASWWU dues which provides for student publications and membership in the Associated Students of Walla Walla University (ASWWU).

Students who are charged the General Fee for less than three quarters will need to pay an additional fee if they wish to receive the yearbook. Students who are exempt from paying the General Fee may purchase publications for prices set by the ASWWU editors.

General Fee--Graduate $135 per quarter

All tuition paying graduate students registered for 4 or more hours are required to pay this fee. This fee covers internet access while on campus, new technology for classrooms, graduation fee, etc. Students on the College Place campus also receive access to the library, gym and pool, and printing the first 100 pages in the computer labs.

Since the General Fee for graduate students does not include ASWWU dues, graduate students wanting campus publications such as the Mask and the yearbookk may purchase these publications for prices set by the ASWWU editors.

INSURANCE

Student Insurance

Walla Walla University believes that insurance is extremely important for all students. All undergraduate and graduate students (including international students) must be covered by a health insurance plan. Students are responsible for obtaining and maintaining their health insurance. Be sure to check your health insurance plan to see if there are in-network providers in your local school area, or consider other health insurance plans. Information regarding local area providers and information regarding the purchase of other insurance plans can be found at wallawalla.edu/insurance.

Excess Student Accident Insurance

Walla Walla University covers all registered undergraduate, graduate, and doctoral students with excess accident insurance with a $5,000 limit. Students injured while on WWU campus, in campus-owned housing, or participating in off-campus University-sponsored activities (excluding intercollegiate athletic accidents) may file a claim. Visit wallawalla.edu/insurance or contact Risk & Safety Officer at (509) 527-2250 for assistance.

Personal Property Insurance

Walla Walla University is not responsible for loss of personal property. Students are encouraged to carry their own insurance for coverage of personal belongings.

PAYMENT PLANS

Parents and students may choose one of the following payment plans that is the most convenient for them.

Regular Payment Plan

The quarter's estimated expenses (tuition, required fees, cafeteria meal plan, rent, estimated books and other expenses) plus any previous balance and less any awarded financial aid is paid before the student receives financial clearance for the new term.

Students and/or parents are billed for actual charges as those charges are incurred.

International (other than Canadian) and Extension students are expected to use the Regular Payment Plan.

Finance charges will accrue on a past due balance.

Monthly Payment Plan

The quarter's estimated expenses (tuition, required fees, cafeteria meal plan, rent, estimated books and other expenses) less any awarded financial aid is divided into three equal payments. The first payment plus any previous balance is due before the student receives financial clearance for registration. The second and third payments are due by set dates during the following two months.

Students and/or parents are billed for actual charges as those charges are incurred.

This plan is not available to international students, except for Canadians, or Extension students.

Finance charges will accrue on a past due balance.

The schedule of payments is as follows:

	Autumn	**Winter**	**Spring**
Down Payment + Previous Balance	Financial Clearance Deadline	Financial Clearance Deadline	Financial Clearance Deadline
Second Payment	October 25	January 25	April 25
Third Payment	November 25	February 25	May 25

Automatic Payment Plan

Walla Walla University offers two automatic payment plan options. To set up an automatic payment plan, go to wallawalla.edu/payment, sign in, go the Account Menu, then Payment Plans, the Add a New Payment Plan.

1 - Monthly Amount Due

The quarter's expenses (plus any previous balance and less any awarded financial aid) are processed as automatic charges using one of the online payment methods listed below. These payments are processed around the 25th of each month. At the end of the school year (or sooner if a student finishes midyear), a final charge or credit is applied using the payment method.

During financial clearance, students on the automatic payment plan can choose to have their down payment processed that day or defer the payment to the due date. The date will be the 25th of the month, or the financial clearance deadline date, whichever occurs first.

Many people choose this option because it reduces the time spent arranging payment and makes the user eligible for rewards many credit card companies offer (frequent flyer mileage, discounts, rebates, etc.).

2 - Recurring Amount

The same amount is processed each month, on the date of your choosing. When you set this up, you specify the date, dollar amount, and how many times you wish the payment to be processed. Because some students use this to pre-pay expenses, these payments are processed even if the account is paid.

Financial Clearance, Deadline, and Classes Dropped

All students must complete financial clearance each quarter. This online process available through myWWU requires students to review contact information (address, phone numbers, email address), choose a meal plan and confirm housing arrangements, make sure all paperwork for financial aid and loans is completed, make any required down payment, and agree to terms and conditions.

The financial clearance deadline for each quarter is 4 p.m. the Wednesday before the start of classes unless posted otherwise. Students missing this deadline will have their classes dropped. Because other students may be waitlisted for one of these classes, students are not guaranteed reinstatement into their scheduled classes after financial clearance is completed.

Diploma Release

By action of the Board of Trustees of the University, a diploma may not be released until the following criteria are met:

- The student's account is paid in full.
- The student does not have a short-term loan co-signed by WWU.
- The student's Nursing, Perkins, and institutional loans are current.
- The student's loan exit interviews are complete.

Financial Aid

Families unable to meet the full costs of a Walla Walla University education are encouraged to apply for financial aid from the government and the University. All financial aid applications are evaluated based on the government's standard analysis of need. This analysis determines how much each family can afford to pay for a college education according to federal government guidelines.

Financial aid recipients are then awarded aid packages which typically include a combination of scholarships, grants, low-interest loans, and student employment. Unless otherwise noted, all forms of financial assistance are disbursed one-third each quarter (Autumn, Winter, Spring).

The total amount of scholarships, grants, and subsidy (from all sources) which a student receives cannot exceed WWU's packaging budget in any given year. If the total does exceed the packaging budget, the award from WWU will be reduced.

Scholarships are awarded for academic excellence, student leadership, and other accomplishments. They are not awarded based on need and do not have to be repaid. Even though it is recommended that students apply for financial aid, they are not required to do so in order to receive scholarships. **Grants** are awarded on the basis of financial need and do not have to be repaid. **Low-interest loans** are an investment in a student's future, allowing the student to attend university with payments and interest typically being deferred until after the student graduates or withdraws from school. Almost all financial aid award packages include a long-term loan. **Part-time employment** helps students meet the expenses of university life.

In order to receive the maximum financial assistance available, students should plan their finances for the entire academic school year prior to registration and complete their financial aid file by April 30 prior to the school year.

Adding or dropping a class on or before the 10th day of the quarter may affect a student's financial aid package.

Scholarships

Scholarships are awarded for academic excellence, student leadership, and other accomplishments. They are not awarded based on need and do not have to be repaid. Even though it is recommended that students apply for financial aid, they are not required to do so in order to receive scholarships.

INTERNATIONAL STUDENTS

Declaration of Finances

To determine ability to meet educational costs, Walla Walla University requires applicants who are not citizens or permanent residents of the United States to submit a declaration of finances before final acceptance is given. Students are asked to submit 12 months of bank documentation from family/sponsors indicating ability to pay for duration of academic program. This information must be reviewed and approved before final acceptance can be given and the I-20 form, needed to secure the United States Student Visa, can be issued.

International Student Deposit

Students who are not citizens or permanent residents of the United States or Canada are required to pay an International Student Deposit of $3,000 before final acceptance can be given and the I-20 form, needed to secure the United States Student Visa, can be issued. This deposit is held as long as the student remains enrolled and will be refunded at the end of the student's studies at WWU, less any outstanding balance owed to WWU. Interest is paid on the deposit using the One-Year Constant Maturity Rate.

Insurance

Walla Walla University requires all international undergraduate and graduate students, including Canadians, to have health insurance that will cover them while they are enrolled at WWU. If students require assistance in finding a health insurance plan to meet their needs, please see wallawalla.edu/insurance or contact the University Clinic at (509) 527-2425 for assistance.

Billing

International students (except Canadian students) will be expected to use the Regular Payment Plan described in this bulletin, which requires payment of all estimated expenses for the next quarter, plus any balance remaining from a prior quarter, before financial clearance is given. The payment deadline is the Wednesday prior to the start of classes each quarter.

Students have many payment options to pay online (wallawalla.edu/payment):

- Credit cards (American Express®, Discover®, MasterCard®, Visa®) have a 2.25% processing fee.
- Electronic checks and debit cards do not have a fee.
- International students can also make payment by wire transfer. Call the Accounting Office at (509) 527-2312 for wiring instructions, or email cashier@wallawalla.edu.

Employment

According to Immigration and Naturalization Services regulations, international students attending WWU while on student visas are only permitted to work on campus and are limited to a maximum of 20 hours of work per week during periods of enrollment. Spouses and children who are not students may not accept employment under any circumstances.

Financial Aid

International Student Scholarship for Non-Canadian Students:

International Students on student visas do not qualify for the majority of loans and grants described in this bulletin. However, these students are eligible to receive a renewable scholarship of at least $18,500. Please

note that **$18,500** is the combination and may include the following resources: Achievement Scholarship, Out of Area, Leadership, Transfer Scholarship, if they qualify. Student may qualify for Church match grant in addition to the International student scholarship (if eligible).

To qualify for WWU's International Student Scholarship, a student:

- Must be a first-time freshman or transfer student enrolling Fall 2023 or later.
- Cannot be a US citizen and must enroll on an F1 Student Visa.
- Is required to pay a $3,000 International Student Deposit, in addition to the $200 enrollment fee.
- Be enrolled full-time at WWU.

The International Student Scholarship does not cover general fees or course fees. Students are also responsible for paying uncovered tuition, housing, food, and all other fees and charges.

Parameters for International Student Scholarship:

- Renewable up to 12 quarters as long as the requirements are being met.
- Discount is calculated based on bracket tuition (12-16 credits).
- Students may become employed by WWU and should be able to contribute $4,000 towards their school bill from work during the academic year and additional $7,000 (approx.) from Summer full-time work.
- Students should apply for a US Social Security card upon arrival at WWU so they have the ability to work.

International Student Scholarship for Canadian Students:

Walla Walla University is excited to announce the new **$8,000** *Yes You Can, Canada!* Scholarship which is available to qualifying new students from Canada (in addition to other scholarships and financial aid). This award is renewable for up to four years if a student remains enrolled at WWU.

To Qualify for *Yes You Can, Canada!* Scholarship, a student:

- Must be a first-time freshman or transfer student enrolling Fall 2023 or later.
- Will attend on an F1 Student Visa. Students with dual citizenship must apply for FAFSA.
- Must not be a recipient of Education Subsidy.
- Be enrolled full-time at WWU.

Yes You Can, Canada! Scholarship has same parameters as an International Student Scholarship. Canadian students can find information about other resources at wallawalla.edu/canada-aid.

Aviation

Due to federal regulations, international students, including students from Canada, cannot major or minor in aviation, and cannot take any flight training classes. International students are allowed to take Intro to Flight.

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Food Services - Sodexo
Michael Benca, Director

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Courtney Bryant, B.B.A., Director

Auxiliary
Manager of University Bookstore
Megan Holm, B.B.A.
Manager of Dairy Express
James Barrett

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*Edward A. Sutherland	1894-1897
*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	1976-1985
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Niels-Erik Andreasen	1990-1994
W. G. Nelson	1994-2001
John C. Brunt	2001
N. Clifford Sorensen	2001-2002
*Jon L. Dybdahl	2002-2006
John K. McVay	2006-2024
Alex Bryan	2024-

**deceased*

FACULTY

Tiago Arrais, *Associate Professor of Theology (2023)*
B.Th. 2006, Adventist University of Sao Paulo
M.A. 2009; Ph.D. 2015, Andrews University

Johanna Retana Attoh, *Associate Professor of Economics (2014)*
B.S. 2008, National University of Costa Rica
M.S. 2009, East Carolina University
M.A. 2014; Ph.D. 2016, Western Michigan University

W. Brandon Beck, *Associate Professor of Music (2000)*
B.S. 1985, Walla Walla College
M.Mus. 1988, VanderCook College of Music

Brent Bergherm, *Associate Professor of Visual Arts (2007)*
B.A. 1999, Walla Walla College
M.A. 2010, Savannah College of Art and Design

Brant Berglin, *Associate Professor of Biblical Studies (2013)*
B.A. 1995, Walla Walla College
M.Div. 2001, Andrews University

Conna L. Bond, *Associate Professor of Business (2013-2017; 2019)*
B.A. 1990, Whitman College
J.D. 2003, University of Florida
M.A. 2021, Marist College

Karlyn Bond, *Professor of Music (2022)*
B.M. 1989, Walla Walla College
M.M. 1991; D.M.A. 1994, University of Southern California

Kellie A. Bond, *Professor of English (2004)*
B.A. 1993, Walla Walla College
M.A. 1998; Ph.D. 2002, University of Oregon

James D. Boyd, *Professor of Social Work and Sociology (2002)*
B.A. 1987; M.S.W. 2000, Walla Walla College
Ph.D. 2015, Capella University

Joseph A. Brannaka, *Professor of Chemistry (2015)*
B.S. 2009, Southern Adventist University
Ph.D. 2014, University of Florida

Cecilia J. Brothers, *Associate Professor of Biology (2018)*
B.S. 2010; M.S. 2012, Walla Walla University
Ph.D. 2016, University of Alabama

Susan Bungard-Beck, *Instructor in Religion (2004)*
B.A. 1981, Walla Walla College
M.A. 2012, Walla Walla University

Roy K. Campbell, *Professor of Physics (2001)*
B.S. 1978, Southern Adventist University
Ph.D. 1986, Florida State University

Eldon Preston Carman, Jr., *Associate Professor of Computer Science (2017)*
B.S. 2003, Walla Walla College
M.B.A. 2006, La Sierra University
M.S. 2014; Ph.D. 2020, University of California, Riverside

Margaret Carman, *Assistant Professor of Nursing (2022)*
B.S.N. 2007, Loma Linda University
M.S.N. 2022, Washington State University

Kristen Coffeen-Smith, *Assistant Professor of Social Work and Sociology (2022)*
B.S.W., B.A. 2010; M.S.W. 2015; D.S.W. 2022, Walla Walla University
L.I.C.S.W. 2020, State of Washington
N.C.A.C. II 2021, State of Washington

Mary Cohen, *Assistant Professor of Nursing (2023)*
B.S.N. 2017, Western Governors University
M.S.N. 2022, Western Governors University

Kayla Cohn, *Assistant Professor of Nursing (2023)*
B.S.N. 2015, Walla Walla University

Bryce E. Cole, *Professor of Engineering (1995)*
B.A., B.S.E. 1987, Walla Walla College
M.S.C.E. 1989, University of Massachusetts
Ph.D. 1995, University of Notre Dame

Holly Coon, *Instructor of Nursing (2023)*
A.S.N. 1995; B.S.N. 1996, Loma Linda University

Carl P. Cosaert, *Professor of Biblical Studies: Greek and New Testament (2005)*
B.A. 1989, Union College
M.Div. 1993, Andrews University
M.A. 2000, Nazarene Theological Seminary
Ph.D. 2005, University of North Carolina at Chapel Hill

David L. Cowles, *Professor of Biology (2001)*
B.S. 1978; M.S. 1981, Walla Walla College
Ph.D. 1987, University of California, Santa Barbara

Kyle S. Craig, *Professor of Chemistry (2003)*
B.S. 1997, Andrews University
M.S. 2014, Walla Walla University
Ph.D. 2003, University of British Columbia

Pamela Keele Cress, *Professor of Social Work and Sociology (1996)*
B.S.W. 1990; M.S.W. 1994, Walla Walla College
Ph.D. 2004, Andrews University

Linda Potter Crumley, *Professor of Communication (2017)*
B.A. 1988, Pacific Union College
M.A. 1991, University of California, Davis
Ph.D. 2002, University of Texas, Austin

Cheris B. Current, *Professor of Social Work and Sociology (2007)*
B.A. 2002, Southern Adventist University
M.A. 2005; Ph.D. 2007, Washington State University

Hilary E. L. Dickerson, *Professor of History (2018)*
B.A. 2002, Walla Walla College
M.A. 2004; Ph.D. 2011, Washington State University

Shawn Dietrich, *Associate Professor of Aviation (2004-2012; 2024)*
B.S.; B.A. 2001, Walla Walla College
C.F.I. 1999; C.F.I.I. 2000; M.E.I. 2006; A.T.P.; M.E.L. 2012; A.T.P.; S.E.L. 2015; C.E.500 P.I.C. 2020; D.A.50; S.I.C. 2022, Federal Aviation Administration

Gregory Dean Dodds, *Professor of History (2000)*
B.A. 1997, Walla Walla College
M.A. 2000; Ph.D. 2004, Claremont Graduate University

Jonathan D. Duncan, *Professor of Mathematics and Computer Science (2002)*
B.S.; B.A. 1997, Walla Walla College
M.A. (Math); M.S. (Cptr. Sci.) 2001, Indiana University
Ph.D. 2007, Indiana University

Paul B. Dybdahl, *Professor of Mission and New Testament (2000)*
B.A. 1992, Walla Walla College
M.Div. 1995; Ph.D. 2004, Andrews University

Thomas B. Ekkens, *Professor of Physics (2004)*
B.S. 1991, Andrews University
M.S. 1995; Ph.D. 1999, University of Notre Dame

Lynelle Ellis, *Associate Professor of Communication (2015)*
B.A. 1990, Walla Walla College
M.A. 2009, Spring Arbor University
Ph.D. 2019, Regent University

Linda Emmerson, *Associate Professor of Philosophy (2001-2005; 2024)*
B.A. 1990, Walla Walla College
M.A. 2009, California State University, Dominguez Hills

Melody Ezpeleta, *Assistant Professor of Psychology (2021)*
B.S. 2015, Walla Walla University
M.S. 2018, Loma Linda University
D.M.F.T. 2022, Loma Linda University

Steven Forbis, *Assistant Professor of Business (2022)*
B.S. 2009, Purdue University Global
M.B.A. 2011, Southern Adventist University
D. Ed. 2021, Capella University

James Foster, *Associate Professor of Computer Science (2018)*
B.A. 1980, Walla Walla College
J.D. 1983, University of California, Los Angeles
M.S. 2006, North Dakota State University
M.B.A. 2015, Southern Adventist University

John Foster, *Associate Professor of Mathematics (2013)*
B.S. 2007, Walla Walla University
M.S. 2009; Ph.D. 2013, University of Oregon

Mathilde Frey, *Professor of Biblical Studies (2015)*
B.A. 1992, Seminar Marienhöhe
M. Div. 2004; Ph.D. 2011, Andrews University

Rob Frohne, *Professor of Engineering (1988)*
B.S.E. 1983, Walla Walla College
M.S.E.E. 1984; Ph.D. 1988, Purdue University
P.E. 1998, State of Washington

Carolyn S. Gaskell, *Librarian (1978)*
B.A. 1976, Pacific Union College
M.A. 1977, University of Denver

Deisy E. Haid, *Associate Professor of Social Work and Sociology (2017)*
B.S.W. 2010; M.S.W. 2011; D.S.W. 2022, Walla Walla University
L.C.S.W. 2017, State of Oregon

Brian D. Hartman, *Associate Professor of Education (2016)*
B.S. (Biology); B.S. (Bioengineering) 1993, Walla Walla College
M.A.T. 1996, Andrews University
Ph.D. 2016, Oregon State University

Jerrold W. Hartman, *Professor of Visual Arts (2003)*
B.A. 1999, Walla Walla College
M.F.A. 2008, National University

Mark A. Haun, *Associate Professor of Engineering (2021)*
B.S. 1996, Walla Walla College
M.S. 1999; Ph.D. 2003, University of Illinois, Urbana-Champaign

Michael Hellie, *Assistant Professor of Health and Physical Education (2018)*
B.S. 1983, Walla Walla College
M.A. 1990, California State University, Chico

Josie Henderson, *Assistant Professor of Technology (2024)*
B.A. 2018, Walla Walla University
M.A. 2020, Walla Walla University

Robert D. Holm, *Associate Professor of Technology (2003)*
B.S. 1996, Walla Walla College
M.S. 2006, Purdue University

Jefre Humbert, *Instructor in Product Design (2017)*
B.S. 1984, Walla Walla College

Linda L. Ivy, *Professor of Psychology (2006)*
B.S. 1999; M.S. 2001; Ph.D. 2005, University of Oregon

Benjamin Jackson, *Professor of Mathematics (2015)*
B.A. 2001, Texas A&M University
M.S. 2003, Washington State University
Ph.D. 2015, Montana State University

Christine Janis, *Assistant Professor of Music (2019)*
B.M. 1985, Westminster Choir College
M.A. 1991; D.M.A. 1994, Ohio State University

Sara Kakazu, *Professor of English (2022)*
B.A. 2002, Walla Walla College
M.A. 2004, Western Washington University
Ph.D. 2012, University of Buffalo

Gerald E. Larson, *Assistant Professor of Health and Physical Education (2024)*
B.S. 1995, Walla Walla College
M.Ed. 2013, University of Idaho

Jennifer Larson, *Associate Professor of Nursing (2023)*
A.S.N. 2001, Southwestern Adventist University
B.S.N. 2016, M.S.N. 2018, Grand Canyon University

Amanda Lewis, *Associate Professor of Social Work and Sociology (2018)*
B.S. 2003, Montana State University
M.S.W. 2007; D.S.W. 2022, Walla Walla University
L.C.S.W. 2009; L.M.F.T. 2009; State of Montana

Joel Libby, *Assistant Professor of Visual Arts (2013)*
B.A. 2004, Walla Walla College
M.F.A. 2016, Academy of Art University

David F. Lindsey, *Professor of Biology (1997)*
B.S. 1981, Southwestern Adventist College
Ph.D. 1992, University of Texas, Austin

Deanna Ludwig-Bos, *Assistant Professor of Nursing (2016)*
B.S.N. 2011, Washington State University
M.S.N. 2014, Kaplan University

Qin Ma, *Professor of Engineering (2005)*
B.S. 1987; M.S. 1994, Chongqing University
M.S. 1999, Florida International University
Ph.D. 2004, Carnegie Mellon University

Ross Magi, *Professor of Mathematics (2014)*
B.S. 2007, Walla Walla University
M.S. 2009; Ph.D. 2014, University of Utah

Pedrito U. Maynard-Reid, *Professor of Biblical Studies and Missiology (1990)*
B.Th. 1970, West Indies College
M.A. 1973; M.Div. 1975; Th.D. 1981, Andrews University
Th.M. 1995, Fuller Theological Seminary

Douglas McClay, *Assistant Librarian, Level II* (2015)
B.S. 2002, Pacific Union College
M.L.S. 2010, Drexel University

Janice McKenzie, *Professor of Bioengineering (2011)*
B.S. 2001, Montana State University
Ph.D. 2006, Purdue University

James R. Nestler, *Professor of Biology (1990)*
B.S. 1984; M.S. 1986, Walla Walla College
Ph.D. 1990, University of Colorado, Boulder

Kirt Onthank, *Professor of Biology (2013)*
B.S. 2006, Walla Walla College
M.S. 2008, Walla Walla University
Ph.D. 2013, Washington State University

Michaelynn R. Paul, *Professor of Nursing (2000)*
B.S. 1987, Walla Walla College
M.S.N. 2004, Oregon Health and Science University
D.N.P. 2017, Walden University

Darryl Penney, *Assistant Professor of Aviation (2022)*
A.I.T., Andrews University
D.C. 1988, Palmer College of Chiropractic
C.F.I.; A&P 1981; C.F.I.I. 2003; M.E.I.; A.G.I.; I.G.I. 2005;
A.T.P.; M.E.L.; S.E.L.; S.E.S. 2016, Federal Aviation Administration

George Perez, *Associate Professor of Business (2018)*
B.S. 1994, Universidad Del Valle De Mexico
M.S. 1998, Andrews University

Analizeth Pesqueira, *Assistant Professor of Social Work and Sociology (2023)*
B.S.W. 2011; M.S.W. 2012, Walla Walla University

Delvin E. Peterson, *Professor of Engineering (2004)*
B.S.E. 2001, Walla Walla College
M.S.M.E. 2004; Ph.D. 2012, Oregon State University

Lauren S. Peterson, *Assistant Professor of English (2022)*
B.A. 2012, Walla Walla University
M.A. 2015, Western Washington University
Ph.D. 2022, University of California, Davis

Stephen Pilgrim, *Professor of Business (2023)*
B.S. 1987; Ph.D. 2011, University of the West Indies
M.A. 1994, University of Westminster
M.Phil. 2008, University of Reading

Jennifer Preble, *Assistant Professor (2025)*
B.S. 2005, Montana Tech of the University of Montana
M.S.W. 2010; D.S.W. 2022, Walla Walla University
L.C.S.W. 2012, State of Montana

Amanda Ramoutar, *Associate Professor (2020)*
B.Ed. 2012, University of Trinidad and Tobago
M.Ed. 2014; Ph.D. 2023, University of the West Indies
M.S. 2021, University of South Wales

L. Melvin Roberts, *Professor of Chemistry (2021)*
B. S. 1989, Southwestern Adventist University
Ph.D. 1994, Texas A&M University

Monique Roddy, *Associate Professor of History (2018)*
B.A. 2007, Walla Walla College
M.A. 2009; Ph.D. 2016, University of Chicago

Brian Schaffner, *Assistant Professor of Accounting (2021)*
B.S. 1992, Walla Walla College
M.B.A. 1997, University of Phoenix

Christy A. Scott, *Associate Librarian (2004)*
B.S. 2001, Union College
M.L.S. 2003, University of Missouri-Columbia

Kraig S. M. Scott, *Professor of Music (1986)*
Associateship (Piano) 1978, The Royal Conservatory of Toronto
B.Mus. 1984, Walla Walla College
M.Mus. 1986, University of Oregon
M.A.; D.M.A. 1993, Eastman School of Music, University of Rochester

Nancy L. Semotiuk, *Professor of Communication (1989)*
B.A. 1979, Walla Walla College
M.A. 1992, Norwich University
Ph.D. 2019, Union Institute and University

Leasha Simafranca, *Assistant Professor of Nursing (2020)*
B.S.N. 2015, Union College
M.S.N. 2020, Western Governors University

Natalie Smith-Gray, *Assistant Professor of Engineering (2022)*
A.S. 2015, Chemeketa Community College
B.S 2018, Walla Walla University
Ph.D. 2022, Washington State University

Jeremy Springer, *Assistant Professor of Social Work and Sociology (2021)*
B.S.W. 2008; M.S.W. 2009; D.S.W. 2022, Walla Walla University
L.C.S.W. 2012, State of Oregon
L.I.C.S.W. 2020, State of Washington

Stefan Sremac, *Associate Professor of Mathematics (2022)*
B.Ed. 2008, Canadian University College
M.S. 2015, University of British Columbia
Ph.D. 2019, University of Waterloo

Rodd L. Strobel, *Assistant Professor of Physical Education (2015)*
B.S. 1987; M.Ed. 2007, Walla Walla College
M.A. 2018, Columbia University

Idah Taruwinga, *Assistant Professor of Social Work and Sociology (2020)*
B.A. 2000, University of Zimbabwe
M.S.W. 2008, Indiana University
L.C.S.W. 2012, State of Indiana
L.I.C.S.W. 2018, State of Washington
D.S.W. 2019, University of Southern California

Douglas Thomsen, *Professor of Engineering (2018)*
B.S.E. 1993, Walla Walla College
M.S.E. 1996; Ph.D. 1999, Purdue University

Timothy L. Tiffin, *Professor of Mathematics (1992)*
B.S. 1985, Pacific Union College
M.S. 1988; D.A. 1995, Idaho State University

Emily Tillotson, *Associate Professor of Social Work and Sociology (2008)*
B.S.W. 1997; M.S.W. 2000, Walla Walla College
D.S.W. 2020, University of Southern California
L.I.C.S.W. 2006, State of Washington

Bruce J. Toews, *Professor of Business (1994)*
B.B.A. 1987, Pacific Union College
M.B.A. 1991, California State University, San Bernardino
C.P.A. 1995, State of Washington
D.B.A. 2015, Walden University

Maria Bastien Valenca, *Professor of Education (2017)*
B.S. 2004, Pacific Union College
B.A. 2010; M.A. 2011, University of Windsor
Ph.D. 2017, University of Ottawa

James Veverka, *Instructor of Technology (2023)*
B.S. 2007, Walla Walla University

Jan Vigil, *Assistant Professor of Nursing (2023)*
B.S.N. 1977, Loma Linda University
M.S.N. 1982, University of Oregon Health Sciences

Monica VonLangen, *Associate Professor (2024)*
B.A. 2005, Rollins College
M.S.W. 2019, Walla Walla University
L.C.S.W. 2021, State of Montana

Laurellé C. Warner, *Professor of Social Work and Sociology (2014-2023; 2024)*
B.S. 1983, Atlantic Union College
M.S.W. 1985, University of Connecticut
L.C.S.W. 2016, State of Montana
Ph.D. 2019, Loma Linda University

Jody E. Washburn, *Associate Professor of Social Worker and Sociology (2016)*
B.A. 2005, Walla Walla College
M.A.; M.A. 2010, Andrews University
M.A. 2013; Ph.D. 2016, University of California, Los Angeles

Cynthia Westerbeck, *Professor of English (2017)*
B.A. 1990, Walla Walla College
M.A. 1992; Ph.D. 2000, Washington University, St. Louis

Jeremy Wiggins, *Associate Professor of Biology (2022)*
B.S. 1996, Walla Walla University
D.D.S. 2000, Loma Linda University

Melodie A. Williams, *Associate Professor of Engineering (2009)*
B.S.E. 1986, Walla Walla College
M.S.E. 1994, Washington State University
P.E. 1989, State of California
P.E. 1991, State of Washington

Louie L. Yaw, *Professor of Engineering (1992-93; 2000)*
B.S.E. 1992, Walla Walla College
M.S. 1996; Ph.D. 2008, University of California, Davis
P.E. 1996; S.E. 2000, State of California
P.E., S.E. 2001, State of Washington

EMERITI

Larry D. Aamodt, Ph.D.
Professor Emeritus of Engineering
Terrie D. Dopp Aamodt, Ph.D.
Professor Emeritus of History
Norman L. Anderson, J.D.
Professor Emeritus of Accounting
Austin Archer, Ph.D.
Professor Emeritus of Psychology and Education
Beverly G. Beem, Ph.D.
Professor Emeritus of English
Darold Bigger, Ph.D.
Professor Emeritus of Religion and Social Work
Roland R. Blaich, Ph.D.
Professor Emeritus of History
Chester D. Blake, Ed.D.
Professor Emeritus of Technology
David A. Bullock, Ph.D.
Professor Emeritus of Communication
Jon A. Cole, P.L.S.
Professor Emeritus of Engineering
Ralph M. Coupland, Ed.D.
Associate Professor Emeritus of Education
Carlton E. Cross, Ph.D.
Professor Emeritus of Engineering
Richard F. Daley, Ph.D.
Professor Emeritus of Chemistry
Donald Dawes, M.Ed.
Associate Professor Emeritus of Technology
C. Loren Dickinson, Ph.D.
Professor Emeritus of Communication
Joseph G. Galusha, Jr., Ph.D.
Professor Emeritus of Biology
Robert Wayne Gardner, Ph.D.
Professor Emeritus of Sociology
Terrell D. Gottschall, Ph.D.
Professor Emeritus of History
James C. Hannum, M.A.
Associate Professor Emeritus of Communication
Wilma M. Hepker, Ph.D.
Professor Emeritus of Social Work and Sociology
Bruce C. Johanson, D.Th.
Professor Emeritus of Biblical Studies
Ronald L. Jolliffe, *Ph. D.*
Professor Emeritus of English
Daniel A. Lamberton, M.F.A.
Professor Emeritus of English
Melvin S. Lang, Ph.D.
Professor Emeritus of Mathematics
Associate Vice President Emeritus for Academic Administration
Steven Lee, Ph.D.
Professor Emeritus of Chemistry
Scott Ligman, Ph.D.
Professor Emeritus of Biology
Carlyle Manous, D.M.A.
Professor Emeritus of Music
Martha F. Mason, M.F.A.
Professor Emeritus of Art
Bruce McClay, M.A.
Librarian Emeritus
Walter Meske, M.A.
Vice President Emeritus for Student Administration
Curtis A. Nelson, Ph.D.
Professor Emeritus of Engineering
Janet D. Ockerman, Ph.D.
Professor Emeritus of Social Work and Sociology
Tamara L. Randolph, Ph.D.
Professor Emeritus of Education
Donald W. Rigby, Ph.D.
Professor Emeritus of Biology
Gail Rittenbach, Ph.D.
Professor Emeritus of Education
Carolyn Stevens Shultz, Ph.D.
Professor Emeritus of English
Dan M. Shultz, M.Mus.
Professor Emeritus of Music
Susan B. Smith, Ph.D.
Professor Emeritus of Social Work and Sociology
Glenn E. Spring, D.M.A
Professor Emeritus of Music
R. Lee Stough, Ph.D.
Professor Emeritus of Psychology
David E. Thomas, *Ph.D.*
Professor Emeritus of Theology
Alden L. Thompson, Ph.D.
Professor Emeritus of Biblical Studies
Thomas M. Thompson, Ph.D.
Professor Emeritus of Mathematics
Fred W. Troutman, Ph.D.
Professor Emeritus of Nursing
Verlie Y. F. Ward, Ph.D.
Professor Emeritus of Education
JoAnn Y. Wiggins, Ph.D.
Professor Emeritus of Business
Ken Wiggins, Ph.D.
Professor Emeritus of Mathematics
Robert F. Wood, Ph.D.
Professor Emeritus of Engineering

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2024-2025

Undergraduate Bulletin

204 S. College Ave. · College Place, WA 99324
(509) 527-2811 · *fax* (509) 527-2574
toll-free (877) 527-2811 · wallawalla.edu

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