Departments, programs and courses are listed in alphabetical order in this section. Courses numbered from 101–299 are lower-division courses primarily for freshmen and sophomores; those numbered from 300–499 are upper-division courses primarily for juniors and seniors. The numbers 296, 396, 496 and 596 designate individual study courses and are available for registration by prior arrangement with the course instructor and approval of Department Chair.

The number in parentheses following the course title indicates the amount of credit each course carries. Variable credit courses include the minimum and maximum number of the credits within parentheses.

Not all of the courses are offered every quarter. Final confirmation of courses to be offered, information on new courses and programs, as well as a list of hours, instructor, titles of courses and places of class meetings, is available on-line in Safari which can be accessed through the CWU home page at www.cwu.edu. A registration handbook is available at Registrar Services or your University center office. This book will assist you in navigating through Safari.

ACCOUNTING
Faculty Chair: Michael Ruble, Lynnwood
http://www.cwu.edu/~cob/acct/
Shaw-Smyser 340

Professors
Jay D. Forsyth (Des Moines)
Norman J. Gierlasinski (Des Moines)
Gary W. Heesacker (Ellensburg)
Robert E. Holtfreter (Ellensburg)
Karen D. Martinis (Ellensburg)
Ronald R. Tidd (Ellensburg)
Allen C. Vautier (Lynnwood)

Associate Professor:
MaryAnne Atkinson (Lynnwood)
Benjamin Bae (Lynnwood)
Michael Ruble (Lynnwood)

Assistant Professors
Joseph Bradley (Ellensburg)

Lecturer
John Lasik (Ellensburg)
Jay Law (Lynnwood)
Frederick McDonald (Ellensburg)

General Information
A Bachelor of Science degree in Accounting is available to students who would like to prepare for careers in public accounting (as Certified Public Accountants), industrial accounting, and nonprofit accounting. The major imparts to students the “common body of knowledge” required of practicing accountants by maintaining a flexible program to meet the needs of a changing society. The student-centered faculty achieve these objectives by developing individual programs, advising students how to meet personal goals and helping the students to secure employment upon graduation.

Certification
Central Washington University Accounting students, within 120 days of obtaining a degree and 225 total credits, or completing the MPA at Central Washington University, are qualified to sit for the Certified Public Accountant examination. State law requires individuals wishing to sit for the CPA examination to have completed (1) a minimum of 36 quarter credits of study in accounting, and (2) a minimum of 36 quarter credits in related business courses. Registration for the examination is made through the State Board of Accountancy, Olympia, Washington. After June 30, 2000, 225 quarter credits will also be required to sit for the CPA exam. Students are also prepared to sit for the Certified Management Accounting examination and the Certified Internal Auditor examination. Students should consult with their major advisor for details.

Transfer Credits
Equivalent lower division (100-200 level) courses may be transferred toward meeting the pre-admission requirements for any B.S. degree in the College of Business. Upper division (300-400 level) courses may be transferred toward meeting the major requirements only with the approval of the Department Chair and the College Dean or designee. Transfer students must earn at least 45 credits at CWU.

Service to Other Majors
Students majoring outside the College of Business who are required to take courses in this College for either their major or minor will be eligible to enroll on a space-available basis. These students will be given priority over other non-college majors wishing to enroll in courses.

Bachelor of Science
Accounting Major
Coursework counting toward the major cannot be taken credit/no credit by Accounting majors.

Admission Requirements
Students must apply and be admitted to the major prior to beginning 300-400 level courses in the College of Business. At the time of application, all 200 level pre-admission requirements should be substantially completed. Application forms are available in the department offices. The completed form must be accompanied by transcripts that reflect all prior college work. Admission shall be based on grades earned in the following courses.

Pre-admission Requirements

<table>
<thead>
<tr>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 251, Accounting I</td>
</tr>
<tr>
<td>ACCT 252, Accounting II</td>
</tr>
<tr>
<td>BUS 241, Legal Environment of Business</td>
</tr>
<tr>
<td>BUS 221, Introductory Business Statistics</td>
</tr>
<tr>
<td>ECON 201, Principles of Economics Micro</td>
</tr>
<tr>
<td>ECON 202, Principles of Economics Macro</td>
</tr>
<tr>
<td>MATH 153, Pre-Calculus Mathematics I</td>
</tr>
<tr>
<td>OR MATH 170, Intuitive Calculus</td>
</tr>
<tr>
<td>OR MATH 172, Calculus</td>
</tr>
</tbody>
</table>

Pre-admission Total 35

A cumulative grade point average of 2.25 in the above courses must be achieved with a minimum grade of “C-” (1.70) in each course. The credit/no credit option will not be accepted for any of these courses. The applicant must also have completed ENG 101/102. The applicant must have earned a minimum cumulative GPA of 2.00 in all college study. These criteria also apply to equivalent courses transferred from other institutions.

Students who have met all the above requirements will be admitted unless the number of eligible applicants exceeds available space. In that case, acceptance will be competitive, based on a selection index. Students who have not met all of the above requirements may be admitted provisionally by permission of the College Dean or designee.

Required Courses

<table>
<thead>
<tr>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGT 380, Organizational Management</td>
</tr>
<tr>
<td>MGT 360, Principles of Marketing</td>
</tr>
<tr>
<td>OSC 323, Operations Management</td>
</tr>
<tr>
<td>MIS 386, Management Information Systems OR ACCT 455*, Accounting Information Systems</td>
</tr>
<tr>
<td>MGT 487, Small Business Management</td>
</tr>
<tr>
<td>OR MGT 489, Strategic Management</td>
</tr>
<tr>
<td>Select one of the following:</td>
</tr>
<tr>
<td>ADMG 385, Business Communications and Report Writing</td>
</tr>
<tr>
<td>COM 345, Business and Professional Speaking</td>
</tr>
<tr>
<td>ENG 310, Technical Writing</td>
</tr>
<tr>
<td>ACCT 305, Cost Accounting</td>
</tr>
<tr>
<td>ACCT 346, Income Tax Accounting</td>
</tr>
<tr>
<td>ACCT 351, Intermediate Accounting I</td>
</tr>
<tr>
<td>ACCT 460, Auditing</td>
</tr>
<tr>
<td>Electives selected from the following:</td>
</tr>
<tr>
<td>ACCT 405, ACCT 430, ACCT 431, ACCT 444, ACCT 446, ACCT 450, ACCT 455*, ACCT 461, ACCT 470, ACCT 475, ACCT 484**, ACCT 485, ACCT 489, BUS 341</td>
</tr>
</tbody>
</table>

*May not be used as an elective if taken in place of MGT 386.
ACCT 484, if taken, should be completed no later than fall of senior year.

ADMG 385, Business Communications and Report Writing (5)
COM 345, Business and Professional Speaking (4)
ENG 310, Technical Writing (4)
ACCT 305, Cost Accounting (5)
ACCT 346, Income Tax Accounting (5)
ACCT 351, Intermediate Accounting I (5)
ACCT 460, Auditing (5)
Electives selected from the following: (15)
ACCT 405, ACCT 430, ACCT 431, ACCT 444, ACCT 446, ACCT 450, ACCT 455*, ACCT 461, ACCT 470, ACCT 475, ACCT 484**, ACCT 485, ACCT 489, BUS 341
Total 109-110

**ACCT 484, if taken, should be completed no later than fall of senior year.

**ACCT 484, if taken, should be completed no later than fall of senior year.
Additional Graduation Requirements

In addition to the University grade-point average requirements that apply to all CWU major programs, the Department requires a cumulative grade-point average of at least 2.0 in upper-division accounting courses completed at CWU. Students must complete a minimum of 90 quarter credits of non-business courses, which may include up to 13.5 quarter credits of economics and 9 quarter credits of business statistics. For the remaining non-business credits, courses include all others EXCEPT FOR those with prefixes of ACCT, BUS, ECON, FIN, HRM, MGT, MKT, MIS and OSC. Transfer students must complete at least 43 CWU business credits to be eligible for the accounting degree.

Accounting Courses


ACCT 252. Accounting II (5). Prerequisite, ACCT 251. Accounting for investing and financing activities. Evaluating firm performance.

ACCT 296. Individual Study (1-6). Prerequisite, permission of instructor.

ACCT 301. Financial Accounting Analysis (5). Not open to students who previously have taken an accounting course. Underlying concepts, preparation and use of financial statements from the user’s viewpoint. Not open to accounting and business administration majors except by permission of instructor.

ACCT 305. Cost Accounting (5). Prerequisite, ACCT 252. Economics of cost accounting; industrial analysis, production control through costs, types of cost systems, and burden application.


ACCT 350. Intermediate Accounting I (5). Prerequisite, ACCT 252. Theory underlying the presentation of current and fixed assets, liabilities, and net worth.


ACCT 396. Individual Study (1-6). Prerequisite, permission of instructor.

ACCT 405. Advanced Cost Accounting (5). Prerequisite, ACCT 305. Computation of mix, yield and variances; value of information theory systems design; and decision models relating to control of costs.

ACCT 430. Accounting for Non-Profit Organizations (5). Prerequisite, ACCT 252. Accounting and budgetary controls for government units and non-profit service organizations, including educational institutions (from school districts to universities) and hospitals. Emphasis is on the advantages, uses, disadvantages, and differences in fund accounting. Students may not receive credit for both ACCT 430 and ACCT 431.

ACCT 431. CPA Review of Non-Profit Accounting (2). Prerequisite, ACCT 252. To prepare the student for problems encountered on the CPA exam in nonprofit, fund, and governmental accounting. Students may not receive credit for both ACCT 430 and ACCT 431.

ACCT 444. Tax Research and Planning (5). Prerequisite, ACCT 346. Tax research, planning, and specific topics including installment sales, real property sales, net operating losses and Internal Revenue Service procedures and penalties.

ACCT 446. Income Tax Accounting II (5). Prerequisite, ACCT 346. Tax accounting practice, including gross income deductions, depreciation, capital gains and losses, estates and trusts, corporate problems, and administrative procedures.

ACCT 450. Advanced Accounting (5). Prerequisite, ACCT 351. Accounting theory and practice for business combinations and consolidated financial statements, foreign currency transactions and translation, partnerships; also federal bankruptcy, trust and estates.

ACCT 455. Accounting Information Systems (5). Prerequisites: ACCT 252, and ACCT 346. Cost accounting; industrial analysis, production control through costs, types of cost systems, and burden application. Design of information systems with emphasis on user’s needs and objectives. Students may not receive credit for both.

ACCT 460. Auditing (5). Prerequisite, ACCT 351. Auditor’s functions and responsibilities. Evaluation of the system of internal control, the determination of appropriate auditing procedures, and the extent of their application.


ACCT 470. Accounting Theory (5). Prerequisite, ACCT 351. Accounting literature theory. History, formal statements of principles, special depreciation problems, relationship between economics and accounting, and the effect of price-level changes upon financial statements.

ACCT 475. International Accounting (5). Prerequisite, ACCT 351. Explores the formulation and application of accounting concepts in other industrialized countries. Particular emphasis directed toward the harmonization of accounting principles between the U.S. and other countries.

ACCT 484. Professional Writing and Speaking for the Accountant (5). Prerequisite, ACCT 351. Recommended, ACCT 460. Develop written and verbal communications skills for practical application in public, private and governmental accounting fields. Includes interviewing techniques, preparation and presentation of group and individual reports, and preparation of resumes, letters, memos and workpapers.

ACCT 485. Current Issues in Accounting (6). Prerequisite, accounting majors only. Explores current theoretical and practical issues in accounting, including but not limited to GAAP, employment, CPA and CMA examinations, and ethics. Seminar format. Formerly ACCT 499.1. Student may not receive credit for both.

ACCT 489. Managerial Controllersh (5). Prerequisite, ACCT 305 or permission. Controllers and their organizations and business decision making under conditions of uncertainty with utilization of quantitative techniques.

ACCT 490. Cooperative Education (1-12). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U.


ACCT 493. Applied Accounting Techniques (3). Prerequisite, permission of instructor. Under direct supervision of the instructor, assist in answering accounting students’ questions and aid in completion of homework for a minimum of six hours weekly. Other tasks as assigned. Grade will be S or U.

ACCT 496. Individual Study (1-6). Prerequisite, permission of instructor.

ACCT 498. Special Topics (1-6).

ACCT 499. Seminar (1-5).
The AFROTC Physical Fitness Program.

The following courses are on reserve and may be offered subject to program needs:
- ACCT 253: Managerial Accounting (5)
- ACCT 302: Managerial Accounting Analysis (5)
- ACCT 345: Basic Income Tax (3)
- ACCT 349: Federal Taxation (5)
- ACCT 457: Advanced Financial Accounting I (5)
- ACCT 458: Advanced Financial Accounting II (5)
- ACCT 495: CPA Examination Review (5)
- ACCT 497: Honors (1-12)
- ACCT 5991
- ACCT 5992
- ACCT 5993
- ACCT 5994
- ACCT 700

AEROSPACE STUDIES (AFROTC)

Faculty
- Chair: John P. Bryant, IV, Lt. Colonel, USAF
- Peterson Hall 203
- Assistant Professors
  - Rob C. Gleghorn, Captain, USAF
  - Joshua C. Miller, Captain, USAF

General Departmental Information

The United States Air Force Reserve Officer Training Corps (AFROTC), represented at CWU by Detachment 695 and the 895th Cadet Wing, prepares students to be commissioned as second lieutenants in the U.S. Air Force. Although freshman and sophomore courses are open to all CWU students, the following information is provided primarily for students considering a potential officer commissioning program. Students from any academic major degree program are eligible. Upon award of the baccalaureate degree and successfully completing all other qualifications to become a commissioned officer, graduates are commissioned and enter active duty in one of several exciting career fields. The Air Force is also actively seeking qualified officer candidates in under-represented groups such as African Americans, Hispanics, Native Americans, and women.

AFROTC courses are accredited, and may be taken as an academic minor or as free electives. The AFROTC curriculum offers four-year, three-year, and two-year programs. The freshman and sophomore courses comprise the General Military Course (GMC) portion of the curriculum. The GMC is introductory and developmental in nature, and is designed to motivate and prepare cadets for entry into the advanced portion of the curriculum. GMC students meet once a week for a one-hour academic class, attend a weekly two-hour leadership laboratory and participate in the AFROTC Physical Fitness Program.

The junior and senior courses comprise the Professional Officer Course (POC), which is designed to prepare cadets to assume responsibilities as commissioned officers in the U.S. Air Force. POC classes meet three hours a week, and again there is an accompanying weekly two-hour leadership laboratory. POC cadets also participate in the AFROTC Physical Fitness Program. It is mandatory that the full two-year POC be completed, even though degree requirements may be met earlier. Graduate studies or a second Bachelor's degree may be allowed to meet this two-year POC requirement.

Another program requirement before entering the POC is participation in summer field training at an Air Force base. Students who have completed the first two years (GMC) of the four-year program, or those with the required amount of prior enlisted service, attend a four-week training camp. Students who did not complete the entire GMC sequence and want to enter the POC (two-year program) attend a six-week summer training camp if qualified.

Enrollment. Enrollment in the freshman and sophomore classes (AFRO 100 and 200 series) creates no obligation to the Air Force. Although enrollment in the fall quarter of the freshman year is necessary to complete the full GMC sequence, enrollment during any of the freshman or sophomore quarters are accepted and will provide an introduction to the program and to the opportunities afforded an Air Force officer. Students who want to continue in the AFROTC program in their junior year must complete a POC enrollment allocation during the winter term of their sophomore year. Students are eligible to compete for an enrollment allocation into the POC only after successfully passing the Air Force Officer Qualifying Test (AFOQT), a medical examination, the physical fitness test and summer field training.

Scholarship and Financial Assistance. Air Force ROTC competitive merit scholarships are available and awarded to both non-technical and technical majors. An AFROTC scholarship will normally cover tuition, fees, and books. Those who have never been a full-time college student may apply for a 4-year AFROTC scholarship at www.afrotc.com by December 1st the year prior to attending college.

College freshmen and sophomores may apply for a 3-year and 2-year scholarship, respectively. All junior and senior cadets in good standing receive a monthly stipend, separate from any scholarships. Stop by Peterson Hall, Room 203, or call 963-2314 for the latest scholarship information.

Aerospace Studies Minor

Required Courses
- AFRO 101, AFRO 102, AFRO 103. Foundations of the USAF (1,1,1). A survey course briefly overviewing Air Force structure, missions, organizations, officerhip and professionalism, and an introduction to communicative skills.
- AFRO 101LAB, AFRO 102LAB, AFRO 103LAB. GMC Leadership Laboratory (2,2,2). Practical experience in Air Force customs and courtesies, physical fitness, drill and ceremonies, and opportunities available to commissioned officers. Two hours weekly plus mandatory physical training. Must be taken concurrently with AFRO 101, 102, 103. Grade will be S or U.
- AFRO 201, AFRO 202, AFRO 203. The Evolution of USAF Air and Space Power (1,1,1). Through historical examples, we examine the development of Air Force capabilities and missions to demonstrate the evolution of today’s USAF air and space power.
- AFRO 201LAB, AFRO 202LAB, AFRO 203LAB. GMC Leadership Laboratory (2,2,2). Practical experience in Air Force customs and courtesies, physical fitness, drill and ceremonies, giving military commands, and preparation for field training. Two hours weekly plus mandatory physical training. Must be taken concurrently with AFRO 201, 202, 203. Grade will be S or U.
- AFRO 296. Individual Study (1-3). Prerequisite, permission of Department Chair. May be repeated.
- AFRO 298. Special Topics (1-6).

Credits
- AFRO 301, AFRO 302, AFRO 303. Air Force Leadership Studies (3,3,3). Provides leadership, management fundamentals, professional knowledge, Air Force personnel and evaluation systems, leadership ethics, and the communication skills required of an Air Force junior officer.
- AFRO 301LAB, AFRO 302LAB, AFRO 303LAB. POC Leadership Laboratory (2,2,2). Students plan, organize, coordinate, and direct cadet corps and physical fitness activities, enhancing communication, management, and other leadership skills. Two hours weekly plus mandatory physical training. Must be taken concurrently with AFRO 301, 302, 303. Grade will be S or U.
AFRO 350. Four-Week Summer Field Training (3). Organization, operation, and mission of an Air Force base; physical conditioning; applied leadership training and evaluation; marksmanship; survival orientation; and field exercises. Grade will be S or U.

AFRO 351. Six-Week Summer Field Training (4). Organization, operation, and mission of an Air Force base; physical conditioning; applied leadership training and evaluation; marksmanship; survival orientation; field exercises. Grade will be S or U.

AFRO 398. Special Topics (1-6).

AFRO 350LAB, 402LAB, 403LAB. POC Leadership Laboratory (2,2,2). Advanced leadership experiences involving planning and conducting cadet training and physical fitness activities, oral and written communications, and developing human relations skills. Two hours weekly plus mandatory physical training. Must be taken concurrently with AFRO 401, 402, 403. Grade will be S or U.


AFRO 401LAB, 402LAB, 403LAB. POC Leadership Laboratory (2,2,2). Advanced leadership experiences involving planning and conducting cadet training and physical fitness activities, oral and written communications, and developing human relations skills. Two hours weekly plus mandatory physical training. Must be taken concurrently with AFRO 401, 402, 403. Grade will be S or U.

AFRO 496. Individual Study (1-3). Prerequisite, permission of Department Chair. May be repeated.

AFRO 498. Special Topics (1-6).

ANTHROPOLOGY AND MUSEUM STUDIES

Faculty
Chair: Kathleen Barlow
Farrell Hall 309

Professors
John A. Alloszatai-Pethoe, Biological Anthropology
Anne S. Denman (Emeritus), American Culture, Intercultural Issues
Steve Hackenberger, Archaeology, Cultural Resource Management, North America and Caribbean
William C. Smith (Emeritus), Archaeology, Museum Studies, Comparative World Prehistory

Associate Professors
Tracy J. Andrews, Sociocultural Anthropology, Ethnicity, Medical and Ecological Anth, Gender; Native North America

Kathleen Barlow, Chair, Sociocultural Anthropology, Psychological Anth, Gender, Art, Museum Studies, Family, Learning; Melanesia/Pacific
Loran E. Cutsinger, Cultural Anthropology, Informal Economy, Gender, Globalization, Caribbean, Russia, Middle East
Patrick McCutcheon, Archaeology, Evolutionary and Environmental Archaeology, Cultural Resource Management
Penglin Wang, Linguistic and Cultural Anthropology; East and Central/Inner Asia, China

Assistant Professors
Patrick Lubinski, Archaeology, Zooarchaeology, Cultural Resource Management; North America
Lene Pedersen, Sociocultural Anthropology, Visual and EnvironmentalAnth, Postcolonialism; SE Asia (Indonesia), E. Africa, Circumpolar North
Lori K. Sheeran, Biological Anthropology, primate ecology, Black Gibbons; China

General Departmental Information

Anthropology presents an integrated perspective on the cultural and biological nature of humans. Anthropologists study present and past human diversity through classroom, laboratory, and field studies in cultural and biological anthropology, including archaeology, linguistics, ethnology, and applied anthropology. Classes at the introductory (100-level) include a general survey of the field and major sub-fields. Intermediate (300-level) classes focus on selected sub-fields; upper-division standing or relevant lower division anthropology courses are desirable. Advanced (400-level) classes generally assume completion of at least three of the core requirement classes, plus 15 credits in Anthropology. However, prerequisite requirements may be waived with permission of the instructor, or for variable credit classes (490, 491, 496, 498).

Students interested in major and minor programs should contact the department office as soon as possible for further information, application forms, and assignment of an advisor. Anthropology majors are expected to meet with their advisors at least once a quarter.

Special Programs

Reflecting the broad nature of anthropological study, the Department directly sponsors or is affiliated with a wide range of on- and off-campus options to broaden classroom experiences. Further information about the following programs is available through the Anthropology Department office:

- Museum Studies Program, offering coursework, field experiences and projects with local and regional museums
- Central Washington Archaeological Survey (CWAS), a service, research and public information facility with special emphasis in the Northwest
- Primate Behavior and Ecology Bachelor of Science, an interdisciplinary program providing undergraduate training in method and theory of primatology as basis for research, laboratory and field experience
- Resource Management M.S. program, offering an integrated program in natural and cultural resource management, including anthropology classes in cultural resource management and historic preservation
- Macintosh and PC computer labs housed in Farrell Hall
- Center for Spatial Information, providing a range of Geographic Information System (GIS) tools for analysis of social and natural science data
- Summer workshops and field schools, recently including archaeology in Mount Rainier National Park, primate studies in Bali (Indonesia), archaeology and ethnology in Barbados, workshops in Forensic Anthropology
- Study Abroad opportunities coordinated through the CWU Office of International Study and Programs
- Departmental Honors Program encourages individualized research and study in a sub-area of Anthropology. It is open to junior and senior students with Anthropology major GPA of 3.00 or better
- Anthropology Student Association, an active student group which sponsors academic and social events related to the discipline.

Anthropology Core Requirements Credits
ANTH 110. Introduction to Biological Anthropology ..........................5
ANTH 110LAB, Biological Anthropology Laboratory ..........................5
ANTH 120. Introduction to Archaeology ..................................1
ANTH 130. Introduction to Cultural Anthropology .........................5
ANTH 180. Introduction to Linguistics ....................................5
ANTH 301, Principles and Assessment ...................................2

Anthropology Core Total 23
Bachelor of Science
Anthropology Major

This major is strongly recommended for students seeking graduate work in anthropology or preparing for careers in closely related fields. Electives are chosen in consultation with the advisor to lead into specialization in areas such as: ethnology, linguistics, archaeology, environmental studies or biological anthropology. Students in this major must have course schedules approved quarterly by their departmental advisors.

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthropology Core Requirements</td>
<td>23</td>
</tr>
<tr>
<td>Select 300 level courses from at least three</td>
<td></td>
</tr>
<tr>
<td>subfields:</td>
<td></td>
</tr>
<tr>
<td>Archaeology, Cultural Anthropology,</td>
<td></td>
</tr>
<tr>
<td>Linguistics, Biological Anthropology</td>
<td></td>
</tr>
<tr>
<td>Anthropology Theory and Method (400 level)</td>
<td>16</td>
</tr>
<tr>
<td>Must include an approved ANTH 499 Seminar</td>
<td></td>
</tr>
<tr>
<td>ANTH 459, Senior Colloquium required</td>
<td>3</td>
</tr>
<tr>
<td>Department-approved electives</td>
<td>4</td>
</tr>
</tbody>
</table>

Total 61

Museum Studies Specialization

The Museum Studies specialization prepares the student for employment in museum settings. Electives may be selected in accordance with student career goals and interests, to include areas such as anthropology, art, biology, business administration, communication, geography, geology, history, etc. The specialization must be supervised and approved by the Department Chair.

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthropology Core Requirements</td>
<td>23</td>
</tr>
<tr>
<td>ANTH 360, Introduction to Museum Studies</td>
<td>4</td>
</tr>
<tr>
<td>ANTH 361, Museum Exhibit Design</td>
<td>4</td>
</tr>
<tr>
<td>ANTH 362, Museum Curation and Management</td>
<td>4</td>
</tr>
<tr>
<td>ANTH 490, Cooperative Education</td>
<td>10</td>
</tr>
<tr>
<td>Department-approved electives</td>
<td>14</td>
</tr>
<tr>
<td>(Must include at least 4 credits in Theory-</td>
<td></td>
</tr>
<tr>
<td>Method at the 400 level)</td>
<td></td>
</tr>
</tbody>
</table>

Total 61

Anthropology 45 Credit Major

This 45 credit major must be accompanied by a major in a discipline related to Anthropology. The program will consist of coursework focused on areas related to the dual major, and must be designed in close consultation with an Anthropology advisor. A program proposal must be approved prior to admission to this B.A. program.

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introductory (100 level)</td>
<td>15-20</td>
</tr>
<tr>
<td>Intermediate (200 level)</td>
<td>15-20</td>
</tr>
<tr>
<td>Theory and Method (400 level)</td>
<td>10</td>
</tr>
<tr>
<td>(ANTH 459 recommended)</td>
<td></td>
</tr>
</tbody>
</table>

Total 45

Bachelor of Arts Programs
Anthropology Major

This liberal arts and sciences major provides background to prepare students for any vocation, in that a measure of achievement in all careers is success in human relationships. The major is also consistent with employment in a variety of business, government, and social service areas.

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthropology Core Requirements</td>
<td>23</td>
</tr>
<tr>
<td>Select 300 level courses from at least three</td>
<td></td>
</tr>
<tr>
<td>subfields:</td>
<td></td>
</tr>
<tr>
<td>Archaeology, Cultural Anthropology,</td>
<td></td>
</tr>
<tr>
<td>Linguistics, Biological Anthropology</td>
<td></td>
</tr>
<tr>
<td>Anthropology Theory and Method (400 level)</td>
<td>16</td>
</tr>
<tr>
<td>Must include an approved ANTH 499 Seminar</td>
<td></td>
</tr>
<tr>
<td>ANTH 459, Senior Colloquium required</td>
<td>3</td>
</tr>
<tr>
<td>Department-approved electives</td>
<td>4</td>
</tr>
</tbody>
</table>

Total 61

Anthropology Minor

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select three from the following:</td>
<td></td>
</tr>
<tr>
<td>ANTH 110, Introduction to Biological</td>
<td>15-16</td>
</tr>
<tr>
<td>Anthropology (5) AND</td>
<td></td>
</tr>
<tr>
<td>ANTH 110LAB, Biological Anthropology</td>
<td></td>
</tr>
<tr>
<td>Laboratory (1)</td>
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<tr>
<td>ANTH 120, Introduction to Archaeology</td>
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<tr>
<td>ANTH 130, Introduction to Cultural</td>
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<tr>
<td>Anthropology (5)</td>
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<tr>
<td>ANTH 180, Introduction to Linguistics</td>
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<tr>
<td>Department-approved electives</td>
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<td>(Students in Teacher Education must</td>
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<tr>
<td>include ANTH 324 or 347, and ANTH 355</td>
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<tr>
<td>or 381 within the 10 credits of electives.</td>
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<tr>
<td>ANTH 381 suggested for those enrolled in</td>
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<tr>
<td>Teaching English as a Second Language.)</td>
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</tbody>
</table>

Total 25-26

Museum Studies Minor

The Museum Studies Minor prepares students for entry-level museum-related employment and/or for graduate work in museum studies. To be eligible for admission to this program, students should be enrolled in a related major (e.g., Anthropology, Art, Biology, Geology, Geography, History, Leisure Services, Science Education, etc.). Approval by the Anthropology Department Chair is also required.

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>Credits</th>
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<tbody>
<tr>
<td>One of the following:</td>
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<tr>
<td>ANTH 107, General Anthropology (5)</td>
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<tr>
<td>OR ANTH 130, Introduction to Cultural</td>
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<tr>
<td>Anthropology (5) OR</td>
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<td>OR ANTH 120, Introduction to Archaeology</td>
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<td>OR</td>
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<tr>
<td>ANTH 110, Introduction to Biological</td>
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<tr>
<td>Anthropology (5)</td>
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<tr>
<td>ANTH 360, Introduction to Museum Studies</td>
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<tr>
<td>ANTH 361, Museum Exhibit Design</td>
<td>4</td>
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<tr>
<td>ANTH 362, Museum Curation and Management</td>
<td>4</td>
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<tr>
<td>Department-approved electives</td>
<td>4</td>
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<td>Teaching English as a Second Language.)</td>
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</tbody>
</table>

Total 30

Anthropology Courses

| ANTH 107. General Anthropology (5).          |         |
| Human biological and cultural adaptations:   |         |
| survey of concepts, methods, and perspectives |         |
| on past and present.                         |         |
| ANTH 110, Introduction to Biological         |         |
| Anthropology (5). A survey of the history,   |         |
| philosophy and theory of biological          |         |
| anthropology including biological            |         |
| relationships to other primate forms, the    |         |
| fossil record, and evolutionary              |         |
| adaptations. ANTH 110LAB should be taken     |         |
| concurrently.                               |         |
| ANTH 110LAB, Biological Anthropology        |         |
| Laboratory (1). Pre or co-requisite: ANTH   |         |
110. Practical laboratory experience with data in human osteology; comparative primate anatomy and ethology, forensic anthropology; genetics, and the fossil record of human evolution. Two hours laboratory per week. ANTH 110LAB required for Anthropology majors and minors; optional for students completing breadth requirements of General Education. Formerly ANTH 110.1. Students may not receive credit for both.

ANTH 120. Introduction to Archaeology (5). Introduction to the concepts, methods and development of archaeology.

ANTH 130. Introduction to Cultural Anthropology (5). Understanding human cultures: concepts, methods, and basic data involved in the comparative study of human cultural adaptations.

ANTH 180. Introduction to Linguistics (5). Background, development, and relation to other fields of study. ANTH 180 and ENG 180 are equivalent courses. Students may not receive credit for both.

ANTH 215. Concepts in GIS (3). Basic principles and uses of Geographic Information Systems (GIS). Practice with the use of GIS in solving land management and evaluation problems. Two hours lecture and 4 hours lab per week. ANTH 215 and GEOG 215 are equivalent courses. Students may not receive credit for both.

ANTH 296. Individual Study (1-6). Prerequisite, permission of instructor.

ANTH 298. Special Topics (1-6).

ANTH 301. Anthropology: Principles and Assessment (2). Principles and assessment course for majors: current topics and careers, research, funding; development of assessment portfolios and individual program plans. Required for all B.A., B.S. Anthropology majors at admission.

ANTH 310. Research/Laboratory in Biological Anthropology (1-2). Prerequisite, previous college work in biological anthropology or other natural sciences and permission of instructor. Laboratory research analysis of biological anthropology materials. May be taken concurrently with and as a supplement to other 300-level courses in biological anthropology. The course may be repeated up to a cumulative maximum of 8 credits. No more than 10 credits of ANTH 310 and 485 allowed to fulfill B.A. or B.S. requirements.

ANTH 311. Advanced Biological Anthropology: Principles of Human Evolution (4). Prerequisites, ANTH 110 and 110LAB or permission of the instructor. Analysis and interpretation of major principles of modern biological anthropology from an evolutionary perspective: genetics, population genetics, ecology, comparative anatomy and human paleontology.


ANTH 313. Primate Social Behavior (4). Prerequisite, ANTH 107 or 110 or 130 or BIOL 112; or permission of instructor. Survey of field studies of nonhuman primates relevant to the study of human social systems and adaptation.

ANTH 314. Human Variation and Adaptation in Living Populations (4). Survey of genetic, morphological and physiological variability of living human populations and their biological source mechanisms. Current population dynamics are used to project future alternatives for change.


ANTH 320. Research/Laboratory in Archaeology (2). Analysis of archaeological materials. Prerequisite, ANTH 120 or permission of instructor. May be repeated, with permission of Department Chair for a total of not more than 6 credits. Minimum of 4 hours laboratory per week. No more than 10 credits of ANTH 320 and 486 allowed to fulfill B.A. or B.S. requirements.

ANTH 321. Archaeological Methods (4). Lectures and practical experience in analytical techniques including seriation, stratigraphic correlation, regional integration and settlement pattern studies.

ANTH 322. World Prehistory (4). Old and New World prehistory from late Pliocene to the early historic period, including the ecology and development of hunting-gathering, agriculture and state-level societies. ANTH 322 and HIST 222 are equivalent courses. Students may not receive credit for both.

ANTH 323. Field Archaeology (3-6). Prerequisite, ANTH 120 or permission. Identification, mapping and recording of archaeological sites; techniques of excavation. Grade will be S or U. May be repeated for credit with permission of Chair.


ANTH 327. Non-Industrial Technologies (3). Selected tools and techniques used by non-industrial and prehistoric peoples in adapting to their environments.


ANTH 333. Culture & Marriage (4). The reciprocal relationships between the biophysical and cultural components in mating, nurturing and sexual access. Cross-cultural patterns in marriage. ANTH 333 and FCSF 333 are equivalent courses. Students may not receive credit for both.

ANTH 334. Culture and Criminality (3). The cultural patterning of criminality: cross-cultural similarities and differences in the ways in which cultures create and maintain social order and cope with social disorder.

ANTH 336. Anthropology of Aging (3). Cross-cultural perspectives on aging and on ethnic elderly in pluralistic societies: variations in social and economic statuses of the elderly.

ANTH 341. Native American Cultures of the Pacific Northwest (4). Ecological settings and cultural adaptation of PNW Native Americans in historical and contemporary contexts. Culture change and continuity, language, religion, resource management, and tribal sovereignty.

ANTH 342. Hispanic Cultures of the Western U.S. (4). This course provides an overview of Hispanic cultures in the American Southwest, California and the Pacific Northwest. Culture change and maintenance through language, religion and an economic resource base are highlighted.


ANTH 345. Cultures of Southeast Asia and Oceania (4). Setting and cultural adaptation of the peoples of Southeast Asia and Oceania.

ANTH 346. Cultures of Latin America and the Caribbean (4). Survey of anthropological research on cultures of Latin America and the Caribbean in historical and contemporary contexts.

ANTH 347. Native American Cultures of North America (4). Ecological settings and cultural adaptations of NA Native Americans in historical and contemporary contexts. Culture change and continuity, language, religion, resource management and tribal sovereignty.

ANTH 348. American Culture (3). A contrastive approach to American culture: values, attitudes, practices of subsistence, economics, politics, kinship, religion in holistic cultural perspective.
ANTH 339. Contemporary Native American Cultures (4). Overview of contemporary Native North American cultures including tribal sovereignty and resource management, religion, art, health status and healing practices, cultural continuity and adaptation.

ANTH 350. Culture, Contact and Ethnicity (4). Theory and methods for analysis of culture contact situations.

ANTH 351. Visual Anthropology (4). Prerequisites, ANTH 130 or ART 225 or COM 321 or 330 or by permission of the instructor. Provides methodological, theoretical and practical background to produce and evaluate imagery in films and video; guidelines and practice of image presentation/manipulation in anthropological and social contexts. ANTH 351 and COM 351 are equivalent courses. Students may not receive credit for both.


ANTH 357. Medical Anthropology: Cross-Cultural Perspectives on Health and Healing (4). Emphasizes cultural and biological factors influencing health maintenance in human populations and cross-cultural perspectives on illness, healing and the provision of health care.

ANTH 358. Culture and Politics in a Global Economy (4). Comparative perspectives on cultural process of change within the global economic system.

ANTH 359. Survey of Music in Cross-Cultural Perspectives (3). An introduction to ethnomusicology: the cultural context of music with emphasis on Africa, Asia, North and South America, and Oceania. ANTH 359 and MUS 359 are equivalent courses. Students may not receive credit for both.


ANTH 361. Museum Exhibit Design (4). Principles of design applied to visual presentation of material culture, ideas and concepts through educational exhibits.

ANTH 362. Museum Curation and Management (4). Application of techniques of environmental security, restoration and preservation in the management of museum collections.

ANTH 380. Nonverbal Communication (4). Interpretation and analysis of four categories of nonverbal behavior: paralanguage, action language, object language, and uses of space and time. Formerly COM 280/ANTH 280. ANTH 380 and COM 380 are equivalent courses. Students may not receive credit for both.

ANTH 381. Language in Culture (4). Language as a culture trait. Influence of language on other human institutions. Includes psycholinguistics, sociolinguistics, ethnographic semantics, and multilingualism in its sociocultural setting.

ANTH 382. Descriptive Linguistics (4). Introduction to the basic concepts and mechanics of formal linguistic analysis.

ANTH 398. Special Topics (1-6).

ANTH 404. Intermediate GIS (4). Prerequisite, GEOG 303/403 or permission. Applied concepts, principles, and operation of fundamental GIS applications, including raster-vector data models, topology, digitizing, and various analytical techniques such as overlay, buffers, and Boolean queries. Lecture and practical applications. ANTH 404, GEOL 404 and GEOG 404 are equivalent courses. Students may not receive credit for more than one. Formerly ANTH/GEOG/GEOL 385.

ANTH 412. Long Term Primate Studies (4). Prerequisite, ANTH 313. A survey of major long term field research projects including apes, monkeys and lemurs; comparisons across sites and results of long term observation of non-human primates.

ANTH 414. Forensic Anthropology: Cold Case Analysis (6). Prerequisites, ANTH 110, ANTH 315, ANTH 310 and permission of the instructor. The course explores the recovery and examination of skeletal remains through practical experience in the recovery of buried remains. Students will plan, manage, and conduct a forensic skeletal analysis of a cold case. Findings will be presented.

ANTH 415. Forensic Anthropology: Theoretical and Applied Issues (4). Prerequisites, ANTH 110, ANTH 315, ANTH 310 and permission of the instructor. An in depth and critical analysis of journal articles pertaining to forensic anthropology, osteology, and archeology. An examination of archaeological techniques that can be adapted to forensic and medico-legal investigations.

ANTH 416. Pongid Behavior (4). Prerequisite, ANTH 313. An overview of Pongid (chimpanzee, gorilla and orangutan) physiology, social and developmental behaviors in natural and laboratory conditions.

ANTH 417. Advanced GIS (4). Prerequisite, GEOG 404, ANTH 404, or GEOL 404 or permission of instructor. Advanced GIS principles, techniques, analysis, and application. Lecture and practical hands-on experience. Applied experience using GIS software. ANTH 417, GEOL 417 and GEOG 417 are equivalent courses. Students may not receive credit for more than one.

ANTH 418. Primate Evolution (4). Prerequisites, ANTH 110, ANTH 313. An overview of primate evolution from the earliest forms to modern representatives. Fossils, paleoenvironments, adaptive radiations and evolutionary trends among the primates.

ANTH 421. Archaeological Theory (4). Prerequisite, ANTH 120, or permission. Discussion of research problems in data collection, analysis, and interpretation.

ANTH 425. Zooarchaeology (4). Prerequisites, ANTH 120 and either ANTH 110LAB or BIOL 112, or permission. Mammalian osteology and methods in the analysis of animal bones from archaeological sites.

ANTH 440. Ecology and Culture (4). Investigation into interdependent environmental and human cultural systems. Traditional agroecologies and subsistence strategies; contemporary problems of resource management, social equity, political ecology, and sustainable development. ANTH 440, GEOG 440 and REM 540 are equivalent courses. Student may not receive credit for more than one.

ANTH 442. Comparative Ethnology (4). A study of the analytical frameworks used in anthropological research.

ANTH 444. Ethnographic Field Methods (4). Methods used in ethnographic field work.

ANTH 451. History and Theory of Anthropology (4). Prerequisite, 20 hours of ANTH or permission. Content and developmental history of anthropological theories and methods.

ANTH 456. Principles of Anthropology for Teachers (4). Concepts related to human biological and cultural adaptation, with emphasis on applicability to public school teaching (K-12).

ANTH 458. Senior Comprehensive Survey (4). Prerequisite, ANTH major or permission. Advanced comprehensive survey of the field of anthropology as to its content and intent. Specifically designed for majors preparing for graduate work.

ANTH 459. Senior Colloquium (3). A capstone seminar for the Anthropology B.A. The seminar reinforces interdisciplinary preparation and knowledge in one field of anthropology (linguistics, ethnology, archaeology, or biological anthropology).
ANTH 480. Survey of Linguistics (4).
Linguistic concepts and the relation between linguistics and other fields of study. Open to seniors and graduate students only. ANTH 480 and ENG 480 are equivalent courses. Students may not receive credit for both.

ANTH 483. Sociolinguistics (4).
Prerequisite, ANTH/ENG 180 or 480, ANTH 381, or FNLA 481 or departmental approval. Concepts and methods of sociolinguistic analysis in first and second languages. Will examine differences among cultures in the relationship between language usage and inequality. ANTH 483 and FNLA 483 are equivalent courses. Students may not receive credit for both.

ANTH 485. Method and Theory in Biological Anthropology (1-8).
Prerequisite, Introductory plus 5 upper-division credits in biological anthropology or corresponding coursework in the biological sciences. Methods and techniques, research problems, data collection, analysis, interpretation. Laboratory orientation. May be repeated up to 8 credits. Formerly ANTH 495.1.

ANTH 486. Advanced Methods in Archaeology (1-8).
Prerequisite, 5 upper-division credits in archaeology. Archaeological research design; planning and supervision of laboratory and field operation; preparation of reports for publication. May be repeated up to 8 credits. No more than 10 credits of ANTH 320 and 486 allowed to fulfill B.A. or B.S. requirements. Formerly ANTH 495.2.

ANTH 487. Field Linguistics (1-8).
Prerequisite, ANTH 382 or permission. A laboratory oriented course providing both demonstration and practicum in recording, transcription, and structure of languages. Tapes and field derived data. May be repeated up to 8 credits. Formerly ANTH 495.3.

ANTH 488. Advanced Research in Cultural Anthropology (1-8).
Prerequisite, ANTH 130 or equivalent, plus 5 upper-division credits in cultural anthropology. May be repeated for credit up to a total of 8 credits. Formerly ANTH 495.4.

ANTH 490. Cooperative Education (1-12).
An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated.

ANTH 491. Workshop (1-6).

ANTH 492. Anthropological Teaching Experience (1-2).
Prerequisite, 15 credits in anthropology; permission of instructor and Department Chair. May be repeated; a maximum of 6 credits to count toward major. Grade will be S or U. Formerly ANTH 494.

ANTH 493. Anthropological Field Experience (1-8).
Prerequisite, permission of instructor and Department Chair. Individual or group off-campus experience in the field study of anthropological phenomena. This course may be repeated for full credit.

ANTH 494. Applied GIS Project (2-6).
Prerequisite, ANTH/GEOG 215 and permission of instructor. GIS projects in Anthropology, Biology, Geography, Geology, Resource Management. May be repeated for credit. ANTH 494, GEOG 494 and GEOL 494 are equivalent courses. Formerly ANTH 492.

ANTH 496. Individual Study (1-6).
Prerequisite, permission of instructor.

ANTH 498. Special Topics (1-6).

ANTH 499. Seminar (1-5).

Undergraduate Courses/Programs on Reserve
The following course is on reserve and may be offered subject to program needs:

ANTH 326 Archaeology of Mexico (3).

ART

Faculty
Interim Chair: William Folkestad
Randall 103

Professors
Michael Chinn, Wood Design, Design
Keith Lewis, Jewelry & Metalsmithing, Design

Associate Professor
Glen Bach, Director of Graphic Design
William Folkestad, Art History and Criticism
Shari Stoddard, Art Education

Assistant Professors
Stephen Chalmers, Photography
Ovidio Gibr optimization, Ceramics, Design
Brian Goetzlenzleuchter, Painting, Drawing
Donna Stack, Sculpture, Design

General Departmental Information
The Department of Art is the primary agent for the study and practice of visual culture at Central Washington University. Through our programs and affiliated course offerings we transmit knowledge which enables our students to assume influential roles as practitioners, educators, and informed patrons of the visual arts. We strive to enhance our students’ understanding of the diversity and unity, the traditions and innovations, the freedom and restraint of both visual and physical imagery. It is additionally the department’s goal to facilitate liberal learning and academic excellence through instruction which is sensitive to the needs of a diverse student body, and is attentive to the technological and economic realities of an increasingly visual culture.

Our undergraduate curricula provides opportunities for study in studio art, graphic design, and art education with allied course offerings in art history and criticism. In addition, we offer minors in studio art, art history and art education for students in other disciplines who wish to supplement their majors.

Students can complete any of our degree programs in four years provided they work closely with an advisor beginning their freshman year and take courses in the recommended sequence.

Bachelor of Fine Arts in Art Graphic Design Specialization
A comprehensive studio art degree for students desiring to pursue careers in the field of graphic design and visual communications. The program emphasizes critical thinking through the exploration of digital and print media. After completion of the Art core and pre-Graphic Design prerequisites students are required to complete the Graphic Design Concentration requirements, including a contracted field experience. Transfer students are encouraged to complete as many of the transferable Art requirements as possible prior to enrolling at CWU.

An Apple Macintosh computer and appropriate software is recommended prior to beginning the Major Core requirements.

Art Core Requirements ............ Credits
ART 190, Drawing I .................. 4
ART 170, Basic Design I ............... 4
ART 171, Basic Design II .............. 4
ART 250, Drawing II .................. 4
ART 235, Ancient to Medieval Art .. 4
ART 236, Renaissance through Mid-19th-Century Art ......................... 4
ART 237, Impressionism through Postmodern Art ......................... 4

Pre-Graphic Design Requirements. Credits
ART 225, Photography I ............. 4
ART 274, Typography ................ 4
ART 351, Illustration I ................ 4
ART 374, History of Graphic Design . 4
ART 384, Computer Art I ............. 4
Select two courses from: ............. 8
ART 260, Painting I (4)
ART 360A, Painting II (4)
ART 262, Watercolor I (4)
ART 362A, Watercolor II (4)
Select one course from: .......................... 4
ART 325A, Photography II–Color
Photography (4)
ART 325B, Photography II–Alternative
Processes (4)
ART 325C, Photography II–Digital
Imaging (4)

Graphic Design Requirements . . . . Credits
ART 370, Layout and Design I ........................ 5
ART 371, Layout and Design II ....................... 5
ART 372, Design and Production I .................. 5
ART 414, Recent Art ................................. 4
ART 451, Illustration II .............................. 4
ART 470, Advertising Graphic Design .............. 4
ART 471, Corporate Graphic Design ............... 4
ART 472, Design and Production II ................. 4
ART 490, Cooperative Education
(Internship) .................................... 10
ART 495, Studio Project ................................ 1

Total 106

Studio Art Specialization

A comprehensive studio art degree for
students desiring to pursue studio art-related
fields or seeking artistic enrichment, with
disciplinary studies in:
- Ceramics (1560)
- Computer Art (1562)
- Drawing (1564)
- Jewelry/Metalsmithing (1566)
- Painting (1568)
- Photography (1570)
- Sculpture (1572)
- Wood Design (1574)

In addition to core and other required
courses, students are required to complete a
24 credit "area of concentration" requirement
in a single discipline. Transfer
students are encouraged to complete as
many of the transferable Art requirements as
possible prior to enrolling at CWU.

Art Core Requirements ............... Credits
ART 150, Drawing I ............................. 4
ART 150, Drawing II ............................. 4
ART 170, Basic Design I .......................... 4
ART 171, Basic Design II .......................... 4
ART 225, Wood Design I ......................... 4
ART 225, Wood Design II ......................... 4
ART 235, Ancient and Medieval Art .......... 4
ART 236, Renaissance through Mid-19th
Century Art .................................. 4
ART 237, Impressionism Through
Postmodern Art .................................. 4

Required Courses ............... Credits
ART 225, Photography I ......................... 4
Select one course from: ......................... 4
ART 260, Painting I (4)
ART 262, Watercolor I (4)
ART 280, Sculpture I ............................. 4
ART 241, Wood Design I .......................... 4
ART 246, Jewelry/Metals I ......................... 4
ART 265, Ceramics I ............................. 4
ART 384, Computer Art I .......................... 4
ART 389, Contemporary Concepts in Art ... 4
ART 414, Recent Art ............................. 4
Select one course from: .......................... 4
ART 357, African and Oceanic Art (4)
ART 456, History of Eastern Art (4)
ART 360A, Painting II (4)
ART 360B, Painting II (4)
ART 362A, Watercolor II (4)
ART 365A, Ceramics II–Handbuilding (4)
ART 365B, Ceramics II–Wheel
Throwing (4)
ART 380A, Sculpture II (4)
ART 384, Computer Art I (4)
ART 389, Contemporary Concepts in Art ... 4
ART 410, Art of the Italian Renaissance (4)
ART 415, Painters and Printmakers
of Northern Europe (4)
ART 453, Art of the United States (4)
ART 456, History of Eastern Art (4)
ART 495, Studio Project .......................... 1

Total 105

Bachelor of Arts

Art Major

Required Courses $ Credits
ART 150, Drawing I ............................. 4
ART 225, Wood Design I ......................... 4
ART 235, Ancient and Medieval Art .......... 4
ART 236, Renaissance through Mid-19th
Century Art .................................. 4
ART 237, Impressionism Through
Postmodern Art .................................. 4
ART 414, Recent Art ............................. 4
Select from the following: ......................... 4
ART 260, Painting I (4)
ART 262, Watercolor I (4)
ART 265, Ceramics I ............................. 4
ART 280, Sculpture I ............................. 4
ART 241, Wood Design I .......................... 4
ART 357, African and Oceanic Art (4)
Select 12 credits from the following: .............. 12
ART 324, History of Photography (4)
ART 325A, Photography II–Color
Photography (4)
or
ART 325B, Photography II–Alternative
Processes (4)
or
ART 325C, Photography II–Digital
Imaging (4)
ART 341, Wood Design II (4)
ART 346, Jewelry/Metals II (4)
ART 350, Drawing III (4)
ART 357, African and Oceanic Art (4)
ART 360A, Painting II (4)
OR
ART 360B, Painting II (4)
ART 362A, Watercolor II (4)
ART 365A, Ceramics II–Handbuilding (4)
OR
ART 365B, Ceramics II–Wheel
Throwing (4)
ART 380A, Sculpture II (4)
ART 384, Computer Art I (4)
ART 389, Contemporary Concepts in Art ... 4
ART 410, Art of the Italian Renaissance (4)
ART 415, Painters and Printmakers
of Northern Europe (4)
ART 453, Art of the United States (4)
ART 456, History of Eastern Art (4)
ART 495, Studio Project .......................... 1

Total 105

Visual Art: Teaching Major

This major satisfies the endorsement for
Visual Arts.

A comprehensive visual-art program
which qualifies students to teach art at either
the elementary or secondary levels in regular
or self-contained classrooms. Students taking
this major are required to complete the
professional education sequence requirements
offered through the
Department of Education.

Required Courses $ Credits
ART 150, Drawing I ............................. 4
ART 225, Photography I ......................... 4
ART 265, Ceramics I ............................. 4
ART 246, Jewelry/Metals I ......................... 4
ART 280, Sculpture I ............................. 4
ART 330, Art in the Elementary School ... 4
ART 410, Art of the Italian Renaissance (4)
ART 415, Painters and Printmakers
of Northern Europe (4)
ART 453, Art of the United States (4)
ART 456, History of Eastern Art (4)
ART 495, Studio Project (must be taken in
one of the last two quarters prior to graduation) 1

Total 61
Art Studio Minor

Required Courses
Select one course: .......................... 4
ART 150, Drawing I (4)
ART 170, Basic Design I (4)
ART 235, Ancient and Medieval Art (4)
ART 236, Renaissance Through Mid-19th Century Art (4)
ART 237, Impressionism Through Postmodernism (4)
ART 414, Recent Art (4)
Select 16 credits from the following: ...... 16
ART 150, Drawing I (4)
ART 225, Photography I (4)
ART 241, Wood Design I (4)
ART 246, Jewelry/Metals I (4)
ART 250, Drawing II (4)
ART 260, Painting I (4)
ART 262, Watercolor I (4)
ART 265, Ceramics I (4)
ART 280, Sculpture I (4)
ART 325A, Photography II–Color Photography (4) OR
ART 325B, Photography II–Alternative Processes OR
ART 325C, Photography–Digital Imaging (4)
ART 341, Wood Design II (4)
ART 346, Jewelry/Metals II (4)
ART 350, Drawing III (4)
ART 360A, Painting II (4)
ART 362A, Watercolor II (4)
ART 365A, Ceramics II (4)
ART 380A, Sculpture II (4)
ART 384, Computer Art I (4)
ART 484, Computer Art II (4)

Total 24

Art History Minor

Required Courses
Select 24 credits from the following: ...... 24
ART 235, Ancient and Medieval Art (4)
ART 236, Renaissance Through Mid-19th Century Art (4)
ART 237, Impressionism Through Postmodernism (4)
ART 357, African and Oceanic Art (4)
ART 410, Art of the Italian Renaissance (4)
ART 414, Recent Art (4)
ART 415, Artists and Printmakers of Northern Europe (4)
ART 453, Art in the United States (4)
ART 456, History of Eastern Art (4)

Total 24

Art Courses
ART 101. Introduction to Western Art (5).
The visual arts as an expression of the human experience. Does not apply to the art major.

ART 102. Introduction to Non-Western Art (5).
A survey of non-western painting, sculpture and architecture. This course does not apply to the art major.

ART 150. Drawing I (4). Studio experience emphasizing the understanding of form and composition through the use of various drawing materials and techniques. May include drawing from the figure. Six hours studio per week.

ART 170. Basic Design I (4). Study of elements and principles of two-dimensional design. Development of conceptual clarity and technical skills, with emphasis on design vocabulary and visual analysis. Six hours studio per week.

ART 171. Basic Design II (4). Prerequisite, ART 170. Exploration of the elements and principles of design in three-dimensional media. Emphasis on the development of design vocabulary, conceptual clarity, visual analysis and technical proficiency. Six hours studio per week. Formerly ART 270. Student may not receive credit for both.

ART 224. Photography for Non-Majors (4). A basic course covering black and white photography and photographic concepts for non-art majors. Six hours studio per week. Does not apply to the art major.

ART 225. Photography I (4). A basic course covering equipment, concepts, and processes of black and white photography. Six hours studio per week.

ART 235. Ancient and Medieval Art (4). A historical survey of Western Art from ancient times through the Gothic period.

ART 236. Renaissance Through Mid-19th Century Art (4). Prerequisite, ART 235. A historical survey of Western Art from the Renaissance to Impressionism. Formerly ART 336. Student may not receive credit for both.

ART 237. Impressionism Through Postmodernism (4). Prerequisites, ART 235 and ART 236. Art in Europe and the United States from Impressionism through Postmodernism. Formerly ART 337. Student may not receive credit for both.

ART 241. Wood Design I (4). Introduction to wood as an artistic and design medium. Emphasis on visual communication utilizing basic shaping and finishing processes. Six hours studio per week.

ART 246. Jewelry/Metals I (4). Design and construction of jewelry and small-scale metal objects. Emphasis on technical skill-development and introduction to contemporary work. Six hours studio per week. Formerly ART 347. Student may not receive credit for both.

ART 250. Drawing II (4). Prerequisite, ART 150. A continuation of ART 150 with an emphasis on technique, composition and interpretation of ideas. Includes drawing from the figure. Six hours studio per week.

ART 252. Introduction to Drawing the Figure (3). Prerequisite, ART 150. An introduction to the basics of design and structure in drawing the figure.

ART 260. Painting I (4). Prerequisite, ART 150, 170, or permission of instructor. An introduction to the techniques of painting for expressive purposes. Six hours studio per week.

ART 262. Watercolor I (4). Prerequisite, ART 150. An introduction to the techniques of transparent watercolor and the visual problems of painting. Six hours studio per week.

ART 264. Traditional Chinese Painting (3). An introduction to the practice of the different styles of traditional Chinese painting. Will include the study of the traditional composition, aesthetic and theory.

ART 265. Ceramics I (4). A foundation course utilizing wheel-throwing and hand-building processes and glazing to form containers and sculpture in clay. Six hours studio per week.


ART 274. Typography (4). Prerequisite, ART 170. History and application of typography as a tool for visual communication. Two hours lecture and two hours studio per week.

ART 280. Sculpture I (4). Introduction to the studio experience in sculpture. Emphasis on the exploration of techniques and history of prints, with an emphasis on relief printmaking. Six hours of studio per week.

ART 285. Printmaking I (4). Prerequisites, ART 150, 170. Exploration of techniques and history of prints, with an emphasis on relief printmaking. Six hours of studio per week.

ART 296. Individual Study (1-6). May be repeated. Prerequisite, permission of instructor.

ART 298. Special Topics (1-6).

ART 299. Seminar (1-5). May be repeated.

ART 300. Papermaking (4). Hand papermaking techniques, exploring historical and contemporary works/methods. Watermarking, pigmentation, moldmaking, with emphasis on sheeforming and fiber preparation. May be repeated for credit.

ART 324. History of Photography (4). A survey of contemporary photographers, their ideas, and the influences of their work upon culture. Covers mid-twentieth
ART 360A. Painting II (4). Prerequisite, ART 260. Continued study of technical and formal approach to painting, with emphasis on visual abstraction. Six hours studio per week. Formerly ART 360.

ART 360B. Painting II (4). Prerequisite, ART 260. Continued study of technical and formal approach to painting, with emphasis on visual abstraction. Six hours studio per week. Formerly ART 360.

ART 360C. Painting IV (4). Prerequisite, ART 360B, or permission of instructor. A continued study in the field as outlined in ART 360B. Six hours studio per week. Formerly ART 361.

ART 362A. Watercolor II (4). Prerequisite, ART 262 or permission of instructor. A continuation of ART 262 stressing a higher degree of individual expression and experimentation with various waterbased media. Six hours studio per week. Formerly ART 263.

ART 362B. Watercolor III (4). Prerequisite, ART 362A. A continuation of the technical and formal study of waterbased media with an emphasis on the development of individual expression. Six hours studio per week. Formerly ART 362.

ART 362C. Watercolor IV (4). Prerequisite, ART 362B. A continuation of the study outlined in ART 362B with emphasis upon developing individual direction. Six hours studio per week. Formerly ART 363.

ART 364. Traditional Chinese Painting II (3). A continuation of traditional Chinese painting with emphasis on fine line and spontaneous style painting using both traditional and contemporary techniques.

ART 365A. Ceramics II-Advanced Handbuilding (4). Prerequisite, ART 265. This course alternates quarterly with ART 365B. Advanced instruction in ceramic sculptural concepts and techniques including idea development, historical/contemporary influences, investigation of clay bodies and personal expression through sculptural form.

ART 365B. Ceramics II-Wheel Throwing (4). Prerequisite, ART 265. This course alternates quarterly with ART 365A. An exploration of the potter’s wheel as a tool for personal expression through vessel forms. Emphasis on utilitarian ceramics, vessel design and historical/contemporary influences.

ART 367. Layout and Design I (5). Prerequisite, permission of instructor. (See requirements for admission to graphic design major) Two-dimensional design, introduction to type, design and composition concepts. Two hours lecture and four hours studio per week.

ART 367L. Layout and Design II (5). Prerequisites, ART 370, permission of instructor. Advanced work in design composition with emphasis on applications of letter forms and color. Two hours lecture and four hours studio per week.

ART 367N. Layout and Design III (5). Prerequisite, permission of instructor. Advanced work in design composition with emphasis on applications of letter forms and color. Two hours lecture and four hours studio per week.

ART 370. Layout and Design I (5). Prerequisite, permission of instructor. Emphasis on advertising art and production techniques. Two hours lecture and four hours studio per week.

ART 374. History of Graphic Design (4). A historical survey of the graphic arts from their beginning to the present.

ART 380A. Sculpture II (4). Prerequisite, ART 280. A continuation of the study of sculpture, emphasizing the development of a higher level of technical competence, greater exploration of materials, and conceptual development. Six hours studio per week.

ART 380B. Sculpture III (4). Prerequisite, ART 380A. A concentrated study of current three-dimensional issues in art, giving increased attention to conceptual clarity, creative problem solving and visual communication. Six hours studio per week. Formerly ART 380.

ART 381. Mixed-Media Art (4). Prerequisites, ART 260, ART 280. A concentrated study of the integration of two and three-dimensional media into mixed-media art forms. May be repeated for credit.

ART 384. Computer Art I (4). Prerequisite, ART 260 or 262 and permission of instructor. Use of computer systems as tools for creative expression. Six hours studio per week.

ART 389. Contemporary Concepts in Art (4). Exploration of the contextual, formal, and philosophic meanings of current art movements and theorems as regards their relevance and place in contemporary art practice.

ART 398. Special Topics (1-6).

ART 410. Art of the Italian Renaissance (4). Prerequisite, ART 236. The painting, sculpture and architecture of the Italian Renaissance from the late middle ages through the sixteenth century.

ART 414. Recent Art (4). Prerequisite, ART 237. The visual arts of the last 25 years, including the traditional forms of painting, sculpture and architecture, and newer forms including video, computer, and performance art. Formerly ART 314. Students may not receive credit for both.


ART 425. Photography III (4). Prerequisites, ART 325 and permission of instructor. A continuation of study outlined in ART 325A, ART 325B, and ART 325C with emphasis upon developing individual direction. Six hours studio per week. May be repeated for credit.

ART 430. Components of Art Education (4). Prerequisite, ART 330. Content and
strategies for teaching aesthetics, art criticism, art history, and art production in art education; writing, implementing, and assessing quality art lessons.


ART 441. Wood Design III (4). Prerequisite, ART 341. Advanced design and fabrication of furniture forms. Emphasis on research and development of furniture forms utilizing advanced and/or innovative fabrication and finishing processes. Six hours studio per week. May be repeated for credit.

ART 449. Principles of Color (4). Prerequisite, two art studio courses. The technical, historic and aesthetic dimensions of pigment and light colors including an examination of major color theories.

ART 450. Drawing IV (4). Prerequisite, ART 350 and permission of instructor. Advanced study and experimentation with technical, formal and conceptual problems in drawing. Includes drawing from the figure. Six studio hours per week. May be repeated for credit by undergraduates only.

ART 451. Illustration II (4). Prerequisite, ART 351. A continuation of ART 351 stressing development of personal expression in illustration. Six hours studio per week. May be repeated for credit by undergraduates only.

ART 453. Art in the United States (4). Sculpture, painting and architecture from Colonial period to the present, with emphasis on the period 1900-1945. Foreign influences are identified and traced to their assimilation. ART 453 and ART 553 are equivalent courses. Students may not receive credit for both.

ART 456. History of Eastern Art (4). Prerequisite, permission of the instructor. A survey of the architecture, sculpture, painting, and the crafts of India, Indonesia, China, and Japan. ART 456 and ART 556 are equivalent courses. Students may not receive credit for both.

ART 460. Painting V (4). Prerequisites, ART 360C, ART 450, permission of instructor. Advanced study and experimentation in technical, formal and conceptual approaches to painting, with an emphasis on developing individual expression. Six hours studio per week. May be repeated for credit.

ART 465. Ceramics III (4). Prerequisites, permission of instructor and ART 365A or B. A continued exploration of ceramic materials and processes. Emphasis on developing professional practices and personal vocabulary through the ceramic medium. May be repeated for credit.

ART 470. Advertising Graphic Design (4). Prerequisite, permission of instructor. Concept and design of advertising problems. Presentation and communication skills; introduction to analysis and implementation of marketing strategies. May be repeated for credit. One hour lecture and four hours studio per week.

ART 471. Corporate Graphic Design (4). Prerequisites, ART 470, permission of instructor. Principles of corporate concept and design: advanced presentation and communication skills; analysis and implementation of marketing strategies in the corporate setting. One hour lecture and four hours studio per week. May be repeated for credit.

ART 472. Design and Production II (4). Prerequisite, ART 471. Continues the development of professional attitudes; promotes creative problem solving techniques; defines the role of designer or art director and relationships to typographer and printer. One hour lecture and four hours studio per week. May be repeated for credit.

ART 480. Sculpture IV (4). Prerequisite, ART 380B. Advanced studies in sculpture. Emphasis is on creative self-expression and the development of a self-directed body of work. Six hours studio per week. May be repeated for credit.

ART 482. Travel Study (2-8). Conducted tour in this country and abroad as a means of studying art. Students registering for credit will be required to do reading on the area to be visited before making the tour, to participate in study session during the tour, and to submit a report for evaluation at the end of the trip. The amount of credit to be granted will be determined by the college at the time the tour is approved, but it must not exceed 1-1/2 credits per week of planned travel study.

ART 484. Computer Art II (4). Prerequisite, ART 384 and permission of instructor. Exploration of the creative potential of several software programs and imaging procedures used in the creation of electronic art. Two hours lecture and two hours studio per week. May be repeated for credit.

ART 489. Art and Gender Theory (4). Examines constructions of masculinity and femininity within the canon of western art. Also explores how contemporary artists and historians are subverting these constructions.

ART 490. Cooperative Education (1-12). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U.

ART 491. Workshop (1-6). Individual and group study of specific or general problems in art education, including laboratory experience, lectures and demonstrations. The credit to be earned determined upon scheduling.

ART 495. Studio Project (1). Preparation of a professional portfolio and presentation of a body of work suitable for exhibition. Satisfies end of major assessment requirement. Must be taken during one of the last two quarters prior to graduation. Grade will be S or U.

ART 496. Individual Study (1-2). Prerequisite, permission of instructor. May be repeated.

A. Computer Art
C. Ceramics
D. Drawing
E. Art Education (1-4)
G. Graphic Design
H. Art History
J. Jewelry and Metalsmithing
P. Painting
T. Photography
S. Sculpture
W. Wood Design

ART 498. Special Topics (1-6).
ART 499. Seminar (1-5). May be repeated.

Undergraduate Courses/Programs on Reserve

The following programs and courses are on reserve and may be offered subject to program needs: Fine Woodworking; ART 277. Lettering (3); ART 287 Intaglio Printmaking (3); ART 354. Art of China (4); ART 385. Serigraphy (3); ART 455. Art of Japan (4); ART 485 Advanced Serigraphy (3); ART 486. Advanced Collagraphy (3); ART 496. Individual Study (1-2) R: Printmaking.
ASIA/PACIFIC STUDIES

Program Director: Jeffrey W. Dippmann
Philosophy
LL 337C

Program Faculty
John Alwin, Geography
James Cook, History
Jeffrey Dippmann, Philosophy & Religion
William Folkestad, Art
Michael Lautman, Political Science
Chenyang Li, Philosophy & Religion
Lixi Meng, Chinese Language
Joshua Nelson, Japanese Language
Penglin Wang, Anthropology
Hong Xiao, Sociology
Bang-Soon Yoon, Political Science & Women Studies

General Program Information
Asia/Pacific Studies is an interdisciplinary program focusing on a region currently undergoing a dramatic economic, political and social transformation. The program is intended to provide students with a grasp of the region’s diversity while also emphasizing the interactive nature of an overarching community of nations. Careers in international business, government service, and education all can be augmented by preparations in Asia/Pacific Studies. The program may also serve as an excellent preparation for graduate study in various academic and professional fields.

Bachelor of Arts
Asia/Pacific Studies Major

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia/Pacific Studies Core</td>
<td></td>
</tr>
<tr>
<td>AST 102, Introduction to Asian Studies</td>
<td>3</td>
</tr>
<tr>
<td>HIST 383, East Asian Civilization (5) OR</td>
<td>5</td>
</tr>
<tr>
<td>HIST 380, Modern East Asia</td>
<td></td>
</tr>
<tr>
<td>GEOG 475, Geography of Asia</td>
<td>5</td>
</tr>
<tr>
<td>POSC 366, Government and Politics of East Asia</td>
<td></td>
</tr>
<tr>
<td>JAPN 151 - 153, First Year Japanese</td>
<td></td>
</tr>
<tr>
<td>CHIN 151-153, First Year Chinese</td>
<td></td>
</tr>
</tbody>
</table>

| Total                                       | 48      |

Electives ........................................... 15
Elective credits may be selected from the following with the approval of the student’s program advisor:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 455, Art of Japan</td>
<td>4</td>
</tr>
<tr>
<td>ANTH 344, Cultures of Asia</td>
<td>4</td>
</tr>
<tr>
<td>AST 201, Chinese Literature in Translation</td>
<td>4</td>
</tr>
<tr>
<td>AST 347, Japanese Literature in Translation</td>
<td></td>
</tr>
<tr>
<td>GEOG 474, Geography of China</td>
<td>4</td>
</tr>
<tr>
<td>HIST 482, Revolutionary China (3)</td>
<td>3</td>
</tr>
<tr>
<td>HIST 483, Modern China (5)</td>
<td>5</td>
</tr>
<tr>
<td>HIST 484, Modern Japan (5)</td>
<td>5</td>
</tr>
<tr>
<td>PHIL 445, Chinese Philosophy (5)</td>
<td>5</td>
</tr>
<tr>
<td>POSC 367, Politics of Japan (5)</td>
<td>3</td>
</tr>
<tr>
<td>POSC 368, Chinese Politics (5)</td>
<td>5</td>
</tr>
<tr>
<td>POSC 369, Korean Politics (5)</td>
<td>5</td>
</tr>
<tr>
<td>POSC 373, International Politics of the Pacific Rim (5)</td>
<td>3</td>
</tr>
<tr>
<td>RELS 351, Religions of Asia (5)</td>
<td>5</td>
</tr>
</tbody>
</table>

| Subtotal                                     | 63      |

Asia/Pacific Studies Minor

Required Courses  Credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AST 102, Introduction to Asian Studies</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 475, Geography of Asia</td>
<td>3</td>
</tr>
<tr>
<td>HIST 380, East Asian Civilization (5) OR</td>
<td>5</td>
</tr>
</tbody>
</table>

| Subtotal                                     | 8       |

Select one of the following emphases:

Japanese Studies

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>JAPN 151, 152, 153 (or higher)</td>
<td>10</td>
</tr>
</tbody>
</table>

| Select from the following: ................................ 10 |
| ART 455, Art of Japan                       | 4       |
| HIST 484, Modern Japan (3-5)                | 5       |
| POSC 367, Politics of Japan (5)*            | 3       |
| AST 301, Chinese Literature in Translation  | 4       |
| AST 310, Japan Today (3)                    | 3       |
| AST 347, Japanese Literature in Translation |         |

Chinese Studies

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHIN 151, 152, 153 (or higher)</td>
<td>15</td>
</tr>
</tbody>
</table>

| Select from the following: ................................ 10 |
| AST 301, Chinese Literature in Translation  | 4       |
| GEOG 474, Geography of China (4)            | 4       |
| HIST 482, Revolutionary China (3)          | 3       |
| HIST 483, Modern China (5)                 | 5       |
| PHIL 445, Chinese Philosophy (5)           | 5       |
| POSC 368, Chinese Politics (5)*            | 5       |

Asian Studies (1551)
Chinese, Japanese, or another language with Director’s approval (e.g. Korean, Russian) ........................................... 15

Select from the following: ............................... 10-14

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 344, Cultures of Asia</td>
<td>4</td>
</tr>
<tr>
<td>GEOG 475, Geography of Asia (5) OR</td>
<td>5</td>
</tr>
<tr>
<td>HIST 380, Modern East Asia (5)</td>
<td>4</td>
</tr>
<tr>
<td>POSC 366, Government and Politics of East Asia (5)*</td>
<td>3</td>
</tr>
<tr>
<td>POSC 373, International Politics of the Pacific Rim (5)*</td>
<td>3</td>
</tr>
<tr>
<td>POSC 369, Korean Politics (5)*</td>
<td>3</td>
</tr>
<tr>
<td>RELS 351, Religions of Asia (5)</td>
<td>3</td>
</tr>
</tbody>
</table>

| Total                                         | 33-37  |

*Elective courses may not be chosen from the student’s major area.

Other courses may be included with advisor’s approval. At least two departments must be represented among selected courses.

Asia/Pacific Studies Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AST 102, Introduction to Asian Studies (3)</td>
<td></td>
</tr>
</tbody>
</table>

An interdisciplinary introduction to the study of Asia; emphasizing geography, history, culture and economics.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AST 301, Chinese Literature in Translation (4)</td>
<td></td>
</tr>
</tbody>
</table>

Prerequisite, grade of C- or better in English 101. A survey of Chinese literature in translation. AST 301 and CHIN 301 are equivalent courses. Students may not receive credit for both courses.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AST 310, Japan Today (3)</td>
<td></td>
</tr>
</tbody>
</table>

Study of culture, social structure, human relations, and issues and problems in contemporary Japan.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AST 347, Japanese Literature in Translation (4)</td>
<td></td>
</tr>
</tbody>
</table>

Prerequisite, C- or higher in English 101 or its equivalent. A survey of Japanese literature in translation. AST 347 and JAPN 301 are equivalent courses. Students may not receive credit for both courses.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AST 396, Individual Study (1-6)</td>
<td></td>
</tr>
<tr>
<td>AST 398, Special Topics (1-6)</td>
<td></td>
</tr>
</tbody>
</table>

ASIA/PACIFIC STUDIES 59
BIOL 110, Basic Biology . . . . . . . . . . . . . . . 5
BIOL 111, Plant Biology . . . . . . . . . . . . . . . . . 5
BIOL 112, Animal Biology . . . . . . . . . . . . . . . 5
BIOL 220, Introductory Cellular Biology . . . . . . 5
BIOL 321, Genetics . . . . . . . . . . . . . . . . . . . . . 5
BIOL 355 & 356, Human Anatomy & Physiology . 10

Total 74-83

Bachelor of Science

Biology Major

The Bachelor of Science major offers undergraduate students a degree program with depth of training in the biological sciences and supporting fields. This program prepares students for immediate entrance into careers in biological sciences or for graduate work (for preparation for teaching high school biology, see Biology Teaching Majors). Students may choose a general B.S. degree (no specialization), or a specialization in one of three areas: Cell and Molecular Biology, Ecology, or Organismal Biology (these will be indicated on the student's transcripts). Students consult with the appropriate Biology advisor for approval of their B.S. program and electives, which must be submitted for approval to the Department of Biological Sciences at least one academic year preceding graduation. All students in the B.S. Biology major must complete all B.S. core requirements, plus additional specific requirements if they choose a specialization. A maximum of 15 credits in BIOL 490 and BIOL 496 may be included in the major. CHEM 181 has a prerequisite of high school chemistry and qualification for MATH 153.

Core Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 110, Basic Biology</td>
<td>5</td>
</tr>
<tr>
<td>BIOL 111, Plant Biology</td>
<td>5</td>
</tr>
<tr>
<td>BIOL 112, Animal Biology</td>
<td>5</td>
</tr>
<tr>
<td>BIOL 220, Introductory Cellular Biology</td>
<td>5</td>
</tr>
<tr>
<td>BIOL 321, Genetics</td>
<td>5</td>
</tr>
<tr>
<td>BIOL 495, Senior Seminar OR</td>
<td>5</td>
</tr>
<tr>
<td>BIOL 497, Honors Thesis</td>
<td>1-5</td>
</tr>
</tbody>
</table>
CHEM 181, 181LAB, 182, 182LAB, 183, 183LAB
CHEM 361, 361LAB, 362, Organic Chemistry and laboratory......................... 8
MATH 311, Statistical Concepts (5) OR PSY 362, Introductory Statistics (4) . 4-5

Core Total 66-67
Organismal diversity requirement: All students in the Biology B.S. program must take at least one advanced (300- or 400-level) animal course, one advanced plant course, and one advanced course covering other organisms (fungi, protists, bacteria, viruses). These courses may be contained within the Core or taken as electives. See department for list of approved courses in each category.

B.S. Biology-General Biology (no specialization)
This general degree offers students the flexibility to choose a broad range of courses within biology or to tailor course requirements to specific interests. Electives must be approved by a Biology advisor.

Required Courses Credits
B.S. Core Requirements ................. 66-67
General Biology Electives .............. 33-34
Total 100

Bachelor of Science Biology
Cell and Molecular Biology Specialization
Cell and Molecular Biology is the study of what cells are, how they are put together, what makes them work, what makes them differ from each other, how they associate and interact, and what goes wrong in disease states. The study of cell and molecular biology facilitates understanding of a wide variety of disciplines including genetics, developmental biology, microbiology, immunology and physiology. The emphasis in Cell and Molecular Biology (CMB) is designed for students with interests in the cellular and molecular basics of life and the application of molecular techniques to medical, technological and environmental issues. The goal of the CMB specialization is to prepare graduates to be competitive in applications for entry into graduate degree programs, professional programs, or technical/industrial jobs. A full year of physics (PHYS 111/112/113 + labs or PHYS 181/182/183 + labs) is recommended for students interested in cell and molecular biology.
Students interested in microbiology are eligible to become registered microbiologists (National Registry of Microbiologists, American Academy of Microbiology) upon completing the following requirements:
1. A minimum of a baccalaureate degree in Biological Science with 30 quarter credits in microbiology courses.
2. Acceptable experience equivalent to one year of full-time work in a microbiology laboratory related to the specialty area in which certification is sought. Experience must be gained within the immediate past three years. Certification as a conditional registrant is offered to individuals who possess the academic qualifications for registered microbiologist, but who lack the required year of full-time laboratory experience.

Required Courses Credits
Biology Core ................................ 66-67
BIOL 323, Microbiology ................ 5
BIOL 425, Molecular Biotechnology ...... 5
CHEM 431 and CHEM 431LAB
Biochemistry ................................ 5
Cell and Molecular Biology Electives .. 18-19
Total 100

Bachelor of Science Biology
Ecology Specialization
Ecology is the study of how organisms interact with their physical and biological environment. The Ecology specialization is designed for students interested in basic and applied ecology, including fisheries, wildlife management, forestry, ecological restoration, and conservation biology. Students following this specialization will gain experience in natural history, field research, and experimental design. Potential careers may be found in federal, state and tribal agencies, or private environmental consulting firms. The Ecology faculty strongly suggest that every student augment the single required taxonomy course with an elective second taxonomy course. Students interested in graduate study in ecology should work closely with their advisor to tailor this specialization to their particular field of interest.

Required Courses Credits
Biology Core ................................ 66-67
Select one of the following advanced ecology courses:............................. 5
BIOL 461, Community Ecology (5)
BIOL 462, Wildlife and Fisheries Ecology (5)
BIOL 463, Limnology (5)
BIOL 464, Terrestrial Plant Ecology (5)
BIOL 466, Conservation Biology (5)
Select one of the following taxonomy courses:......................... 4-5
BIOL 341, Plant Taxonomy (5)
BIOL 350, Invertebrate Zoology (5)
BIOL 351, Entomology (5)
BIOL 443, Mycology (5)
BIOL 444, Algology (5)
BIOL 445, Mushrooms and Puffballs (5)
BIOL 450, Ichthyology (4)
BIOL 451, Herpetology (4)
BIOL 452, Ornithology (4)
BIOL 453, Mammalogy (5)
BIOL 493, Field, Techniques .............. 5
MATH 170, Intuitive Calculus ........... 5
Ecology Electives .............. 13-15
Total 100

Bachelor of Science Biology
Organismal Biology Specialization
The Organismal Biology Specialization allows a student to explore the structure (morphology), function (physiology), development, behavior, and taxonomic diversity of animals, plants, fungi, and/or microbes. A student looking for a traditional Zoology or Botany program will be well served by this specialization. The Organismal specialization is a good choice for students preparing for graduate study in organismal biology or planning for a career in the health professions, forensics, or state or federal agency work, and it can complement other programs such as teaching, biological anthropology, and psychology.

Required Courses Credits
Biology Core ................................ 66-67
Select two of the following structural/ functional courses:......................... 10-11
BIOL 343, Plant Anatomy (5)
BIOL 353, Comparative Vertebrate Anatomy (6)
BIOL 354, Embryology/Developmental Biology (5)
BIOL 442, Comparative Morphology of Vascular Plants (5)
BIOL 454, Histology (5)
Select one of the following taxonomy courses:............................. 4-5
BIOL 341, Plant Taxonomy (5)
BIOL 350, Invertebrate Zoology (5)
BIOL 351, Entomology (5)
BIOL 444, Algology (5)
BIOL 445, Mushrooms and Puffballs (5)
BIOL 450, Ichthyology (4)
BIOL 451, Herpetology (4)
BIOL 452, Ornithology (4)
BIOL 453, Mammalogy (5)
Organismal Biology Electives .............. 17-20
Total 100
Bachelor of Science Biology

Teaching Major

This major satisfies the criteria for an endorsement in Biology. This major qualifies students to teach biology at the high school level and the middle or junior high school levels. Students should seriously consider working toward endorsement in a second area such as chemistry, earth science, general science, physics, or mathematics. Students taking this major are required to complete the Professional Education Program requirements offered through the Department of Education. Students completing this program after August 31, 2005 will be required to pass the WEST-E (PRAXIS II) exam for biology to receive a Biology endorsement.

Required Courses Credits
BIOL 110, Basic Biology 5
BIOL 111, Plant Biology 5
BIOL 112, Animal Biology 5
BIOL 220, Introductory Cellular Biology 5
BIOL 321, Genetics 5
BIOL 322, Introductory Microbiology 5
OR BIOL 323, Microbiology 5
BIOL 360, General Ecology 5
BIOL 427, Biotechnology for Teachers 5
BIOL 300, Introduction to Evolution 3
OR BIOL 470, Mechanisms of Evolution 5
BIOL 441, Plant Physiology 5
OR BIOL 355 & 356, Human Anatomy and Physiology 5
OR BIOL 455, Zoophysiology 5
BIOL 492, Laboratory Experience in Teaching Biological Sciences 2
BIOL 499S, Senior Seminar 1
SCED 324, Science Education in the Secondary Schools 4
SCED 495, Science Education Research 1
Select from the following sequence: 15-23
CHEM 111, 111LAB, 112, 112LAB, 113, 113LAB, Introduction to Biochemistry/Lab (15)
OR
CHEM 181, 181LAB, 182, 182LAB, 183, 183LAB General Chemistry/Lab (15)
AND
CHEM 361, 361LAB, 362, Organic Chemistry (5)

Total 71-86

Biology: Teaching Elementary Minor

Required Courses Credits
BIOL 101, Fundamentals of Biology 5
BIOL 110, Basic Biology 5
BIOL 111, Plant Biology 5
BIOL 112, Animal Biology 5
BIOL 220, Introductory Cellular Biology 5
BIOL 321, Genetics 5
BIOL 323, Microbiology 5
BIOL 360, General Ecology 5
BIOL 370, Laboratory Experience in Teaching Biological Sciences 2
SCED 324, Science Education in the Elementary Schools 3

Total 23

Biology: Teaching Secondary Minor

This minor is restricted to students working on a teaching major in chemistry, earth science, or physics. Students taking this minor will receive an endorsement in Biology only upon passing the WEST-E (PRAXIS II) exam for biology. SCED 324 requires admission to the Teacher Preparation Program.

Required Courses Credits
BIOL 110, Basic Biology OR BIOL 101, Fundamentals of Biology 5
BIOL 111, Plant Biology 5
BIOL 112, Animal Biology 5
BIOL 220, Introductory Cellular Biology 5
BIOL 321, Genetics 5
BIOL 323, Microbiology 5
BIOL 360, General Ecology 5
BIOL 492, Laboratory Experience in Teaching Biological Sciences 2
SCED 324, Science Education in the Secondary Schools 4

Total 41

Botany Minor

Not available to biology majors

Required Courses Credits
BIOL 110, Basic Biology 5
BIOL 111, Plant Biology 5
BIOL 220, Introductory Cellular Biology 5
Electives in Biological Sciences 13

Total 23

Zoology Minor

Not available to biology majors

Required Courses Credits
BIOL 110, Basic Biology 5
BIOL 112, Animal Biology 5
BIOL 220, Introductory Cellular Biology 5
Electives in Biological Sciences 8

Total 23

Allied Health Sciences Course

AHSC 301, Introduction to Medical Technology 2
Prerequisites, 5 credit hours in biology and 5 credit hours in chemistry and permission of instructor. Introduction to laboratory procedures and theory of urinalysis, clinical chemistry, hematology, blood banking and coagulation. One hour lecture and two hours laboratory per week.

Biological Sciences Courses

BIOL 101, Fundamentals of Biology 5
Biology in the modern world. Four hours lecture and one two-hour laboratory per week. May not be counted toward a major or minor in the Department of Biological Sciences. Formerly BISC 104. Students may not receive credit for both.

BIOL 111, Plant Biology 5
Prerequisite, BIOL 101. Four hours lecture and one two-hour laboratory per week. Formerly BISC 111. Students may not receive credit for both.

BIOL 112, Animal Biology 5
Prerequisite, BIOL 110. Four hours lecture and two hours laboratory per week. Formerly BISC 112. Students may not receive credit for both.

BIOL 200, Plants In the Modern World 5
Plants and their significance in the world today. Three hours lecture and three hours laboratory per week. (Not open to majors in the biological sciences.) May not be counted toward a major or minor in the Department of Biological Sciences. Formerly BOT 211. Students may not receive credit for both.

BIOL 201, Human Physiology 5
Organ systems of humans. Not open to students with credit in BIOL 455; may not be counted toward a major or minor in the Department of Biological Sciences. Formerly ZOOL 270. Students may not receive credit for both.

BIOL 220, Introductory Cellular Biology 5
Prerequisites, BIOL 110, and either CHEM 113 or CHEM 183. Concepts, processes and structures involved in understanding life at the cellular level. Four hours lecture and two hours of laboratory per week. Formerly BISC 223, 313. Student may not receive credit for more than one.
Biol 298. Special Topics (1-6). Formerly Bisc 298.

Biol 300. Introduction to Evolution (5).
The evidence, theories, and mechanisms of the evolution of life, including man. May not be counted toward a major in the Department of Biological Sciences. Formerly Bisc 385. Students may not receive credit for both.

Basic concepts of ecology with emphasis on ecosystems and populations and how human activities and attitudes relate to these basic concepts. This course may not be counted towards a major in the Department of Biological Sciences. Formerly Bisc 302. Students may not receive credit for both.

Biol 304. Human Inheritance (5).
The study of human inheritance and related areas of biology. May not be counted toward a major in the Department of Biological Sciences. Formerly Bisc 304. Students may not receive credit for both.

Prerequisites, Biol 220 and Chem 361/361LAB. Advanced analysis of cellular processes. Five hours lecture per week. Formerly Bisc 333. Students may not receive credit for both.

Biol 321. Genetics (5).
Prerequisite, Biol 220. A lecture and laboratory course in the basic principles of heredity of plants and animals. Four hours lecture and two hours laboratory per week. Formerly Bisc 365. Students may not receive credit for both.

Biol 322. Introductory Microbiology (5).
Prerequisite, Biol 220. An introduction to the biology of the microorganisms with applications to medicine, food science, industry, and agriculture. This course is not intended for students who plan to take additional classes in microbiology. Four lectures and one two hour laboratory a week. Formerly Bisc 369. Students may not receive credit for both.

Biol 323. Microbiology (5).
Prerequisites, Biol 220 and either Chem 113/113LAB or Chem 182/182LAB. Principles of microbiological practice, including isolation, cultivation, morphological and physiological methods of analysis, and variability. Two hours lecture and six hours laboratory per week. Formerly Bisc 370. Students may not receive credit for both.

Biol 341. Plant Taxonomy (5).
Prerequisite, Biol 111 or Biol 200 or permission. Classification of vascular plants, using local flora. Two hours lecture and six hours laboratory per week; the course includes field trips and individual field work. Formerly Bot 333. Students may not receive credit for both.

Biol 343. Plant Anatomy (5).
Prerequisite, Biol 111. A treatment of the fundamental facts and aspects of vascular plant anatomy. Plant tissues with special reference to their development, organization, and biological significance. Three hours lecture and four hours laboratory per week. Formerly Bot 358. Students may not receive credit for both.

Biol 344. Dendrology (4).
Prerequisite, Biol 112. A botanical classification of instructor. A study of trees, their habits of growth, the characteristic forest areas of North America. Two hours lecture and four hours laboratory per week. A field course. Formerly Bot 365. Students may not receive credit for both.

Biol 350. Invertebrate Zoology (5).
Prerequisite, Biol 112 or permission of instructor. Morphology, phylogeny, physiology, and embryology of the invertebrate phyla, exclusive of parasitic forms. Four hours lecture and two hours laboratory per week. Formerly Zool 361. Students may not receive credit for both.

Biol 351. General Entomology (5).
Insect biology, taxonomy, structure and relationships to man. Two hours lecture and six hours laboratory or field work per week. Formerly Zool 362. Students may not receive credit for both.

Biol 352. Parasitology (5).
Prerequisite, Biol 112. Biological classification of animal parasite and host; structure, classification, and methods of diagnosis of parasitic protozoa, worms and arthropods. Two hours lecture and six hours laboratory per week. Formerly Zool 380. Students may not receive credit for both.

Biol 353. Comparative Vertebrate Anatomy (6).
Prerequisite, Biol 112. Evolutionary, functional, and developmental aspects of vertebrate morphology. Three hours lecture and six hours laboratory per week. Formerly Zool 351. Students may not receive credit for both.

Prerequisite, Biol 112. Comparative development; fertilization, growth and differentiation, experimental morphogenesis, and establishment of the early organ systems. Two hours lecture and six hours laboratory per week. Formerly Zool 348. Students may not receive credit for both.

Biol 355. Human Anatomy and Physiology (5).
Prerequisite, Biol 355 and permission of instructor. The second quarter of the two quarter study of the structure and function of the human body. Three hours lecture and four hours laboratory per week. Formerly Zool 342. Students may not get credit for both.

Biol 356. Human Anatomy and Physiology (5).
Prerequisite, Biol 355 and permission of instructor. The first quarter of the two quarter study of the structure and function of the human body. Students should not take Biol 355 unless they intend to take Biol 356. Three hours lecture and four hours laboratory per week. Formerly Zool 341. Students may not get credit for both.

Biol 358. General Anatomy and Physiology (5).
Prerequisite, Biol 355 and permission of instructor. The second quarter of the two quarter study of the structure and function of the human body. Three hours lecture and four hours laboratory per week. Formerly Zool 342. Students may not get credit for both.

Prerequisites, Biol 110, 111 and Math 153. Interrelationships of organisms with their environment. Three hours lecture and four hours laboratory/field work/discussion per week. A weekend field trip may be required. Formerly Bisc 375. Students may not receive credit for both.

Biol 377. Regional Natural History (2).
Prerequisite, permission of instructor. Classroom study of the natural history of a selected region as preparation for one-to-two week field trip. Emphasis will be on developing background skills to undertake a field exploration over the quarter (winter, spring, summer) break. Subtitles will identify the selected biological region (e.g., Baja California Natural History). May be repeated for credit under a different subtitle (region). Biol 377 and Geol 377 are equivalent courses. Formerly Bisc/Biol 377.1. Students may not receive credit for more than one.

Biol 377LAB. Regional Natural History (5).
Prerequisite, Biol 377 and permission of instructor. Special fees required. One-to-two week field trip to explore biological and physical patterns and processes in selected regions of North America. Emphasis will be on recording field observations, keeping a field journal, field study techniques, and performing investigations chosen and developed by student participants. Subtitles will identify the region studies. May be repeated for credit under a different subtitle. Biol 377LAB and Geol 377LAB are equivalent courses. Formerly Bisc/Biol 377.2.

Biol 398. Special Topics (1-6).

Biol 420. Environmental Microbiology (5).
Prerequisites, Biol 323 and Chem 362. Ecology of microorganisms in marine, fresh-water and soil environments. Three hours lecture and four hours laboratory per week. Formerly Bisc 411. Students may not receive credit for both.

Prerequisites, Biol 323 and Chem 362. Biol 321 strongly recommended. Interrelationship between animal, plant, and bacterial viruses and their hosts, with emphasis on the animal viruses. Five hours lecture per week. Formerly Bisc 413. Students may not receive credit for both.
BIOL 422. Immunology (5). Prerequisites, BIOL 323 and CHEM 361. Nature of the immune response, disease preventing and producing mechanisms and laboratory applications. Five hours lecture per week. Formerly BISC 414. Students may not receive credit for both.

BIOL 423. Techniques in Immunology and Virology (5). Prerequisite or corequisite, BIOL 420 or 422. A practical course in dealing with the routine techniques used in diagnostic and experimental immunology and virology. Three hours lecture and four hours laboratory per week. Formerly BISC 415. Students may not receive credit for both.

BIOL 425. Molecular Biotechnology (5). Prerequisite, BIOL 220, BIOL 322 or BIOL 333 recommended. The practice and theory of techniques used in molecular biology. Two hours lecture and six hours laboratory per week. Formerly BISC 423. Students may not receive credit for both.

BIOL 426. Medical Microbiology (3). Prerequisite, BIOL 323 or permission of instructor. An introduction to medical microbiology emphasizing the biology of pathogenic bacteria, their relation to infectious diseases and the isolation and identification of specific disease agents. Three lectures per week. Formerly BISC 445. Students may not receive credit for both.

BIOL 426LAB. Medical Microbiology Laboratory (2). Prerequisite, BIOL 323; prerequisite or corequisite, BIOL 426. Formerly BISC 445.1 and BIOL 426.1. Students may not receive credit for more than one.

BIOL 427. Biotechnology for Teachers (5). Prerequisites, BIOL 110, 111, 112, 220; also strongly recommended, BIOL 321. This course will help pre-service teachers develop the skills necessary to construct and perform biological experiments using contemporary biotechnology in the context of educational theory and application.

BIOL 440. Plant Pathology (5). Prerequisite, BIOL 111. Representative diseases of plants and the bacterial and fungal organisms which cause them. Two hours lecture and six hours laboratory per week. Formerly BOT 460. Students may not receive credit for both.

BIOL 441. Plant Physiology (5). Prerequisites, BIOL 111, BIOL 220, BIOL 320, CHEM 362, or permission. A critical study of the various physiological activities of plants, such as photosynthesis, respiration and responses to various stimuli. Three hours lecture and four hours laboratory per week. Formerly BOT 461. Students may not receive credit for both.

BIOL 442. Comparative Morphology of Vascular Plants (5). Prerequisite, 10 credits in Botany. Form, structure, and habits of the major groups of vascular plants. Three hours lecture and four hours laboratory per week. Formerly BOT 462. Students may not receive credit for both.

BIOL 443. Mycology (5). Prerequisite, BIOL 111 and BIOL 220. The biology, morphology, and economic importance of the major groups of fungi including the slime molds. Three hours lecture and four hours laboratory per week. Formerly BOT 463. Students may not receive credit for both.

BIOL 444. Algology (5). Prerequisites, BIOL 111 and BIOL 220. Taxonomy and ecology of fresh-water and marine algae. Three hours lecture and four hours laboratory per week. Formerly BOT 464. Students may not receive credit for both.

BIOL 445. Mushrooms, Fuffballs, and Related Forms (5). Prerequisite, BIOL 111 or permission of instructor. Stresses taxonomy, morphology, and ecology of mushrooms and related forms with emphasis on Northwest flora. Offered fall quarter only. Formerly BOT 465. Students may not receive credit for both.

BIOL 450. Ichthyology (4). Prerequisite, BIOL 112. An introduction to the biology, taxonomy and distribution of modern fishes with special reference to the Pacific Northwest. Three hours lecture and two hours laboratory or field work per week. Formerly ZOOL 412. Students may not receive credit for both.

BIOL 451. Herpetology (4). Prerequisite, BIOL 112. An introduction to biology, taxonomy and distribution of modern amphibians and reptiles with special reference to the Pacific Northwest. Two hours lecture and four hours laboratory or field studies per week. Formerly ZOOL 411. Students may not receive credit for both.

BIOL 452. Ornithology (4). Prerequisite, BIOL 112. Study of birds with special emphasis on anatomic and behavioral adaptations. Three hours lecture and two hours laboratory or field study per week. Formerly ZOOL 410. Students may not receive credit for both.

BIOL 453. Mammalogy (5). Prerequisite BIOL 112. Evolution, taxonomy and ecology of mammals with laboratory emphasis on Pacific Northwest mammals. Three hours lecture and four hours laboratory per week. Formerly ZOOL 409. Students may not receive credit for both.

BIOL 454. Histology (5). Prerequisites, BIOL 112, BIOL 220 and either BIOL 353, BIOL 356 or BIOL 455. Systematic study, description and identification of microscopic structures of animal tissues. Three hours lecture and four hours laboratory per week. Formerly ZOOL 471. Students may not receive credit for both.

BIOL 455. Zoophysiology (5). Prerequisites, BIOL 112, BIOL 220 or BIOL 320, CHEM 362, or permission. Vertebrate physiology; laboratory experience in physiological techniques. Three hours lecture and four hours laboratory per week. Formerly ZOOL 472. Students may not receive credit for both.

BIOL 456. Biology of Aging (3). Prerequisite, BIOL 201 or BIOL 355, 356 or BIOL 455. Description and analysis of aging phenomena in humans and animal models. Three lectures per week. Formerly BISC 460. Students may not receive credit for both.

BIOL 461. Community Ecology (3). Prerequisite or corequisite, BIOL 360. Principles of the structure and function of ecological communities. Three hours lecture/discussion per week. Formerly BISC 475. Students may not receive credit for both.

BIOL 461LAB. Community Ecology Laboratory (2). Corequisite, BIOL 461. Laboratory and field study of the structure and function of ecological communities. Four hours of laboratory/field work per week. Weekend field trips may be required. Formerly BISC 475.1 and BIOL 461.1. Students may not receive credit for more than one.

BIOL 462. Wildlife and Fisheries Ecology (5). Prerequisite, BIOL 360. Ecological principles of wildlife and fish populations and communities as they relate to management theory and practice in the Pacific Northwest. Three hours lecture and four hours laboratory per week. Formerly BISC 476. Students may not receive credit for both.

BIOL 463. Limnology (5). Prerequisites, CHEM 182 and BIOL 360 or permission of instructor. Chemical, physical and biological characteristics of inland waters. Three hours lecture and four hours laboratory per week. Formerly BISC 480. Students may not receive credit for both.

BIOL 464. Terrestrial Plant Ecology (5). Prerequisites, BIOL 111 and BIOL 360 or permission. The ecological relationships of plant species and plant communities. Three hours lecture and either four hours laboratory or a Saturday field trip per week. Formerly BOT 441. Students may not receive credit for both.

BIOL 465. Biology of Animal Behavior (4). Prerequisite BIOL 112 or permission of instructor. Three lectures and two hours of laboratory a week. Formerly ZOOL 465. Students may not receive credit for both BIOL 465/ ZOOL 465 and BIOL 565.
BIOL 466. Conservation Biology (5). Prerequisite BIOL 360 or permission of instructor. An introduction to the theory and practice of conservation biology, with emphasis on case studies. Two hours lecture, one hour discussion, and 4 hours lab or field study per week. Weekend field trips may be required. Formerly BISC 440. Students may not receive credit for BISC 440 or BIOL 466 and BIOL 566.

BIOL 470. Mechanisms of Evolution (3). Prerequisites, 15 credits of biology plus senior standing. Darwinian evolution and the modern synthesis. Formerly BISC 485. Students may not receive credit for both.

BIOL 490. Cooperative Education (1-12). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U. Formerly BISC 490.

BIOL 491. Workshop (1-6). Formerly BISC 491.

BIOL 492. Laboratory Experience in Teaching Biological Sciences (2). Prerequisite, 15 credit hours in college biology and permission of instructor. Experience in planning, managing and teaching in a laboratory setting. May be repeated once for full credit with permission of Chair. Formerly BISC 492.

BIOL 493. Biological Field Practicum (1-15). Prerequisite, permission of instructor. Individual or group off-campus experience in the field study of biological phenomena. This course may be taken more than once for full credit. Formerly BISC 493.

BIOL 496. Individual Study (1-6). Prerequisite, permission of instructor. Formerly BISC 496/BOT 496/ZOOL 496.

BIOL 497. Honors Thesis (1-5). Prerequisite, admission to departmental honors program. May be repeated for up to a total of six credits. This course may be substituted for BIOL 499S, Senior Seminar, in any Biology baccalaureate program. Formerly BISC 497/BOT 497/ZOOL 497.

BIOL 498. Special Topics (1-6). Formerly BISC 498.

BIOL 499. Seminar (1-5). May be repeated. Formerly BISC 499.

BIOL 499S. Senior Seminar (1). Prerequisite, senior standing. Biological sciences: reading, writing and speaking. Either this course or BIOL 497, Honors Thesis, is required in all baccalaureate programs of the Biology Department. Formerly BISC/BIOL 499.1.

Undergraduate Courses/Programs on Reserve

The following courses/programs are on reserve and may be offered subject to program needs: Allied Health Sciences Program; BIOL 424. Laboratory Immunology (1); BIOL 460. Introduction to Soils (5); BIOL 468. Biogeography (5).

BUSINESS ADMINISTRATION

http://www.cwu.edu/~cob/bsad/
Shaw-Smyser 329

Office of the Chair
Stephen B. Schepman, Ellensburg
Don R. Nixon, Des Moines
F. Lynn Richmond, Lynnwood

Professors
Bruce D. Bagamery, FIN (Lynnwood)
James P. Beagham, MKT (Des Moines)
Gerald P. Gunn, BUS (Ellensburg)
Stanley Jacobs, FIN (Des Moines)
Eldon C. Johnson, FIN (Lynnwood)
James L. Nimmich, HRM (Ellensburg)
Don R. Nixon, M&O (Des Moines)
Stephen B. Schepman, BUS (Ellensburg)
Hugh M. Spall, Law (Ellensburg)

Associate Professors
Peter J. Boyle, MKT (Lynnwood)
C. Christopher Lee, MIS (Des Moines)
Gary M. Richardson, FIN (Ellensburg)
F. Lynn Richmond, M&O (Lynnwood)
Richard T. Trimble, OSC (Lynnwood)

Assistant Professors
Ozden Bayazit, OSC, MIS (Lynnwood)
Gregory Cant, MKT (Ellensburg)
Graeme Coetzee, HRM (Lynnwood)
Ronald Elkins, OSC (Ellensburg)
Wanda H. Fujimoto, MKT (Ellensburg)
Nancy Graber-Pigeon, Law, HRM (Ellensburg)
Seong-Jong Joo, MIS (Ellensburg)
Ruth Lapsley, M&O (Ellensburg)
John Montoya, HRM (Lynnwood, Des Moines)
Rex Moody, MKT (Ellensburg)
William H. Turnquist, MIS (Ellensburg)

Business Administration Program Educational Outcomes

The department has identified overall educational outcomes related to knowledge, values, and skills for all BSBA graduates. Following are the outcomes for the Bachelor of Science in Business Administration (BSBA) programs:

1. Knowledge-Based Educational Outcomes.

Upon completion of the BSBA program, students should:
• have a working knowledge in a set of analytical business tools related to: math, statistics, accounting, economics, and behavioral science.
• apply business core concepts, principles and analytical skills across functional lines.
• show competency in an area of specialization. (Specializations include Finance, General Business, Human Resource Management, Management & Organization, Marketing Management, and Operations and Supply Chain Management.
• understand global, national, and regional business systems and environments.

2. Values-Based Educational Outcomes. Upon completion of the BSBA program, students should:
• comprehend issues in ethical decision making and social responsibility.
• demonstrate effective oral and written business communication skills.
• use business computer application software and support decisions on problems in areas of specialization.
• access, develop, and use information to analyze business problems and propose feasible solutions.

3. Skills-Based Educational Outcomes. Upon completion of the BSBA program, students should:
• function effectively when in teams both as a leader and as a member.
• function effectively when in teams both as a leader and as a member.
• function effectively when in teams both as a leader and as a member.
• function effectively when in teams both as a leader and as a member.

BSBA Program Overview

The department offers coursework leading to the Bachelor of Science in Business Administration (BSBA) degree. In addition to the University general education requirements, the BSBA major is comprised of three principal components: 1) pre-admission courses that provide foundation knowledge and skills needed for further study in business, 2) business core courses that build on the pre-admission group and focus on decision making in the main functional areas of business, and 3) specialization courses that allow for advanced study in one of the functional areas. Students matriculating in Ellensburg select a 25-credit specialization within the BSBA program in one of six areas: Finance, General Business, Human Resource Management, Management & Organization, Marketing Management, and Operations and Supply Chain Management. Students matriculating at the Westside centers are limited to the 25-credit General Business specialization.
Transfer Credits and Prior Learning Assessment
Equivalent lower division (100-200 level) courses may be transferred toward meeting the pre-admission requirements. Upper division (300-400 level) courses may also be transferred toward meeting the business core and specialization requirements, but only with the approval of the Department Chair and the College Dean or designee.

For individuals seeking academic credit for prior work experiences, a prior learning assessment program is available. Students opting for this program must demonstrate competency in the course material by successfully completing a challenge exam. The following pre-admission and business core courses are eligible: BUS 241; BUS 221, OSC 323, MIS 386; MKT 360; FIN 370; MGT 380. The result of the challenge is recorded as “S” or “U” on the transcript and is not used in computing grade point average. See your business administration advisor or program director at your site for additional information.

Repeat Policy
Business Administration courses may be repeated only once.

Service to Other Majors
Students majoring outside of the College of Business who are required to take courses in this College for either their major or minor will be eligible to enroll on a space-available basis. These students will be given priority over other non-college majors wishing to enroll in upper division courses.

BSBA Program Admission Requirements
Students must apply and be accepted into the major prior to beginning 300- or 400-level business coursework. At the time of application, the 35 credits of pre-admission coursework should be substantially completed. Application forms are available in the department offices. The completed form must be accompanied by transcripts that reflect all prior college work. Admission shall be based on grades earned in the following courses:

Pre-admission Requirements Credits
ACCT 251, Accounting I .......................... 5
ACCT 252, Accounting II .......................... 5
BUS 241, Legal Environment of Business .......................... 5
BUS 221, Introductory Business Statistics .......................... 5
MATH 153, Pre-Calculus Mathematics I OR MATH 170, Intuitive Calculus OR MATH 172, Calculus .......................... 5

BSBA Major

Business Core Requirements Credits
FIN 370, Introductory Financial Management .......................... 5
MGT 380, Organizational Management .......................... 5
MKT 360, Principles of Marketing .......................... 5
OSC 323, Operations Management .......................... 5
MIS 386, Management Info. Systems .......................... 5
MGT 489, Strategic Management .......................... 5

Business Core Total 30

Communication Requirement
Select from the following: ENG 310, Technical Writing (4) COM 345, Business and Professional Speaking (4) 

Specialization Requirements: .......................... 25
Select one of the following six areas: Finance General Business Human Resource Management Management and Organization Marketing Management Operations and Supply Chain Management

Total 94-95

Additional BSBA Graduation Requirements
The following special rules apply to students seeking the BSBA major:
- Students must earn a minimum cumulative GPA of 2.25 in the 94-95 credit in-the-major coursework to be eligible for a degree. In addition, the Department requires a minimum GPA of 2.25 in the 59-60 credit upper-division component of the in-the-major total.
- Students must complete a minimum of 90 quarter credits of non-business courses, which may include up to 13.5 quarter credits of economics and 9 quarter credits of business statistics (BUS 221, 321).

BSBA with Finance Specialization

Advisors: Bagamery, Jacobs, E. Johnson, Lasik, G. Richardson

Finance builds on the business core and focuses on decision making in three interrelated areas: managerial finance, investments, and financial markets and institutions. The business core and finance specialization courses provide academic preparation for a wide variety of entry-level positions in managerial finance and the financial services industry.

Required Courses Credits
ECON 330, Money and Banking .......................... 5
FIN 475, Investments .......................... 5
Select a minimum of 10 credits from the following (with no more than 5 credits from ECON classes): ENG 310, Technical Writing (4) COM 345, Business and Professional Speaking (4) ADMG 385, Business Communication and Report Writing (5) 

Total 40 CWU business credits to be eligible for the business administration degree.

Finance Specialization Total 25
BSBA with General Business Specialization
Advisors: Bagamery, Beaghan, Boyle, Coetzer, Fujimoto, Graber-Pigeon, Gunn, Jacobs, Johnson, Lasik, Lapsley, Lee, Nimnicht, Nixon, Richmond, Spall, Turnquist and Schepman

This specialization is intended for the student who wishes to tailor a "unique" set of specialization courses to his or her needs or for the student who desires a broad-based "generalist" track within the Business Administration major. Twenty-five upper division elective credits are required including at least 20 credits must be Business (BUS), Finance (FIN), Human Resource Management (HRM), Management (MGT), Marketing (MKT), or Operations and Supply Chain Management (OSC) courses. The remaining 5 credits may be Accounting (ACCT) or Economics (ECON). The student is limited to ten credits from any one area and the specialization must include at least ten credits of 400-level courses.

General Business Specialization
Total 25

BSBA with Human Resource Management Specialization
Advisors: Coetzer, Graber-Pigeon, Lapsley, Montoya, Nimnicht, Nixon, and Richmond

Students pursuing the HR specialization will deal with fundamental organizational processes that must be developed and managed for continuous improvement by both HR specialists and by all managers in general. Thus, the study of HR takes on a dual emphasis. First, by pursuing an HR specialization, students will be thoroughly trained to focus decision-making as it pertains to the acquisition, utilization, development and retention of employees. Alternatively, the study of HR is also applicable as a strong supplement to other specializations or majors.

Required Courses Credits
HRM 381, Management of Human Resources .................. 5
HRM 486, Problems in Human Resource Management .................. 5
Select from the following: .................. 15
HRM 442, Training and Development (5)
HRM 445, Organizational Staffing (5)
HRM 479, Industrial Relations/Collective Bargaining (5)
HRM 488, Compensation Policy and Administration (5)
BUS 490, Cooperative Education (1-6)
ECON 355, Economics of Labor (5)
MGT 481, Organizational Behavior (5)
HRM 435, Advanced Operations Management (5)

Human Resource Management
Total 25

BSBA with Management and Organization Specialization
Advisors: Cant, Lapsley, Nimnicht, Nixon, Richmond and Schepman

The Management and Organization specialization reflects the diverse activities required to productively utilize the organization's resources. The overall focus of this specialization will be on how to effectively coordinate people, technology, and structure in order to reach organizational objectives. Studies include both the theory and practice of management as preparation for leadership in public and private organizations.

Required Courses Credits
MGT 481, Organizational Behavior .................. 5
MGT 484, International Management .................. 5
Select from the following: .................. 15
MGT 383, Contemporary Management Practices (5)
MGT 384, Introduction to International Business (5)
MGT 385, Organizational Theory (5)
MGT 389, Business and Society (5)
MGT 482, Applied Management & Organizational Behavior (5)
MGT 483, Organizational Change (5)
MGT 487, Small Business Management (5)
BUS 490, Cooperative Education (1-6)
HRM 381, Management of Human Resources (5)
OSC 435, Advanced Operations Management (5)
ECON 452, Managerial Economics (5)

Management and Organization
Total 25

BSBA with Marketing Management Specialization
Advisors: Beaghan, Boyle, Fujimoto, Moody

The marketing curriculum provides background for careers in sales, advertising, marketing management, research and analysis, and retail management. Marketing topics include researching and analyzing consumers, market demand, pricing, product distribution and development, and communication in order to develop marketing strategies and policies.

Required Courses Credits
MKT 367, Consumer Behavior .................. 5
MKT 369, Marketing Research .................. 5
MKT 470, Marketing Problems and Policy 5
Select a minimum of 10 credits from the following: .................. 10
MKT 361, Channels of Distribution Management (5)

Marketing Management Total 25

BSBA with Operations and Supply Chain Management Specialization (OSC)
Advisors: Bayazit, Elkins, Joo, Lee, Nixon, Trimble, and Turnquist

Operations and Supply Chain Management (OSC) builds on the business core and prepares students for careers as analysts, decision makers, and managers in any and all segments of the organization’s supply, production, and distribution chain. Students who complete this program will have a fundamental understanding of the systematic, integrated nature of the creation and delivery of goods and services, and the manner in which the supply, production and distribution chain includes or involves other internal and external entities. Students will be able to solve problems and make decisions in this environment by using concepts from accounting, economics and other business administration areas, computing and analytical skills, and appropriate quantitative and qualitative models.

Required Courses Credits
OSC 435, Advanced Operations Management .................. 5
OSC 464, Supply Chain Management .................. 5
OSC 475, Global Supply Chain Management .................. 5
OSC 480, Problems and Policy in Operations and SCM .................. 5

Minimum of 5 credits from the following*: 5
OSC 324, Quality and Continuous Improvement (5)
ACCT 305, Cost Accounting (5)
BUS 490, Cooperative Education (1-6)
ECON 452, Managerial Economics (5) OR One other course approved in advance by OSC advisor (5)

Operations and SCM Total 25

MKT 462, Marketing Promotion Management (5)
MKT 463, Sales Force Management (5)
MKT 465, Direct Marketing (5)
MKT 466, Industrial Marketing (5)
MKT 467, International Marketing (5)
MKT 475, New Product Development (5)
BUS 490, Cooperative Education (1-6)
ECON 310, International Economics (5)
Business Administration Minor

Advisors: Any Business Administration faculty member

The Business Administration minor provides students the opportunity to select business administration and supporting accounting and economics courses to meet individual educational needs. Students are admitted into the program when the completed minor application form is approved by a Business Administration minor advisor. Forms are available in the department offices. Students must earn a cumulative grade point average of 2.25 in courses allowed in fulfilling the Business Administration minor requirements.

Required Courses Credits
ECON 201, Principles of Economics Micro 5
ACCT 301, Financial Accounting Analysis 5
Select a minimum of 20 credits from the following: 20
Courses with a prefix of BUS, FIN, HRM, MGT, MIS, MKT, or OSC. At least 15 of the 20 credits must be upper division

Business Administration Minor Total 30

Suitable elective courses for the Business Administration minor may come from any of the functional areas of Business Administration. Appropriate course selections must be made and pre-approved by one of the Business Administration minor advisors. Advisors make every effort to help tailor the minor to best serve the needs of the individual student.

Supply Chain Management Certificate Program

Advisors: Elkins, Nixon, Richmond, Trimble, and Turnquist

The certificate program provides the opportunity for the student to gain knowledge and skills in the full spectrum of supply chain activities—supplier relationships, purchasing management, operations and inventory management, logistics and transportation, quality management, and information technology. Typical job titles include: Purchasing/Supply Manager, Procurement Manager, Materials Manager, Contracts Manager, Purchasing Agent, Senior Buyer, and Buyer/Planner.

Required Courses Credits
MIS 386, Management Information Systems 5
OSC 435, Advanced Operations Management 5

BUS 400. Understanding the Private Enterprise System (2). An intensive course covering U.S. and Washington state economics; small business and large corporations; business, labor, government, and the public; and the future of business in the Pacific Northwest. Restricted to professional educators participating in Business Week. Grade will be S or U. Formerly MGT 400. Students may not receive credit for both.

BUS 490. Cooperative Education (1-12). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. Grade will be S or U.

BUS 495. Directed Research (1-5). Prerequisite, permission of instructor. May be repeated. Grade will be S or U.

BUS 496. Individual Study (1-6). Prerequisite, permission of instructor.

BUS 498. Special Topics (1-6).
BUS 499. Seminar (1-5).

Undergraduate Courses/Programs on Reserve

The following courses and programs are on reserve and may be offered subject to program needs: BUS 344, Real Estate Law (3); BUS 352, Principles of Real Estate (5); BUS 357, Risk and Insurance (5); BUS 515, Organization and Environment (5).

Finance Courses

FIN 370. Introductory Financial Management (5). Prerequisite, admission to the major or permission. An introduction to financial decision-making. Topics include time value of money, security valuation, capital budgeting, cost of capital, financial forecasting, financial statement analysis, and working capital management. Formerly BUS 370. Students may not receive credit for both.

FIN 371. Personal Financial Planning (5). Prerequisite, FIN 370 or permission. Introduction to full range of financial planning decisions, including: budgeting, investing, tax planning, risk management, employee benefits, retirement, and estate planning.

FIN 470. Intermediate Financial Management (5). Prerequisite, FIN 370. A review, consolidation, and extension of the FIN 370 class. Additional focus on the theory, practice, and analysis of the firm’s investing and financing activities as these activities relate to the value creation process. Formerly BUS 470. Students may not receive credit for both.
FIN 471. Case Problems in Managerial Finance (5). Prerequisite, FIN 470. A capstone course in business financial management. Case analysis directed to the major financial decision-making areas of the firm. Computer assisted analysis using popular business software. Formerly BUS 471. Students may not receive credit for both.

FIN 475. Investments (5). Prerequisite, FIN 370. Principles of investment valuation. Topics include a survey of securities and securities markets, analysis of risk, expected return, timing, and selection of stocks and bonds in a portfolio context. Formerly BUS 475. Students may not receive credit for both.

FIN 476. Advanced Investments (5). Prerequisite, FIN 475. Portfolio theory, construction, and administration. Cases may be used to analyze key investment decisions and to relate theories and concepts to real-world situations. Formerly BUS 476. Students may not receive credit for both.

FIN 477. International Finance (5). Prerequisite, FIN 477. Financial decision making in an international setting. Explores both traditional areas of finance and recent innovations in financial management from the perspective of the multinational corporation. Formerly BUS 477. Students may not receive credit for both.

FIN 478. Management of Financial Institutions (5). Prerequisites, FIN 370 and ECON 330. Asset-liability management process; investment and financing activities of banks, savings and loans, and credit unions. Formerly BUS 478. Students may not receive credit for both.

Human Resource Management Courses

HRM 381. Management of Human Resources (5). Selection of personnel, methods of training and retraining workers, wage policy, utilization of human resources, job training, administration of labor contracts, and public relations. Formerly IR 381, BUS 381, and MGT 381. Students may not receive credit for more than one.

HRM 442. Training and Development (5). Prerequisite, HRM 381. Application of training and development concepts and techniques used in assessing training requirements, planning and budgeting training programs, developing and facilitating training, and evaluating results.

HRM 445. Organizational Staffing (5). Prerequisite, HRM 381. Applied and conceptual analysis of employee recruitment, selection, placement, retention, and career development.

HRM 479. Industrial Relations/Collective Bargaining (5). Prerequisite, HRM 381 or permission. Statutory and case law governing labor relations. Contracts and negotiations. Impasse procedures. Arbitration cases and grievance procedures. Contemporary issues and cases. Formerly IR 479, BUS 479, and MGT 479. Students may not receive credit for more than one.

HRM 486. Problems in Human Resource Management (5). Prerequisite, HRM 381 plus two HRM electives, or permission of instructor. Analysis and research on selected topics involving contemporary issues in personnel management. This is the capstone course for the HRM specialization. Formerly IR 486, BUS 486, and MGT 486. Students may not receive credit for more than one.

HRM 488. Compensation Policy and Administration (5). Prerequisite, HRM 381. Employee compensation policy and administration is studied on a broad perspective encompassing direct financial payments, employer benefits, and nonfinancial rewards. Formerly IR 488, BUS 488, and MGT 488. Students may not receive credit for more than one.

Management Courses

MGT 380. Organizational Management (5). Prerequisite, admission to the major or permission. History of management thought and practice, its development, change and probable future; relationship of management and decisions to environment and society; organization theory; human behavioral aspects of management; planning, controlling, and staffing as decision processes in organizational systems. Formerly BUS 380. Students may not receive credit for both.

MGT 383. Contemporary Management Practices (5). Prerequisite, MGT 380 or permission of instructor. Exposure to and experience with contemporary management techniques and practices. Conceptual foundations are examined through case work, applied field activities and team projects. Formerly MGT 389.1 and BUS 383. Students may not receive credit for more than one.

MGT 384. Introduction to International Business (5). Prerequisite, ECON 310 or permission of instructor. Principles underlying international business; national policies influencing world trade and finance; and regional and international institutions. Formerly BUS 384. Students may not receive credit for both.

MGT 385. Organizational Theory (5). Prerequisite, MGT 380 or permission. An examination of the socio-technical system in a task-oriented organization focusing on the total organization as the unit of analysis; technology, structure, work design and environment as determinants of effectiveness. Formerly BUS 385. Students may not receive credit for both.

MGT 388. Women in Management (3). An examination of the ways in which American sex roles, together with corporate cultural practices and organizational structures, affect women’s attainment of and performance in managerial roles within business, educational, and professional organizations. Formerly SOC 368, MGT 368, and BUS 388. MGT 388 and SOC 388 are equivalent courses. Students may not receive credit for more than one.

MGT 389. Business and Society (5). Relations between business enterprise and society. Ethics and social responsibility in increasingly complex economic, political, social and technological environments. Formerly BUS 389. Students may not receive credit for both.

MGT 481. Organizational Behavior (5). Prerequisite, MGT 380. Applied and conceptual analysis of behavior within organizations. Involves leadership, motivation, communications, group processes, decision making, climate and culture. Formerly BUS 481. Students may not receive credit for both.

MGT 482. Applied Management and Organizational Behavior (5). Prerequisites, MGT 380 and MGT 481 or permission. Application of training and development practices to the personal and professional growth of the human resource. Individual and small group exercises give students the opportunity to apply and experience a variety of management concepts and practices. Formerly BUS 482. Students may not receive credit for both.

MGT 483. Organizational Change (5). Prerequisites, MGT 380 and MGT 481 or permission. Managing problem solving and change in organizations. An integration and application of theories adapted to organizational behavior. Formerly BUS 483. Students may not receive credit for both.

MGT 484. International Management (5). Prerequisite, MGT 380 or permission. A comparative study of management in selected countries as well as an analysis of key managerial problems encountered in the multinational corporation.

MGT 487. Small Business Management (5). Prerequisite, completion of all core requirements for business administration or accounting except MGT 489. Investigation of small business management and
policy issues. Student-consulting teams develop solutions to small business problems in marketing, finance, production, and management. Formerly MGT 471 and BUS 487. Students may not receive credit for more than one.

MGT 489. Strategic Management (5). Prerequisite, completion of all other core requirements for business administration or accounting. Basic policy decisions involved in managing the total enterprise. Formerly BUS 489. Students may not receive credit for both.

Management Information System Courses

MIS 386. Management Information Systems (5). Prerequisite, IT 101 or equivalent, and admission to the major or permission of instructor. Use of computer-based information systems in all functional areas of business. Computer and information technology, resources, management and end-user decision making, and system development. Formerly MS 386, OMIS 386 and BUS 386. Students may not receive credit for more than one.

MIS 387. Systems Analysis, Design, and Implementation (5). Prerequisite, MIS 386 or permission of instructor. Methods and techniques for the design, development and implementation of computer-based information systems for management and end-users. Emphasizes the integrated nature of modern systems. Formerly MS 387, OMIS 387 and BUS 387. Students may not receive credit for more than one.

MIS 400. MIS Laboratory Assistant (2). Prerequisite, MIS 386, software installation, technical support, and software training for students & Faculty in a computer lab. MIS teaching and/or research assistant. May be repeated to a maximum total of 6 credits.

MIS 420. Database Systems in Business (5). Prerequisite, MIS 387 or permission of instructor. Database management systems theories. Logical data modeling and physical database design and implementation for business process improvement and effective business decision-making. Structured query language. Formerly OMIS 420. Students may not receive credit for more than one.

MIS 430. Business Data Communications (5). Prerequisite, MIS 386 or permission of instructor. Optimizing data communications systems for effective business decision-making. Planning, design, and management of networks and operating systems for enterprise-wide computing.


MIS 450. Systems Implementation in Business (5). Prerequisites, MIS 420 and CS 1111 or permission of instructor. A capstone course in MIS emphasizing systems implementation and maintenance. Emerging technologies in creating enterprise computer applications for business decision-making.

Marketing Courses

MKT 360. Principles of Marketing (5). Prerequisite, admission to the major or permission. Introduction to the development of a marketing system. Interaction of economics, law, politics, ethics, and the behavioral sciences in a mixed market society. Formerly BUS 360. Students may not receive credit for both.

MKT 361. Channels of Distribution Management (5). Prerequisite, MKT 360. Selection, evaluation, management and control of channels of distribution. Analysis of the channel system includes warehousing, inventory management, and physical distribution in consumer and industrial products and services. Formerly BUS 361. Students may not receive credit for both.

MKT 367. Consumer Behavior (5). Prerequisite, MKT 360 or permission. An introduction to analysis of the consumer as a basis for marketing decisions. The analysis concerns who buys what, how the consumer uses the product, the significance of the product to the consumer, and the buying process. Formerly BUS 367. Students may not receive credit for both.

MKT 369. Market Research (5). Prerequisites, BUS 221 and MKT 360 or permission. Application of research to economic and business problems; tools of research design; planning investigations; gathering, organizing, and interpreting data; and presentation of findings. (Not open to students with credit in ECON 426.) Formerly BUS 469. Students may not receive credit for both.

MKT 398. Special Topics (1-6).

MKT 461. Self-Marketing (2). Prerequisite, MKT 360. Applying the principles of marketing to the development of a personal marketing plan including strategies and tactics. Formerly BUS 461. Students may not receive credit for both.

MKT 462. Marketing Promotion Management (5). Prerequisite, MKT 360. Communication problems of transferring goods and services to consumers and industrial buyers; advertising management, personal selling, and sales promotion; analysis for the promotion mix; and public interest in marketing communication. Formerly BUS 462. Students may not receive credit for both.

MKT 463. Sales Force Management (5). Prerequisite, MKT 360 or permission. Integration of sales force into the total marketing program of the firm; emphasizes organization, coordination, recruiting, training and incentives; develops methods for analyzing market demand and evaluation of sales force performance. Formerly BUS 463. Students may not receive credit for both.

MKT 465. Direct Marketing (5). Prerequisite, MKT 360. Primary and adjunct means of promotion and distribution through direct marketing. Formerly BUS 465. Students may not receive credit for both.

MKT 466. Industrial Marketing (5). Prerequisite, MKT 360. An introduction to industrial marketing and its major differences from consumer marketing. Major topics stressed are derived demand, industrial buyer behavior and planning of strategies and variations in the marketing mix. Case study method will be stressed. Formerly BUS 466. Students may not receive credit for both.

MKT 467. International Marketing (5). Prerequisite, MKT 360. Marketing functions involved in doing business overseas, environmental conditions affecting overseas trade and problems of securing employment overseas. Formerly BUS 467. Students may not receive credit for both.

MKT 470. Marketing Problems and Policy (5). Prerequisites, MKT 367, MKT 369 plus two marketing electives and senior standing; by permission only. The capstone course for the marketing specialty. Uses case analysis and other techniques to develop marketing decision skills and policy determination abilities. Formerly MKT 468 and BUS 468. Students may not receive credit for more than one.


Operations and Supply Management Courses

OSC 323. Operations Management (5). Prerequisites, BUS 221, and admission to the major, or permission of instructor. For Business Administration majors, BUS 321 is strongly recommended. Introduction to the production/operations management function. Quantitative and qualitative methods and models to support decision making in production, operations, logistics, and other functional areas. Formerly
OSC 324. Quality and Continuous Improvement (5). Prerequisite, OSC 323 or permission of instructor. Development and deployment of quality management and continuous improvement practices. Qualitative, analytical, and statistical methods which integrate managerial, technical, behavioral, and economic perspectives. Formerly MS 324, OMIS 324 and BUS 324. Students may not receive credit for more than one.

OSC 435. Advanced Operations Management (5). Prerequisite, OSC 323 and MIS 386 or permission of instructor. Advanced methods and models for planning, management and decision making in the supply, operations and logistics chain. Emphasizes the integration and coordination of resources for productivity improvement. Formerly MGT 435, OMIS 435, and BUS 435. Students may not receive credit for more than one.

OSC 450. Logistics Management (5). Prerequisite, BUS 221, Introductory Business Statistics. Analysis for competitive corporate rate strategies, adapting to change, qualitative, analytical, and statistical methods which integrate managerial, technical, behavioral, and economic perspectives. Formerly MS 324, OMIS 324 and BUS 324. Students may not receive credit for more than one.

OSC 464. Supply Chain Management (5). Prerequisite, OSC 323 or permission of instructor. An introduction to the elements of purchasing activities in industrial, commercial, and governmental markets. Analytical, legal, and ethical implications of purchasing decision making. Formerly MKT 464, BUS 464 and OMIS 464. Students may not receive credit for more than one.

OSC 475. Global Supply Chain Management (5). Prerequisite, OSC 464 or permission of instructor. Global negotiating and purchasing including locating, selecting and managing foreign suppliers, negotiating the purchase of foreign and domestic goods or services and arranging for their shipment. Formerly OMIS 475. Students may not receive credit for more than one.

OSC 480. Problems and Policies in OSC (5). Prerequisites OSC 464 and OSC 435 or permission of instructor. The capstone course for the OSC specialization. Students will complete a comprehensive project, which applies skills learned in other OSC classes to solve business problems and develop appropriate policies. Formerly OMIS 481. Students may not receive credit for more than one.

CHEMISTRY

Faculty
Chair: Martha Kurtz
SCI 302 F

Professors
JoAnn P. DeLuca, Organic, Mechanistic David G. Lygre, Biochemistry

Associate Professors
Martha J. Kurtz, Chemistry Education Carin Thomas, Biochemistry, Toxicology

Assistant Professors

General Departmental Information
Chemistry is the study of matter, its properties, and the changes it undergoes. The Department offers three majors. In each major, courses in the first two years emphasize fundamental topics in chemistry, mathematics, and physics. Students then choose advanced courses in chemistry and related areas to complete the requirements in their major.

These majors provide opportunities for practical experience in chemistry. For example, students are encouraged to take CHEM 490, Cooperative Education, in which they work in a private or public laboratory facility off campus. Students also are encouraged to do research on campus with a faculty member, and to participate in the Department's seminar program. A minor in Chemistry is offered to supplement career related fields.

Note: In order to graduate, all chemistry majors are required to achieve at least a 2.00 cumulative GPA and a 2.25 GPA in courses required for the major.

Bachelor of Arts Chemistry Major
The Bachelor of Arts major is designed to provide breadth, with an emphasis on Chemistry, that provides maximum flexibility in career choices. For example, students with this major may pursue careers in the health sciences, industry, environmental sciences, and other related areas.

Students are recommended to take MATH 272 and 273 before taking CHEM 381.

Required Courses Credits
CHEM 181, 181LAB, 182, 182LAB, 183, 183LAB, General Chemistry .......... 15
CHEM 251, 251LAB, Quantitative Analysis OR CHEM 345, Environmental Chemistry .......... 5
CHEM 350, Inorganic Chemistry .......... 3
CHEM 361, 361LAB, 362, Organic Chemistry .......... 8
CHEM 381, Physical Chemistry .......... 5
CHEM 431, 431LAB, Biochemistry .......... 5
CHEM 488, Colloquium .......... 1
CHEM 492, Laboratory Experience in Teaching Chemistry .......... 2
SCED 324, Science Education in the Secondary Schools .......... 4

Total 73-75

Chemistry: Teaching Major
This major satisfies the criteria for an endorsement in Chemistry. This major qualifies students to teach chemistry at the high school level and the middle or junior high school level. Students should seriously consider working toward endorsement in a second area, such as biology, general science, earth science, physics, or mathematics. Students taking this major are required to complete the Professional Education Program requirements offered through the Department of Education. Students completing this program after August 31, 2005 will be required to pass the WEST-E (PRAXIS II) exam for chemistry to receive a chemistry endorsement.

Students are recommended to take MATH 272 and 273 before taking CHEM 381.

Required Courses Credits
CHEM 181, 181LAB, 182, 182LAB, 183, 183LAB, General Chemistry .......... 15
CHEM 251, 251LAB, Quantitative Analysis OR CHEM 345, Environmental Chemistry .......... 5
CHEM 350, Inorganic Chemistry .......... 3
CHEM 361, 361LAB, 362, Organic Chemistry .......... 8
CHEM 381, Physical Chemistry .......... 5
CHEM 431, 431LAB, Biochemistry .......... 5
CHEM 488, Colloquium .......... 1
CHEM 492, Laboratory Experience in Teaching Chemistry .......... 2
SCED 324, Science Education in the Secondary Schools .......... 4
Bachelor of Science
Chemistry Major

The Bachelor of Science major is designed for students who plan a career in chemistry or related fields. The program prepares students for further study in graduate programs, or to enter the workplace directly. Students are recommended to take MATH 272 and 273 before taking CHEM 381.

Required Courses Credits
CHEM 181, 181LAB, 182, 182LAB, 183, 183LAB, General Chemistry .............. 15
CHEM 251, 251LAB, Quantitative Analysis (5)
CHEM 350, Inorganic Chemistry .......... 3
CHEM 361, 361LAB, 362, 363, 363LAB,
Organic Chemistry .......... 13
CHEM 381, 382, 382LAB, 383, 383LAB,
Physical Chemistry .......... 15
CHEM 388, Colloquium .................. 1
CHEM 431, 431LAB, Biochemistry .......... 5
CHEM 452, 452LAB, Instrumental Analysis (5)
CHEM 488, Colloquium .................. 1
PHYS 111, 111LAB, 112, 112LAB, 113, 113LAB,
Introductory Physics OR
PHYS 181, 181LAB, 182, 182LAB, 183, 183LAB, General Physics .............. 15
MATH 172, 173, Calculus ................. 10

Total 74

Chemistry Minor

Required Courses Credits
CHEM 181, 181LAB, 182, 182LAB, 183, 183LAB, General Chemistry .............. 15
Department-approved upper division electives in Chemistry ................. 16

Total 31

Chemistry: Teaching Minor

This minor is restricted to students working on a teaching major in biology, earth science or physics. Students taking this minor will receive an endorsement in chemistry only upon passing the WEST-E (PRAXIS II) exam for chemistry. SCED 324 requires admission to the Teacher Education Program.

Required Courses Credits
CHEM 181, 181LAB, 182, 182LAB, 183, 183LAB, General Chemistry .............. 15
CHEM 251, 251LAB, Quantitative Analysis OR CHEM 345, Environmental Chemistry 5
CHEM 361, 361LAB, 362, Organic Chemistry .................. 8
CHEM 492, Laboratory Experience in Teaching Chemistry .................. 2
SCED 324, Science Education in the Secondary Schools .................. 4

Total 34

Biochemistry Specialization

This specialization is designed for students who plan a career in biochemistry or a related health science area such as medicine or dentistry. Majors may pursue further graduate studies, a career in biotechnology or a related industry.

Students are recommended to take MATH 272 and 273 before taking CHEM 381.

Required Courses Credits
CHEM 181, 181LAB, 182, 182LAB, 183, 183LAB, General Chemistry .............. 15
CHEM 251, 251LAB, Quantitative Analysis (5)
CHEM 361, 361LAB, 362, 363, 363LAB,
Organic Chemistry .......... 13
CHEM 381, 382, 382LAB, Physical Chemistry 10
CHEM 388, Colloquium .................. 1
CHEM 431, 431LAB, 432, Biochemistry .......... 8
CHEM 488, Colloquium .................. 1

Select one of the following: 3-5
CHEM 350, Inorganic Chemistry (3)
CHEM 383, 383LAB Physical Chemistry (5)
CHEM 452, 452LAB, Instrumental Analysis (5)
Biol 321, Genetics .................. 5
Biol 325, Microbiology ................. 5
PHYS 111, 111LAB, 112, 112LAB, 113, 113LAB,
Introductory Physics OR
PHYS 181, 181LAB, 182, 182LAB, 183, 183LAB, General Physics .............. 15
MATH 172, 173, Calculus ................. 10

Total 96-98

Chemistry Courses

CHEM 101. Contemporary Chemistry (5).
Chemical principles and their application to contemporary problems of human beings and their environment. Four lectures and one laboratory session weekly.

CHEM 105. Processes in Physical Science Chemistry (5).
An introductory course stressing the development of chemical concepts through class discussions, labs, and investigative activities. Recommended for students planning to teach in the elementary school (K-6).

CHEM 111. Introduction to Chemistry (4).
Principles of chemistry for health science students and for those needing a background in chemistry prior to taking CHEM 181. Not open to students with credits in CHEM 181 or higher.

CHEM 111LAB. Chemistry Laboratory (1). Pre or co-requisite, CHEM 111. One laboratory session weekly. Formerly CHEM 111.1.


CHEM 112LAB. Chemistry Laboratory (1). Prerequisite, CHEM 111LAB prerequisite or corequisite, CHEM 112. One laboratory session weekly. Formerly CHEM 112.1.


CHEM 113LAB. Chemistry Laboratory (1). Prerequisite, CHEM 112LAB, prerequisite or corequisite CHEM 113. One laboratory session weekly. Formerly CHEM 113.1.

CHEM 181. General Chemistry (4).
Prerequisites, strongly recommend high school chemistry and qualification for MATH 155 or math placement exam.

CHEM 181LAB. General Chemistry Laboratory (1). Pre or corequisite, CHEM 181. One laboratory session weekly. Formerly CHEM 181.1.

CHEM 182. General Chemistry (4).
Prerequisite, CHEM 181.

CHEM 182LAB. General Chemistry Laboratory (1). Prerequisite, CHEM 181LAB, pre or corequisite, CHEM 182. One laboratory session weekly. Formerly 182.1.

CHEM 183. General Chemistry (4).
Prerequisite, CHEM 182. Four lectures weekly.

CHEM 183LAB. General Chemistry Laboratory (1). Prerequisite, CHEM 182LAB, pre or corequisite, CHEM 183. One laboratory session weekly. Formerly CHEM 183.1.

CHEM 251. Quantitative Analysis (3).
Prerequisite, CHEM 183, CHEM 183LAB. Pre or co-requisite, CHEM 251LAB.

CHEM 251LAB. Quantitative Analysis Laboratory (2). Pre or corequisite, CHEM 251. Two laboratory sessions weekly. Formerly CHEM 251.L.

CHEM 295. Research (1-6). By permission only.

CHEM 296. Individual Study (1-6). By permission only.

CHEM 298. Special Topics (1-6).
CHEM 345. Environmental Chemistry (5). Prerequisite, CHEM 183. Introduction to aquatic, atmospheric, and soil chemistry. Chemical analysis of substances in natural and contaminated systems. Three lectures and two laboratory sessions weekly.

CHEM 350. Inorganic Chemistry (3). Prerequisites, CHEM 183 and PHYS 113 or PHYS 183.

CHEM 361. Organic Chemistry (3). Pre- or corequisites, CHEM 183 and 183LAB.

CHEM 361LAB. Organic Chemistry Laboratory (2). Pre or corequisite, CHEM 361. Two laboratory sessions weekly. Formerly CHEM 361.1.

CHEM 362. Organic Chemistry (3). Prerequisite, CHEM 361.

CHEM 363. Organic Chemistry (3). Prerequisites, CHEM 362 and CHEM 361LAB.

CHEM 363LAB. Qualitative Organic Chemistry Laboratory (2). Prerequisite, CHEM 361LAB. Pre or corequisite, CHEM 363. Two laboratory sessions weekly. Formerly CHEM 363.1.

CHEM 381. Physical Chemistry (Thermodynamics) (5). Prerequisites, CHEM 183 and 183LAB, PHYS 113/113LAB or PHYS 183/183LAB and MATH 173. PHYS 183, 183LAB and MATH 273 recommended.

CHEM 382 Physical Chemistry (3). Prerequisite, CHEM 381.

CHEM 382LAB. Integrated Physical/Inorganic Laboratory I (2). Prerequisite or corequisite, CHEM 382. Synthesis of inorganic compounds and their characterization using physical chemistry methods, with additional experiments in thermodynamics, quantum mechanics and kinetics. Six hours of laboratory weekly. Formerly CHEM 382.1.

CHEM 383. Physical Chemistry (3). Prerequisite, CHEM 381.

CHEM 383LAB. Integrated Physical/Inorganic Laboratory II (2). Prerequisite, CHEM 382LAB, pre or corequisite, CHEM 383. Synthesis of inorganic compounds and their characterization using physical chemistry methods, with additional experiments in thermodynamics, quantum mechanics and kinetics. Six hours of laboratory weekly. Formerly CHEM 383.1.

CHEM 388. Colloquium (1). Prerequisite, 25 credits of chemistry. Analysis and presentation of the chemistry literature on a specific topic.

CHEM 395. Research (1-6). By permission only.

CHEM 431. Biochemistry (3). Prerequisite, CHEM 362. Formerly CHEM 371. Students may not receive credit for both.

CHEM 431LAB. Biochemistry Laboratory (2). Prerequisites, CHEM 361LAB, pre or corequisite CHEM 431. Two laboratory sessions weekly. Formerly CHEM 371.1 and CHEM 431.1.

CHEM 432. Biochemistry (3). Prerequisite, CHEM 431. Formerly CHEM 372. Students may not receive credit for both.

CHEM 452. Instrumental Analysis (3). Prerequisites, CHEM 251, 251LAB.

CHEM 452LAB. Instrumental Analysis Laboratory (2). Pre or corequisite, CHEM 452. Two laboratory sessions weekly. Formerly CHEM 452.1.

CHEM 454. Spectroscopy (3). Prerequisites, CHEM 363, 363LAB and 383 or permission. Theory, instrumentation and application of spectroscopy in chemistry. Three hours per week split between lecture and laboratory as needed. CHEM 454 and CHEM 554 are equivalent courses. Students may not receive credit for both.

CHEM 473. Transition Metal Chemistry (3). Prerequisites, CHEM 350 and CHEM 382. A survey of the structure, spectroscopy, and characterization of transition metal compounds, and the electronic structures of transition metals and lanthanides.

CHEM 488. Colloquium (1). Prerequisite, CHEM 388. Analysis and presentation of the chemistry literature on a specific topic. May be repeated.

CHEM 490. Cooperative Education (1-12). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U.

CHEM 491. Workshop (1-6).

CHEM 492. Laboratory Experience in Teaching Chemistry (2). Prerequisite, 10-15 credit hours in college chemistry and permission of the instructor. May be repeated for credit with permission of the Department Chair. Grade will be S or U.

CHEM 495. Senior Research (1-6). By permission only.

CHEM 496. Individual Study (1-6). By permission only.

CHEM 498. Special Topics (1-6).

CHEM 499. Seminar (1-5). Students do literature research of a chemical topic and make a presentation to the Department. May be repeated once for credit.

COMMUNICATION

Faculty
Chair: Corwin P. King
Bouillon 232

Professors:
Philip M. Backlund, Communication Studies
Corwin P. King, Communication Studies, Public Relations
Jerilyn S. McIntyre, Mass Communication Studies

Associate Professors:
Lois J. Breedlove, Journalism
Beatrice Coleman, Public Relations
Robert C. Fordan, Journalism
Michael R. Ogden, Journalism

Assistant Professors:
Cynthia Mitchell, Journalism

General Departmental Information

Communication is a social science discipline that focuses upon how, why, and with what effects people use language to convey information. It is among the oldest and the newest fields of study, with historical roots going back to the Greeks and Romans, and other ancient cultures, and with modern roots grounded in the latest developments in science and technology. It provides academic preparation for employment in the media, business and industry, government, education, and social and community service, as well as for advanced work in communication or such fields as law and ministry.

Majors are offered in Communication Studies, Public Relations, and Journalism. The Journalism major acquaints students with the structures, functions, and work methods of the media in preparation for careers in print, broadcast, and on-line media utilizing oral, visual and written communication. The Public Relations major combines the study of oral, visual, and written communication to prepare students for careers in the professional practice of public relations and advertising with corporations, agencies, and non-profit organizations. The Communication Studies major gives students the knowledge and skills necessary for effective communication in interpersonal, small group, and public situations, and is designed to prepare a student for graduate school as well as a variety of career opportunities.

Minors are available in several areas. They are a strong addition to majors in other fields, since there are few occupations where the ability to communicate well is not important.
### Admission to Departmental Programs

1. Students pursuing either majors or minors are required to be advised by the departmental faculty.
2. Students must be enrolled in or have completed COM 201, 207, 208, and 289 before obtaining entrance to the majors.
3. Students wishing to apply for entrance to any of the departmental majors must submit a major application form, a current CAPS report or an evaluation by a Communication faculty member, a letter of application, and test scores from the departmental admissions test in accordance with department policies.
4. Students must earn a minimum grade of C- in every course allowed toward fulfilling any major and/or minor requirements.
5. The Communication Department reserves the right to modify these requirements as the needs of the Department change and would supersede policies previously published in this catalog.

### Department Policies

1. Some required upper-division Communication courses in Public Relations, Journalism, and Communication are limited to students who have been accepted as majors or minors in those programs. Permission to register for these courses must be obtained from the department office. Check catalog listings for specifics about each course.
2. Internship credits: All majors are required to take 5 credits of COM 490, Cooperative Field Experience. Communication Studies majors may elect to take COM 485, Senior Seminar, instead of COM 490. Students shall receive COM 490 credits only if they have major status at the time they enroll for Cooperative Field Experience credit. Students not having major status shall receive COM 290 credits.
3. All Communication Department majors are required to complete a minor from outside the department of at least 20 credits. The minor must be approved by the student’s advisor as being compatible with the student’s long-term academic and career goals. Advertising is considered an internal-department minor and does not fulfill this requirement.

### Honors in Communication

The Communication Department recognizes and rewards superior scholarship. Qualified students are encouraged to enter the Department’s honors program. Entrance requirements include junior or senior class standing, an overall GPA of 3.0, a GPA of 3.4 in courses taken in communication and completion of an honors project. Please contact the Department Chair for further information.

### Bachelor of Arts

These courses set the foundation of learning for all disciplines in the communication professions. Students will learn the concepts, skills and professional ethics needed to be communication professionals in our society. All Communication majors must complete the following core classes:

**Required Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 201</td>
<td>Introduction to Mass Media</td>
<td>4</td>
</tr>
<tr>
<td>COM 207</td>
<td>Survey of Oral Communication</td>
<td>4</td>
</tr>
<tr>
<td>COM 208</td>
<td>Writing Across the Media</td>
<td>4</td>
</tr>
<tr>
<td>COM 289</td>
<td>Communication Orientation</td>
<td>1</td>
</tr>
<tr>
<td>COM 300</td>
<td>Communication Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>COM 321</td>
<td>Visual Communication</td>
<td>4</td>
</tr>
<tr>
<td>COM 333</td>
<td>Communication Ethics</td>
<td>3</td>
</tr>
<tr>
<td>COM 489</td>
<td>Portfolio Assessment</td>
<td>1</td>
</tr>
</tbody>
</table>

**Total Core Classes** 24

### Communication Studies

The Communication Studies major combines traditional liberal arts courses with professional courses in oral, written, and visual communication. It is intended for students who seek broad-based training in communication, suitable for graduate study, professional study, or a variety of careers in business and industry.

**Communication Core Courses** 24

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 251</td>
<td>Group Communication</td>
<td>4</td>
</tr>
<tr>
<td>OR COM 252</td>
<td>Argumentation and Debate</td>
<td>4</td>
</tr>
<tr>
<td>COM 253</td>
<td>Interpersonal Communication</td>
<td>4</td>
</tr>
<tr>
<td>OR COM 302</td>
<td>Intercultural Communication</td>
<td>4</td>
</tr>
<tr>
<td>COM 401</td>
<td>Communication Concepts and Processes</td>
<td>4</td>
</tr>
<tr>
<td>Select one of the following: 3-4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>COM 369</td>
<td>Mass Media and Society</td>
<td>3</td>
</tr>
<tr>
<td>COM 382</td>
<td>Media History</td>
<td>3</td>
</tr>
<tr>
<td>COM 330</td>
<td>Media Aesthetics</td>
<td>3</td>
</tr>
<tr>
<td>COM 460</td>
<td>Communication Law</td>
<td>4</td>
</tr>
<tr>
<td>COM 340</td>
<td>Rhetorical Theories of Communication</td>
<td>4</td>
</tr>
<tr>
<td>COM 345</td>
<td>Business and Professional Speaking</td>
<td>4</td>
</tr>
</tbody>
</table>

**Total (including core classes)** 72-73

### Public Relations Major

Organizations, whether they are industrial, governmental, educational, or corporate, require individuals who communicate with various internal and external publics. Accurate information on internal operations as they affect the public, as well as policies and decisions of the organization, must be communicated by representatives of the organization. Such persons must be able to speak to groups persuasively, be familiar with all aspects of research, be responsible for monitoring public attitudes and concerns, and be capable of creating various types of publicity and promotional materials. Public relations practitioners design internal communication programs for employees, management and other key stakeholder publics.

**Public Relations Core Courses** 24

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 270</td>
<td>Introduction to Public Relations</td>
<td>4</td>
</tr>
<tr>
<td>COM 370</td>
<td>Writing for Public Relations</td>
<td>4</td>
</tr>
<tr>
<td>COM 460</td>
<td>Communication Law</td>
<td>4</td>
</tr>
<tr>
<td>COM 470</td>
<td>Applied Public Relations</td>
<td>5</td>
</tr>
<tr>
<td>COM 475</td>
<td>Public Relations and Advertising Management</td>
<td>4</td>
</tr>
<tr>
<td>COM 487</td>
<td>Public Relations Professional Seminar</td>
<td>3</td>
</tr>
<tr>
<td>ME 461</td>
<td>Advertising and Sales Promotion</td>
<td>5</td>
</tr>
<tr>
<td>COM 490</td>
<td>Cooperative Education</td>
<td>5</td>
</tr>
</tbody>
</table>

Select from the following: 9

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 306</td>
<td>Introduction to On-line Media</td>
<td>4</td>
</tr>
<tr>
<td>COM 310</td>
<td>Broadcast News Writing</td>
<td>4</td>
</tr>
<tr>
<td>COM 341</td>
<td>Television Field Production</td>
<td>4</td>
</tr>
<tr>
<td>COM 342</td>
<td>NewsWatch Reporting</td>
<td>1</td>
</tr>
<tr>
<td>COM 348</td>
<td>Publication Design</td>
<td>3</td>
</tr>
<tr>
<td>COM 349</td>
<td>Media Management</td>
<td>4</td>
</tr>
<tr>
<td>COM 440</td>
<td>Corporate Television</td>
<td>4</td>
</tr>
<tr>
<td>COM 468</td>
<td>Observer (1-2)</td>
<td>1</td>
</tr>
<tr>
<td>COM 478</td>
<td>Advanced Newspaper Editing</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one from the following: 5

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mkt 360</td>
<td>Principles of Marketing</td>
<td>5</td>
</tr>
<tr>
<td>Mkt 462</td>
<td>Marketing Promotion Management</td>
<td>5</td>
</tr>
<tr>
<td>Mkt 369</td>
<td>Market Research</td>
<td>5</td>
</tr>
</tbody>
</table>

**Total (including core classes)** 72
Journalism Major

The Journalism major helps students become competent in the skills, concepts and perspective they need to be successful in the media. Students will learn to communicate information to a mass audience in a variety of media—print, broadcast, and on-line. Students also will develop an appreciation for the fundamental roles the media play in our social, political and economic system.

Communication Core Courses ...... Credits 
COM 300, Reporting .......................... 5
COM 349, Media Management ........... 4
Select one of the following: .................. 3
COM 330, Media Aesthetics (3)
COM 369, Mass Media and Society (3)
COM 382, Media History (3)
COM 460, Communication Law .......... 4
COM 486, Advanced Journalism Seminar 3
COM 490, Cooperative Education ...... 5
Total 24

Select one of the following Specializations

Print Specialization
COM 342, NewsWatch Reporting ........ 1
COM 347, Copy Editing .................... 4
COM 348, Publication Design ............. 3
COM 466, Public Affairs Reporting ..... 4
COM 468, Observer (4) OR
COM 478, Advanced Newspaper
Editing (3-6) ..................................... 10
Print Specialization 22

Broadcast Specialization
COM 310, Broadcast News Writing ....... 4
COM 322, Television Studio Production . 4
COM 341, Television Field Production .. 4
COM 342, NewsWatch Reporting (1) OR 1
COM 332, NewsWatch Production (1)
COM 442, NewsWatch Management and Production (4) ............... 8
COM 468, Observer ......................... 1
Broadcast Specialization 22

On-line Media Specialization
IT 248, Web Fundamentals ............... 2
COM 306, Introduction to On-line Media . 4
COM 342, NewsWatch Reporting ....... 1
COM 347, Copy Editing .................... 4
COM 406, On-line Media Skills ........ 4
COM 468, Observer (1-2) .................. 7
On-line Media Specialization 22

Pre-approved upper division journalism electives .......................... 4
Total (including core classes) 74

Communication Minor

Students in Teacher Education must meet with the Department Chair and the certification director to determine the course of study necessary for endorsement.

Required Courses Credits
COM 201, Introduction to Mass Media . 4
COM 207, Survey of Oral Communication 4
COM 208, Writing Across the Media .... 4
COM 300, Communication Research Methods ............................................. 3
COM 321, Visual Communication ......... 4
COM 333, Communication Ethics ....... 3
Approved Communication Electives .... 8
Total 30

Organizational Communication Minor

The minor in Organizational Communication is designed to complement a broad spectrum of majors leading to careers in government, education, and social and community services. Emphasis is placed on an understanding of the basic nature of communication in organizations, and on the fundamental knowledge and skills necessary for effective communication in organizations at the interpersonal small group, and public (large group) levels. Students are urged to consult early with a department advisor for approval of electives courses. Credit for COM 490 will not normally be given until all other courses in the minor have been completed. Not available as a minor for students majoring in public relations.

Required Courses Credits
COM 201, Group Communication OR
COM 302, Intercultural Communication ................................................. 4
COM 345, Business and Professional Speaking ...................................... 4
COM 365, Organizational Communication 4
COM 375, Interviewing Principles and Techniques .................................. 4
COM 490, Cooperative Education ........... 5
Department-approved electives ........... 4
Total 25

Advertising Minor

The minor in advertising provides recognition for students who complete the specified minor courses. Such recognition will benefit students in gaining professional employment or advancing in their current professional position.

The advertising minor develops competence in advertising planning, production, and distribution. It complements a range of majors and is jointly offered by the Departments of Communication and Information Technology and Administrative Management. IT 101, Computer Applications, CS 101, Computer Basics, or demonstration of computer competence is a prerequisite to the minor.

Required Courses Credits
COM 270, Introduction to Public Relations 4
COM 300, Research Methods .............. 4
COM 305, Advertising Copywriting and Placement .................................. 4
ME 340, Principles of Selling ............ 4
ME 350, Principles of Advertising ....... 4
ME 461, Advertising and Sales Promotion 5
Select one of the following: .............. 3-4
COM 306, Introduction to Online Media (4)
COM 309, Broadcast Advertising and Scriptwriting (4)
COM 341, Television Field Production (4)
COM 348, Publication Design (3)
IT 389, Desktop Publishing (3)
Select one of the following: .......... 4-5
ME 455, Consumer Research (5)
COM 440, Corporate Television (4)
COM 475, P.R. & Advertising Agency Management (4)
Total 32-34

Communication Courses

COM 201, Introduction to Mass Media (4). Media study from consumer point of view: media production, politics and history. Required for entrance to major exam.

COM 207, Survey of Oral Communication (4). Introductory course to develop oral communication abilities for effective communication across a variety of contexts.

COM 208, Writing Across the Media (4). Prerequisites, ENG 101, ENG 102, COM 201 (may be concurrent enrollment in COM 201). Integrated approach to media writing. Emphasizes print news writing, public relations writing, advertising copy writing, and broadcast newswriting.

COM 250, Public Speaking: Practice and Criticism (4). Practice in selection, organization, and presentation of effective public speeches. Attention also given to theory and practice of speech criticism.

COM 251, Group Communication (4). Prerequisites, COM 207 or permission of the instructor. Analysis and practice of communication principles affecting effectiveness of small group discussion. Includes theory and practice of leadership and problem solving in small groups.

COM 252, Argumentation and Debate (4). Development of skills in oral advocacy. Content of the course will center on evidence, tests of acceptable evidence, effective implementation of evidence, patterns of reasoning, tests for validity.

COM 253, Interpersonal Communication (4). Prerequisite, COM 207 or permission of the instructor. Investigation of theory,
research and practice of the role of communication in effective interpersonal relationships.

COM 270. Introduction to Public Relations (4). Prerequisites, COM 208 or permission of the instructor. The basic concepts of public relations; the tools and media used in communicating with the variety of publics.

COM 289. Communication Orientation (1). Prerequisite or corequisite, COM 201. Survey of departmental requirements and fields of study. Required for entrance to major. Formerly COM 488. Students may not receive credit for both.

COM 290. Cooperative Field Experience (1-6). Internship designed to explore career opportunities in the major. Open to all students. Grade will be S/U.

COM 296. Individual Study (1-6). Prerequisite, permission of instructor.

COM 298. Special Topics (1-6).

COM 300. Communication Research Methods (3). Prerequisites, major status or by permission of the instructor. Methods of gathering, measuring, analyzing qualitative and quantitative communication research.

COM 302. Intercultural Communication (4). The objective of this course is to give the participants the skills and understanding necessary to improve communication with peoples of other nations and cultures.

COM 305. Advertising Copywriting and Placement (4). Prerequisite, major status or by permission of the instructor. Preparation and placement of advertising in mass and selective media. Theory and techniques of advertising writing and media buying.

COM 306. Introduction to Online Media (4). An introduction to the theories and concepts of the on-line media.

COM 308. Reporting (5). Prerequisite, COM 208, major status or by permission of the instructor. Information gathering and research skills to produce well-developed news stories for print, broadcast and online media.

COM 309. Broadcast Advertising and Scriptwriting (4). Prerequisites, COM 208, major status or by permission of the instructor. Principles and techniques used in writing effective radio and television commercials, promotional copy, and video scripts. Preparation of program treatments, storyboards, and scripts for broadcast-writing intensive course.

COM 310. Broadcast News Writing (4). Prerequisites, major status and COM 208, or by permission of the instructor. Writing and producing news copy for the electronic media. News gathering techniques, on the scene coverage, interviewing, and producing television newscasts. Formerly COM 289. Students may not receive credit for both.

COM 315. Studies in Communication (1). Prerequisite, permission of the instructor. Specialized topics in communication to increase practical communication skills. May be repeated for credit under different topics. Grade will be S or U.

COM 321. Visual Communication (4). Prerequisites, Major status, or permission of instructor. Understanding the communication of visual messages for an audience, production of visual images in print, video, and digital forms.

COM 322. Television Studio Production (4). Prerequisite, COM 321. An introduction to the production elements of a television show, with an emphasis on the function and operation of studio lighting, audio, and cameras.

COM 330. Media Aesthetics (3). Prerequisite, COM 321. An examination of the fundamental elements of electronic media, including light, space, motion, and sound.

COM 332. NewsWatch Production (1). Prerequisite, COM 322 or permission of the instructor. Help produce newscasts and public affairs programs on Ellensburg Community Television, cable channel 2, and KCWU-TV, cable channel 15. May be repeated to a limit of six credits. Formerly COM 342B.

COM 333. Communication Ethics (3). Prerequisite, COM 201. The study of ethical issues in communication.

COM 340. Rhetorical Theories of Communication (4). Prerequisite, 15 credits of communication or permission of instructor. Survey of rhetorical theory and practice from ancient to modern times. Examination of classical, renaissance and modern historical periods and transitions to current theories of communication.

COM 341. Television Field Production (4). Prerequisite, major status, COM 321 and COM 309 or COM 310, or permission of instructor. Principles and techniques of information gathering and visual storytelling. Applications of video to journalism, advertising and public relations.

COM 342. NewsWatch Reporting (1). Prerequisite, COM 208 or permission of instructor. Gather, write, and report news stories for newscasts and public affairs programs on Ellensburg Community Television, cable channel 2, and KCWU-TV, cable channel 15. May be repeated to a limit of six credits. Formerly COM 342A.

COM 345. Business and Professional Speaking (4). Prerequisite, permission. Oral communication in career and professional settings with focus on public presentations, briefings and persuasion.

COM 347. Copy Editing (4). Prerequisite, COM 208, major status or by permission of instructor. The editing process; edit copy for content and mechanics; write headlines and datelines.

COM 348. Publication Design (3). Prerequisites, by permission of instructor or major status. Publication design, the theories of graphics, headlines and text. Management of the design process.

COM 349. Media Management (4). Prerequisites, major status or by permission of the instructor. Principles of management employed in the planning, organizing, staffing, and budgeting of newspapers, magazines, broadcast stations and cable television operations.

COM 350. Persuasion (4). Prerequisite, major status or permission of the instructor. Role of persuasion in society, elements of human motivation, techniques and appeals of the persuader.

COM 351. Visual Anthropology (4). Prerequisites, ANTH 130 or ART 225 or COM 321 or 330 or by permission of the instructor. Provides methodological, theoretical and practical background to produce and evaluate imagery in films and video; guidelines and practice of image presentation/manipulation in anthropological and social contexts. COM 351 and ANTH 351 are equivalent courses. Students may not receive credit for both.

COM 365. Organizational Communication (4). Prerequisites, major status, COM 300, and permission of the instructor. Function, forms, and patterns of communication in organizations. Effects of organizational structures and dynamics on communication. Methods of evaluating communication policies and practices as an aid to organizational management.

COM 369. Mass Media and Society (3). Relationship of the mass media to social institutions; including philosophy, responsibilities, regulations and criticism. COM 369 and SOC 369 are equivalent courses. Students may not receive credit for both.

COM 370. Writing for Public Relations (4). Prerequisite, COM 270, major status or by permission of the instructor. Practical instruction in persuasive writing, news releases, broadcast material, speeches, institutional messages, newsletter articles, employer publications, backgrounder, features, and corporate profiles.

COM 375. Interviewing Principles and Techniques (4). Prerequisites, COM 207, major status or permission of the instructor. Examination of the basic principles and techniques of interviewing and their application in informational, employment, and persuasive/counseling contexts. Extensive in-class and community experience in interviewing provided.
COM 380. Nonverbal Communication (4). Interpretation and analysis of four categories of nonverbal behavior: paralanguage, action language, object language, and uses of space and time. Formerly COM 280/ANTH 280. COM 380 and ANTH 380 are equivalent courses. Students may not receive credit for both.

COM 382. Media History (3). Prerequisite, COM 201 and COM 300, or by permission of instructor. A survey of the history of American media, emphasizing an understanding of the technological, social, and cultural trends affecting the print, broadcast and public relations industries.

COM 401. Communication Concepts and Processes (4). Prerequisite, major status or by permission of instructor. Examination of human communication on an individual, interpersonal, and public level. Exploration of the relationship between communication theory and the practice of communication in various professional settings.

COM 402. Gender Communication (4). Prerequisite, major status or permission of the instructor. Analysis of gender role development in females and males with focus on effective relationship development between sexes. Analysis and development of communication skills useful in cross-sex friendships, working relationships, and romantic/family relationships.

COM 406. Online Media Skills (4). Prerequisites, COM 306, major status or permission of the instructor. Advanced skills, theories, and management to create online media. May be repeated once for credit.

COM 422. Advanced Television Studio Production (4). Prerequisites, COM 322, COM 332, major status or permission of instructor. Advanced course in creative use of television studio equipment, lighting, sound, computer graphics and editing principles. Emphasis on magazine-style, music video, and dramatic formats.

COM 429. Classroom Communication (5). Consideration of problems, practices and techniques, and means of improvement in classroom communication. Examined from the viewpoint of both teacher and student.

COM 430. Listening (4). Prerequisite, major status or permission of instructor. Principles of effective listening. Exploration of personal listening practices and improving them both in and outside the classroom setting.

COM 440. Corporate Television (4). Prerequisite, COM 309, and COM 322 or 341, major status, or by permission of the instructor. A study of methods used in the conceptualization, design and production of non-broadcast video programs. Consideration of management needs and training requirements.

COM 441. Advanced Television Field Production (4). Prerequisite, COM 341, major status or permission of instructor. Advanced theory and practice of electronic field production. Examines technical and aesthetic requirements of single-camera video production and editing, and multicamera remotes.

COM 442. Newswatch Management and Production (4). Prerequisite, major status, COM 308 and COM 310, COM 341, and COM 342, major status or permission of instructor. Gather, write, report and produce regularly scheduled newscasts on KGWU-TV. May be repeated to a limit of 12 credits.

COM 445. Speech Criticism (4). Prerequisite, major status, 20 credits of communication, or permission of instructor. Theory and methodology in the description, analysis and evaluation of rhetorical discourse.

COM 450. Speech Composition (4). Prerequisite, major status or permission of instructor and COM 250 or COM 345. Preparation and delivery of specialized forms of public address. Writing speeches for others, advanced forms of style and support, and speeches for special occasions. Offered alternate years.


COM 452, 453, 454. Applied Video Production (1,1,1). Prerequisites, COM 321, major status or by permission of the instructor. Assistant in the operation and programming of KGWU-TV, Ellensburg. Grade will be S or U.

COM 460. Communication Law (4). Prerequisite, COM 201, COM 333, major status or permission of the instructor. Understanding legal issues for the communication professions including libel, slander, privacy, copyright, and First Amendment.

COM 466. Reporting of Public Affairs (4). Prerequisites, COM 308, major status or permission of the instructor. An advanced reporting course with emphasis on live coverage of governmental activities at the local level, including city councils, courts and law enforcement agencies, school boards, and business and the environment.

COM 468. Observer (1-2). Prerequisites, COM 208 or permission of the instructor. Reporting and photo assignments on the campus newspaper. May be repeated to a limit of 6 credits.

COM 470. Applied Public Relations (5). Prerequisite, COM 300, COM 370, major status or by permission of the instructor. Creation of a public relations program for an organization, agency or institution. Two hours lecture and four hours laboratory or field work per week.

COM 475. Public Relations and Advertising Management (4). Prerequisite, COM 470, major status or by permission of the instructor. Application of theory and concepts to managing public relations and advertising accounts.

COM 478. Advanced Newspaper Editing (3-6). Prerequisite, COM 208, COM 347, COM 468 and permission. Administrative responsibilities for students serving as editors of the campus newspaper. Variable credit with a maximum of six credits. May be repeated.

COM 485. Senior Seminar (5). Prerequisites COM 300, COM 401, and major status. A research project leading to a thesis.

COM 486. Advanced Journalism Seminar (3). Prerequisites, COM 308, major status or by permission of the instructor. Issues and skills in specialized journalistic situations. Seminar topics will change from quarter to quarter. Class may be repeated for up to nine credits.

COM 487. Public Relations Professional Seminar (3). Prerequisite, COM 470 and Public Relations major status. Advanced Public Relations Seminar topics will change from quarter to quarter. Course may be repeated for credit.

COM 489. Portfolio Assessment (1). Prerequisite, major status, senior standing. End of program assessment activities. Preparation, presentation, and evaluation of a professional portfolio of work produced during the major.

COM 490. Cooperative Education (1-12). Prerequisite, Major status and approval of Department Chair. Individual contract arrangement involving student, faculty, and cooperating agency to gain practical experience in communication. Grade will be S/U.

COM 491. Workshop (1-6).

COM 496. Individual Study (1-6). Prerequisite, permission of instructor.

COM 498. Special Topics (1-6).

COM 499. Seminar (1-5).

Undergraduate Courses/Programs on Reserve

The following courses and programs are on reserve and may be offered subject to program needs: COM 101. Communication and Issues (5); COM 110. Oral Communication Skills (3).
COMPUTER SCIENCE

Faculty
Chair: James Schwing
Hebeler 219

Professor
Boris Kovalerchuk, Artificial Intelligence, Simulation and Optimization, Computer Architecture

Associate Professor
Razvan Andonie, Neural Networks, Parallel and Distributed Computing, Computational Intelligence, Data Mining
Grant Eastman, Systems Design and Analysis, Networking, Computer Architecture
Edward Gellenbeck, User Interface Design, Web Development, Software Engineering

General Departmental Information

The Department of Computer Science offers a degree program leading to the Bachelor of Science in Computer Science. The Department of Computer Science also jointly offers a program with the Industrial Engineering Technology (IET) Department in the College of Education and Professional Studies in Computer Engineering Technology. Information related to the Computer Engineering Technology program can be found in the IET section of the catalog.

The field of computer science can trace its beginnings and much of its foundation to both mathematics and engineering. Because of this, studies in computer science range from theory through experimental techniques to engineering methodology. The purpose of the computer science curriculum is to expose students to aspects of each of these disciplines and foster an appreciation and understanding of them. To accomplish this, students are exposed to the broad theoretical basis of computer science as well as a strong laboratory component. The laboratory experience is more than simple programming. Rather, it is through the laboratories that students are introduced to both the experimental and the design aspects of computer science.

Using this philosophy as a base, the Computer Science Department has designed a curricular model that seeks to increase relevance to the real world. In particular, the senior project, a capstone course series – CS 480 and 481 – adopts a theme that expands upon the experimental and design approach of typical computer science curricula. This capstone series addresses the creativity and productivity elements required for business and industry applications today. Students become engaged in projects that investigate each stage of transforming a creative idea into a productivity enhancing system in a realistic context.

Standards for Admission

Admission to the Computer Science major or minor is selective. A cumulative grade point average of 2.50 is required in the Pre-Admission requirements listed below. Students should submit their application during the quarter in which they are completing the Pre-Admission requirements. Applications will be accepted through the last day of classes (i.e., the week before finals) of the Fall, Winter, and Spring quarters for admission the following quarter. A completed application must include the standard major application form and an advisor approved graduation plan.

Students must be accepted as a Computer Science major or minor prior to enrolling in computer science classes beyond CS 301 with the exception of CS 511. Students applying for admission to the major may register for courses for the following quarter but will be dropped if not admitted.

Students should request admission to the Computer Science Pre-Major prior to completion of the Pre-Admission requirements.

The Computer Science Department believes that advising is one of the keys to success in an undergraduate program. To that end, majors and minors are required to meet with a faculty advisor every term in order to register. Pre-majors are also encouraged to meet with their designated faculty advisor each term. Advisors and advising times are listed with the Computer Science office.

Pre-Admission Requirements

General University Requirements Credits
ENG 101, English Composition .............. 4
ENG 102, English Composition .............. 4

Major Requirements
CS 110, Programming Fundamentals I ........ 4
CS 111, Programming Fundamentals II .... 4
CS 301, Data Structures .................... 4
MATH 172, Calculus ......................... 5

Pre-Admission Total 25

Bachelor of Science
Computer Science Major

In order to expose computer science majors to a broad theoretical base while emphasizing the laboratory experience, students will complete the CS Core courses. To add depth and flexibility to their academic programs, students will work out an focus area with a major advisor. A specific focus may be developed in many areas of computer science, examples include: artificial intelligence, computer systems, information systems, scientific computing, and software engineering. A table of possible sequences for focus area electives follow the core requirements.

CS Requirements Credits
Pre-Admission Major requirements ............ 17
CS 112, Foundations of Computer Science .... 4
CS 302, Advanced Data Structures ........... 4
CS 311, Computer Architecture I ............. 4
CS 312, Computer Architecture II ............ 4
CS 325, Technical Writing in Computer Science .......... 3
CS 361, Principles of Programming Languages I ...................................... 4
CS 362, Principles of Programming Languages II ...................................... 4
CS 392, Lab Experience in Teaching in Computer Science ................................. 1
CS 420, Database Management Systems ......... 4
CS 427, Algorithm Analysis ..................... 4
CS 446, User Interface Design .................. 4
CS 470, Operating Systems .................... 4
CS 480, Software Engineering .................. 4
CS 481, Software Engineering Project ........... 4
CS 489, Senior Colloquium .................... 1
CS 492, Lab Experience in Teaching in Computer Science ................................. 2
MATH 260, Sets and Logic ........................ 5
MATH 330, Discrete Mathematics .............. 5
Focus Area Electives .......................... 24

Total 106

Focus Area Electives List

Students may use additional courses as their focus area electives with the approval of their major advisor.

CS 350, Web Development Technology
CS 441, Introduction to the UNIX Operating System
CS 410, Formal Language Theory
CS 418, Microprocessor Systems
CS 435, Simulation
CS 440, Computer Graphics
CS 441, Computer Graphics II
CS 450, Computer Network and Data Communication
CS 455, Artificial Intelligence
CS 456, Data Mining
CS 457, Computational Intelligence
CS 458, Artificial Intelligence Project
CS 460, Optimization
CS 465, Compiler Design
CS 473, Parallel Computing
CS 490, Cooperative Education (Maximum of 4 credits)
CS 496, Individual Study
EET 221, Basic Electricity
EET 221.1, Basic Electricity Laboratory
EET 312, Basic Electronics

...
EET 371, Digital Circuits
EET 372, Advanced Digital Circuit
EET 375, Microprocessor Applications
MATH courses at or above the level of 173
ACCT 251, 252, Accounting I and II
ECON 201, Principles of Macroeconomics
BUS 221, Business Statistics
MIS 386, Management Information Systems

Possible Focus Area Sequences
The table below summarizes typical focused sequences taken by students.
AI – Artificial Intelligence
Sys – Computer Systems
IS – Information Systems
Sci – Scientific Computing
SW – Software Design and Engineering

<table>
<thead>
<tr>
<th>AI</th>
<th>Sys</th>
<th>IS</th>
<th>Sci</th>
<th>SW</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>X</td>
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<td>X</td>
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</tr>
</tbody>
</table>

Computer Science Minor Programs
The Department of Computer Science has designed two minor programs to meet the varying needs of undergraduate students.

Computer Science Minor
This minor is designed for students who wish to investigate and basic core of the computer science discipline. This minor is appropriate for any student including those in teacher education seeking to enhance their technical computer science background.

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 110, Programming Fundamentals I . . . . 4</td>
<td></td>
</tr>
<tr>
<td>CS 111, Programming Fundamentals II . . . 4</td>
<td></td>
</tr>
<tr>
<td>CS 301, Data Structures ......................... 4</td>
<td></td>
</tr>
<tr>
<td>CS 311, Computer Architecture I .............. 4</td>
<td></td>
</tr>
<tr>
<td>MATH 130, Finite Mathematics ................... 5</td>
<td></td>
</tr>
<tr>
<td>MATH 154, Pre-Calculus Mathematics II . . . 5</td>
<td></td>
</tr>
<tr>
<td>MATH 260, Sets and Logic ......................... 5</td>
<td></td>
</tr>
</tbody>
</table>

Total 31

Applied Computer Science Minor
This minor is designed for students who wish to integrate a computer science component into their curriculum. This minor is appropriate for any student who wishes to include an enhanced technical computer science background as part of their overall curriculum.

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 110, Programming Fundamentals I . . . . 4</td>
<td></td>
</tr>
<tr>
<td>CS 111, Programming Fundamentals II . . . 4</td>
<td></td>
</tr>
<tr>
<td>CS 301, Data Structures ......................... 4</td>
<td></td>
</tr>
<tr>
<td>MATH 130, Finite Mathematics ................... 5</td>
<td></td>
</tr>
<tr>
<td>MATH 154, Pre-Calculus Mathematics II . . . 5</td>
<td></td>
</tr>
<tr>
<td>MATH 260, Sets and Logic ......................... 5</td>
<td></td>
</tr>
<tr>
<td>Electives ........................................ 12-14</td>
<td></td>
</tr>
</tbody>
</table>

At least one course will be in computer science. The other electives will be computer related and may be selected from the student's major with the approval of an advisor.

Total 34-36

Computer Science Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 100, Basic Computer (4). An introductory course for students with limited computer skills that will cover basic topics in word processing, using e-mail and spreadsheet</td>
<td></td>
</tr>
<tr>
<td>IT 100 and CS 100 are equivalent courses. Students may not receive credit for both.</td>
<td></td>
</tr>
<tr>
<td>CS 101, Computer Basics (4). Prerequisite, high school or college algebra. Lecture course; basic computer structure; introduction to word processing, spreadsheet and database programs; introduction to the Internet.</td>
<td></td>
</tr>
<tr>
<td>CS 105. The Logical Basis of Computing (4). Problem solving; algorithm development; complexity; computability. Representation of algorithms as computer programs; data, decision and control; inherent sources of error.</td>
<td></td>
</tr>
<tr>
<td>CS 110. Programming Fundamentals I (4). Fundamental concepts of programming from an object-oriented perspective. Classes, objects and methods, algorithm development, problem-solving techniques, basic control structures, primitive types and arrays.</td>
<td></td>
</tr>
<tr>
<td>CS 111. Programming Fundamentals II (4). Prerequisites, CS 110, MATH 153. Continuation of object-oriented programming concepts introduced in CS 110. Inheritance, exceptions, graphical user interfaces, recursion, and data structures.</td>
<td></td>
</tr>
<tr>
<td>CS 112. Foundations of Computer Science (4). Overview of the computer science profession including basic computer organization, algorithm development and analysis, computer data representation, computer applications and social issues.</td>
<td></td>
</tr>
<tr>
<td>CS 157. Introduction to COBOL Programming (4). Prerequisite, CS 101 or equivalent. An introduction to the COBOL programming language. Business algorithms are developed and translated into common business oriented language programs.</td>
<td></td>
</tr>
<tr>
<td>CS 177. Introduction to FORTRAN Programming (4). Prerequisite, MATH 153 or equivalent. Mathematical and logical algorithms are translated into FORTRAN programs.</td>
<td></td>
</tr>
<tr>
<td>CS 187. Introduction to C++ Programming (4). Prerequisite, MATH 130 or MATH 153 or equivalent. Mathematical and logical algorithms are translated into C++ programs.</td>
<td></td>
</tr>
<tr>
<td>CS 201, Technology and Society (3). The computer impact, how computers work, applications in business, government, human affairs, control of computer systems. A general survey course.</td>
<td></td>
</tr>
<tr>
<td>CS 247, Computer Trend Report (1). Corequisite for courses in departments requiring use of the computer at CWU.</td>
<td></td>
</tr>
<tr>
<td>CS 284, Computer Terminal Equipment Use at CWU (1). Corequisite for courses in departments requiring use of the computer at CWU.</td>
<td></td>
</tr>
<tr>
<td>CS 290, Cooperative Education (1-5). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U.</td>
<td></td>
</tr>
<tr>
<td>CS 298, Special Topics (1-6).</td>
<td></td>
</tr>
<tr>
<td>CS 301, Data Structures (4). Prerequisites, CS 111, MATH 154. Introduction to data structures, simple list processing, basic searching and sorting techniques, stacks, queues and trees. Formerly CS 265. Students may not receive credit for both.</td>
<td></td>
</tr>
<tr>
<td>CS 302, Advanced Data Structures and File Processing (4). Prerequisite, CS 301, and MATH 172. Sequential, random access and</td>
<td></td>
</tr>
</tbody>
</table>
indexed file organizations; B-trees; external searching and sorting; I/O buffering. Formerly CS 340. Students may not receive credit for both.

CS 305. Programming Language Survey (3).
Prerequisite, CS 301. One or more sections offered each quarter, each of which features a programming language of interest for historical, functional, or theoretical reasons. Languages offered will include: B, "C++", C, "COBOL", L, "ICON", M, "SMALLTALK", N, "JAVA". Formerly CS 274. Students may not receive credit for both. May be repeated for credit under different topic.

Prerequisite, CS 112. Introduction to computer architecture, data representation, assembly language, addressing techniques.

Prerequisite, CS 301 and CS 311. Introduction to the structure of computers. Digital circuits, central processing units, memory, input/output processing, parallel architectures. Formerly CS 383. Students may not receive credit for both.

CS 325. Technical Writing in Computer Science (3).
Prerequisites, ENG 102, and CS 301. Writing and editing technical material in computer science.

CS 333. Computer Science Topics for Educators (4).
Prerequisite, CS 111. Use and analysis of various applications and utility software packages. Recommended for the prospective teacher.

CS 334. Computer Languages for Educators (4).
Prerequisite, CS 111. Introduction to and comparison of computer languages appropriate for use by educators. Recommended for the prospective teacher.

Prerequisite, CS 301. Client-side techniques for World Wide Web software development including XHTML, style sheets, scripting languages, and ethical issues related to the Web.

CS 351. Web Development Technologies II (4).
Prerequisite, CS 350. Server-side technologies for World Wide Web software development including programming languages, database access, e-commerce, testing, and ethical issues related to the Web.


Prerequisite, CS 302. Topics will include evolution of programming languages, syntax and semantics, bindings, scope, data types, assignment, control, and subprograms.

Prerequisites, CS 361 and MATH 260 (can be taken concurrently). Topics will include abstract data types, parallel processing, object-oriented programming, exception handling, functional programming, and logic programming.

Visual Basic Programming (4). Prerequisite, CS 366. Students may not receive credit for both.

CS 370. Introduction to the UNIX Operating System (4).
Prerequisites, CS 301 and CS 311. The fundamental requirements, features and functions of the UNIX operating system. A UNIX compatible OS will be used as a working model. Installation, configuration, setup, shell operations, and program development with the UNIX operating system.

CS 392. Lab Experience in Teaching Computer Science (1).
Prerequisite, CS 301 and permission of department. Supervised experience in developing procedures and techniques in teaching computer science. Grade will be S or U.

Prerequisite, Computer Literacy. Computer Architecture for Educators is designed to acquaint the educator with the hardware aspects of education for the prospective teacher.

CS 410. Formal Language Theory (4).
Prerequisite, CS 325 and MATH 230. Language classes: regular, context-free, recursive; language acceptors; finite automata, push-down automata, Turing machines. Four hours lecture per week.

Prerequisites, CS 311, CS 325 and either CS 312 or EET 372. Microcomputer systems; peripheral interfacing; interrupt handling; I/O; programming techniques.

Prerequisites, CS 302, CS 325 and MATH 330. Logical aspects of database processing; concepts of organizing data into integrated databases; hierarchical, network, and relational approaches.

CS 427. Algorithm Analysis (4).
Prerequisites, CS 302, CS 325, and MATH 330 (minimum grade of C). Topics will include basic algorithmic analysis, algorithmic strategies, fundamental computing algorithms, basic computability, the complexity classes P and NP, and advanced algorithmic analysis.

CS 435. Simulation (4).
Prerequisites, CS 302, CS 325, MATH 330 and MATH 311 (may be taken concurrently). Principles of computer simulation; applications of several simulation languages to continuous and discrete systems.

Prerequisite, CS 302 and CS 325. Graphic I/O devices; 2-dimensional and 3-dimensional display techniques; display processors; clipping and windowing; hidden line removal; data structures for graphics.

Prerequisite, CS 440. Advanced graphics in 3-D with vector tools. Topics include: transformations, affine transformations, changing coordinate system, drawing scenes, modeling shapes, solid modeling, and smooth objects.

CS 446. User Interface Design and Development (4).
Prerequisites, CS 301, CS 325, and MATH 311 or BUS 221. The relationship of user interface design to human-computer interaction. Types of user interfaces, methods of evaluation, user centered design and task analysis, programming tools and environments, and hardware devices.

CS 450. Computer Network and Data Communications (4).
Prerequisites, CS 301, CS 311, and CS 325. Device protocols; network configurations; encryption; data compression and security; satellite networks.

CS 455. Artificial Intelligence (4).
Prerequisites, CS 302, CS 325, CS 362 and MATH 330. Introduction to the principles of artificial intelligence. Pattern matching, knowledge representation, natural language processing, expert systems.

CS 456. Data Mining (4).
Prerequisites, CS 420 or permission of instructor and MATH 311 or BUS 221. Data mining methods for discovering hidden patterns in large databases and data warehouses with applications in business, science, and engineering.

CS 457. Computational Intelligence (4).
Prerequisites, CS 302, CS 325, CS 362, and MATH 330. Introducing concepts, models, algorithms, and tools for development of intelligent systems: artificial neural networks, genetic algorithms, fuzzy systems, swarm intelligence, and hybridizations of these techniques.

CS 458. Artificial Intelligence Project (2).
Prerequisite, CS 325 and CS 455. Implementation of a significant project relating to artificial intelligence.

CS 460. Optimization (4).
Prerequisites, CS 325, CS 427, MATH 265 and MATH 311. Linear programming; game theory; PERT; network analysis; duality theory; and sensitivity analysis.

CS 470. Operating Systems (4). Prerequisites, CS 302, CS 312, and CS 325. Topics will include principles of operating systems, concurrency, scheduling and dispatch, memory management, processes and threads, device management, security and protection, and file systems.

CS 473. Parallel Computing (4). Prerequisites, CS 325 and CS 470. Parallel architectures and languages. Parallel programming methodologies and applications.

CS 480. Software Engineering (4). Prerequisites, CS 325, CS 420 and senior standing. The software development process: user requirements, specifications, design, coding, testing, maintenance, documentation and management; students work in teams to develop large software projects.

CS 481. Software Engineering Project (4). Prerequisites, CS 325 and CS 480. Continuation of coding, testing, and implementation phases of project begun in CS 480.

CS 489. Senior Colloquium (1). Prerequisites, CS 325 and senior standing. Introduction to research in Computer Science through investigation of ethical and historical topics in the field. End of major assessment activities.

CS 490. Cooperative Education (1-12). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U.

CS 491. Workshop (1-6). The title of the workshop and the credits shall be determined at the time the workshop is approved. Designed to give an opportunity for individual and group study of special areas of computer applications. With the approval of Department Chair, course may be designed for regular letter grade or S or U, depending upon course objectives and methods of instruction.

CS 492. Laboratory Experience in Teaching Computer Science (1-2). Prerequisites, CS 302, CS 392, and permission. Supervised progressive experience in developing procedures and technique in teaching computer science. May be repeated to a maximum total of 15 credits. Grade will be S or U.

CS 493. Practicum (1-5). Prerequisites, 15 credits in CS and permission. Supervised progressive experience in management, operation, programming or systems work in one of the University’s computing centers.

CS 496. Individual Study (1-6). Prerequisite, permission of instructor.

CS 498. Special Topics (1-6).

CS 499. Seminar (1-5).

ECONOMICS
http://www.cwu.edu/~cob/econ/

Faculty Chairs:
Robert J. Carbaugh, summer and fall quarters
Shaw-Smyser 428
Koushik Ghosh, winter and spring quarters
Shaw-Smyser, 427

Professors
Robert J. Carbaugh
Koushik Ghosh
Richard S. Mack
Peter J. Saunders
Roy Savoian

Associate Professors
David W. Hedrick

Assistant Professors
Timothy P. Dittmer
Ronald Elkins
Charles S. Wasell, Jr.

General Departmental Information
Positions of responsibility in today’s world are usually held by individuals who have the capacity to analyze complex problems and make intelligent decisions. Learning economics will help students think logically and improve their ability to use economic concepts to analyze “real world” problems and opportunities. In addition to preparation for business and government agency employment, an Economics major is excellent preparation for law schools, Masters of Business Administration programs and graduate programs in economics, agricultural economics and natural resource management. The Economics Department offers a Bachelor of Science degree in Economics with specializations in Managerial Economics and General Economics. Economics minors are offered to complement Accounting, Business Administration, and other majors.

The Department of Economics requires that all University general education requirements be fully met. In addition to these requirements, the B.S. Economics Major is comprised of the following components: 1) pre-admission courses providing necessary theoretical and quantitative skills to pursue studies in economics, 2) core courses in both micro and macro economic theory, and 3) a choice of supporting courses for each of the three economics major specializations.

Transfer Credits
Equivalent lower division (100-200 level) courses may be transferred toward meeting the pre-admission requirements for any B.S. degree in the College of Business. Upper division (300-400 level) courses may be transferred toward meeting the major requirements only with the approval of the Department Chair and the College Dean or designee.

Transfer students must earn a minimum of 45 quarter credits at CWU to be eligible for the B.S. Economics degree. Transfer students earning fewer than 45 quarter credits in their major at CWU must receive approval from the College Dean prior to graduation.

Service to Other Majors
Students majoring outside the College of Business who are required to take courses in this college for either their major or minor will be eligible to enroll on a space-available basis. These students will be given priority over other non-college majors wishing to enroll in courses.

Bachelor of Science Economics Major with Specialization
Coursework counting toward the major cannot be taken credit/no credit by Economics majors. Double majors are available. Interested students should consult with their advisor or the Department Chair for details prior to enrolling.

The Economics faculty have determined the following objectives which apply to all B.S. Economics graduates:

- Students completing an economics degree will possess the tools which enable them to analyze and understand macro and micro economic problems and policies.
- Students will possess qualifications and knowledge which will help them to find employment in fields related to economics.
- Students will acquire and be able to use basic tools to enable them to carry out quantitatively oriented tasks in their employment or their field of graduate studies.
- Students completing the program should possess the communication and economic skills desirable in their future employment or graduate studies.
Admission Requirements

Students must apply and be admitted to the major prior to beginning 300-400 level courses in the College of Business. At the time of application all pre-admission requirements should be substantially completed. Application forms are available in the Department offices. The completed form must be accompanied by transcripts that reflect all prior college work.

Admission will be based on grades earned in the following pre-admission courses. ENG 101 and ENG 102 must also be completed before admission.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 201</td>
<td>Principles of Economics Micro</td>
<td>5</td>
</tr>
<tr>
<td>ECON 202</td>
<td>Principles of Economics Macro</td>
<td>5</td>
</tr>
<tr>
<td>BUS 221</td>
<td>Introductory Business Statistics</td>
<td>5</td>
</tr>
<tr>
<td>MATH 153</td>
<td>Pre-Calculus Mathematics I</td>
<td>5</td>
</tr>
<tr>
<td>MATH 170</td>
<td>Intuitive Calculus</td>
<td>5</td>
</tr>
<tr>
<td>ECON 102</td>
<td>World Economic Issues</td>
<td>5</td>
</tr>
</tbody>
</table>

Pre-admission Total  20

A cumulative grade point average of 2.25 in the above courses must be achieved with a minimum grade of “C-” (1.70) in each course. The credit/no credit option will not be accepted for any of these courses. The applicant must have earned a minimum cumulative GPA of 2.00 in all collegiate study. These criteria also apply to equivalent courses transferred from other institutions.

Students who have met all of the above requirements will be admitted unless the number of eligible applicants exceeds available spaces. In that case, acceptance will be competitive, based on a selection index. Students who have not met all of the above requirements may be admitted provisionally by permission of the College Dean or designee.

General Economics Specialization

This specialization is recommended for students desiring the traditional Economics major. Highly recommended courses: MATH 172, MATH 173, and FIN 370.

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-admission Requirements</td>
<td>20</td>
</tr>
<tr>
<td>ECON 201, Intermediate Microeconomic Analysis</td>
<td>5</td>
</tr>
<tr>
<td>ECON 301, Intermediate Macroeconomic Analysis</td>
<td>5</td>
</tr>
<tr>
<td>ECON 302, Intermediate Macroeconomic Analysis</td>
<td>5</td>
</tr>
<tr>
<td>ECON 310, International Economics</td>
<td>5</td>
</tr>
<tr>
<td>ECON 324, Introduction to Econometrics</td>
<td>5</td>
</tr>
<tr>
<td>ECON 330, Money and Banking</td>
<td>5</td>
</tr>
<tr>
<td>ECON 332, Public Finance</td>
<td>5</td>
</tr>
<tr>
<td>ECON 426, Economic Research</td>
<td>5</td>
</tr>
<tr>
<td>MIS 386, Management Info. Systems</td>
<td>5</td>
</tr>
<tr>
<td>ADMG 385, Business Communications and Report Writing</td>
<td>5</td>
</tr>
</tbody>
</table>

Total 74-75

Managerial Economics Specialization

This specialization is for students with an interest in both public and private sector employment and preparation for law school. Highly recommended supporting courses: MATH 170 or MATH 172. The Managerial Economics specialization can be used as part of a double major. See your advisor for details.

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-admission Requirements</td>
<td>20</td>
</tr>
<tr>
<td>ECON 201, Intermediate Microeconomic Analysis</td>
<td>5</td>
</tr>
<tr>
<td>ECON 302, Intermediate Macroeconomic Analysis</td>
<td>5</td>
</tr>
<tr>
<td>ECON 452, Managerial Economics</td>
<td>5</td>
</tr>
<tr>
<td>ACCT 251, Accounting I</td>
<td>5</td>
</tr>
<tr>
<td>ACCT 252 Accounting II OR ACCT 302, Managerial Accounting Analysis</td>
<td>5</td>
</tr>
<tr>
<td>FIN 370, Introductory Financial Management</td>
<td>5</td>
</tr>
<tr>
<td>Select one of the following:</td>
<td>4-5</td>
</tr>
<tr>
<td>ADMG 385, Business Communications and Report Writing</td>
<td>5</td>
</tr>
<tr>
<td>COM 345, Business and Professional Speaking</td>
<td>4</td>
</tr>
<tr>
<td>ENG 310, Technical Writing</td>
<td>4</td>
</tr>
<tr>
<td>Department-approved electives selected from the following:</td>
<td>10</td>
</tr>
<tr>
<td>Any 300-400 level economics courses</td>
<td>10</td>
</tr>
<tr>
<td>Total 74-75</td>
<td></td>
</tr>
</tbody>
</table>

Economics Minor I

This minor is designed to accompany the Business Administration and Accounting majors. Prior approval of electives by the Economics advisor is required.

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 201, Principles of Economics Micro</td>
<td>5</td>
</tr>
<tr>
<td>ECON 301, Intermediate Microeconomic Analysis</td>
<td>5</td>
</tr>
<tr>
<td>ECON 302, Intermediate Macroeconomic Analysis</td>
<td>5</td>
</tr>
<tr>
<td>ADMG 385, Business Communications and Report Writing</td>
<td>5</td>
</tr>
<tr>
<td>ECON 301, Intermediate Microeconomic Analysis</td>
<td>5</td>
</tr>
<tr>
<td>ECON 302, Intermediate Macroeconomic Analysis</td>
<td>5</td>
</tr>
<tr>
<td>ECON 330, Money and Banking</td>
<td>5</td>
</tr>
<tr>
<td>ECON 332, Public Finance</td>
<td>5</td>
</tr>
<tr>
<td>Select 10 additional credits from the above list OR Other 300-400 level economics courses with departmental approval</td>
<td>10</td>
</tr>
</tbody>
</table>

Total 25

Economics Minor II

This minor is designed for all majors with the exception of Business Administration and Accounting. Prior approval of electives by the Economics advisor is required.

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 201, Principles of Economics Micro</td>
<td>5</td>
</tr>
<tr>
<td>ECON 202, Principles of Economics Macro</td>
<td>5</td>
</tr>
<tr>
<td>Select from the following:</td>
<td>5</td>
</tr>
<tr>
<td>ECON 301, Intermediate Microeconomic Analysis</td>
<td>5</td>
</tr>
<tr>
<td>ECON 302, Intermediate Macroeconomic Analysis</td>
<td>5</td>
</tr>
<tr>
<td>ECON 330, Money and Banking</td>
<td>5</td>
</tr>
<tr>
<td>ECON 332, Public Finance</td>
<td>5</td>
</tr>
<tr>
<td>Select an additional 5 elective credits from the above list OR Other 300-400 level economics courses with departmental approval</td>
<td>5</td>
</tr>
</tbody>
</table>

Total 20

Economics Courses

ECON 101. Economic Issues (5). For the student who desires a general knowledge of economics. Applications of economic principles to current social and political problems. ECON 101 cannot be substituted for either ECON 201 or 202.

ECON 102. World Economic Issues (5). An introduction to current international issues related to international trade and finance, economic development and comparative economic systems.

ECON 201. Principles of Economics Micro (5). The function of the market system in the allocation of scarce resources, determination of prices and output in competitive and monopolistic markets, and distribution of income. The role of government in the market economy.

ECON 202. Principles of Economics Macro (5). Prerequisite, ECON 201 or permission of instructor. Organization of the U.S. economy, structure and role of the monetary system, problems of employment and inflation, overall impact of government spending and taxation on the economy. Economic growth, world economic problems and a comparison of capitalism with other economic systems.

ECON 298. Special Topics (1-6).
ECON 301. Intermediate Microeconomic Analysis (5). Prerequisite, ECON 201. Markets as mechanisms for organizing and directing human activities; production of goods and services; the allocation of labor, capital, and natural resources to various productive activities; and the distribution of income. Relationship between microeconomics theory and contemporary thought, practical problems and government policies.


ECON 310. International Economics (5). Prerequisite, ECON 202. International trade and monetary theories; analyzing economic relationships and adjustments within and among trading nations; specialization, tariffs, balance of payments, and international monetary systems.

ECON 324. Introduction to Econometrics (5). Prerequisites, ECON 201 and BUS 221 or permission. Computer application of statistical and mathematical techniques to business and economic problems.


ECON 332. Public Finance (5). Prerequisite, ECON 202. Rationale of public sector; effect of government expenditure and taxation on resource allocation and income distribution; structure of federal, state and local tax systems. Emphasis is on current policy problems.

ECON 340. Development of Economic Thought (5). Prerequisite, ECON 202. The historical development of economic concepts and their classification into schools of thought. Contributions to economics from medieval to modern time and relationships among various economic, social and political philosophies.

ECON 346. Comparative Economic Systems (5). Prerequisite, any economics course. Compares the capitalist market economy to the centrally planned system and considers a variety of mixed systems. Economic structure and performance of selected countries; emphasizes economies in transition and the Pacific Rim.

ECON 348. Economic History of the United States (5). Economic factors in the development of the American nation, from the European background to the present.

ECON 355. Economics of Labor (5). Prerequisite, ECON 202. Economics of the labor market, labor, productivity, investment in human capital, manpower problems and public policy.


ECON 361. Agricultural Economics (5). Prerequisite, ECON 101 or 201. Application of basic economic concepts to farm (ranch) management and marketing. Relationship between the agricultural sector and the Federal government, and the role of agribusiness firms in processing and distributing agricultural products.

ECON 388. Economic History of Europe Since 1760 (3-5). The Industrial Revolution in Great Britain and on the Continent, its resultant social and cultural effects, the rise of trade unionism, socialism, anarchism, imperialism; economics of war in the 20th century, and the rise of the welfare state. ECON 388 and HIST 388 are equivalent courses. Students may not receive credit for both.

ECON 398. Special Topics (1-6).

ECON 412. International Economic Development (5). Prerequisite, ECON 202. Economic problems, issues, and policy decisions facing developing nations including growth theory, capital development and rates of progress in different countries.

ECON 423. Mathematical Economics (5). Prerequisites, ECON 201 and MATH 170 or MATH 172 or by permission. The application of mathematics to the theoretical and practical aspects of economic analysis.

ECON 426. Economic Research (5). Prerequisites, ECON 202, BUS 221 and CS 110. Highly recommended, ECON 302. Designed to familiarize students with an understanding of econometric theory and testing procedures. The course uses time-series approach in econometric hypotheses testing. A completion of an economic research project is required.

ECON 452. Managerial Economics (5). Prerequisites, IT 101, ECON 202 and BUS 221. Application of microeconomic theories to managerial decisions and planning utilizing the case method.


ECON 462. Economics of Energy, Resources and Environment (5). Prerequisite, ECON 201 or by permission of the instructor. Economic decision making related to issues of pollution, energy, resource use, and external effects. Benefit/cost analysis, cost effectiveness, and other economic methods.

ECON 490. Cooperative Education (1-12). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U.

ECON 496. Individual Study (1-6). Prerequisite, permission of instructor.

ECON 498. Special Topics (1-6).

ECON 499. Seminar (1-5).

Undergraduate Courses/Programs on Reserve

The following courses are on reserve and may be offered subject to program needs: ECON 342. Evaluation of American Business Enterprise (5); ECON 434. State and Local Government Finance (5); ECON 436. Public Resource Management (4); ECON 464. Pacific Northwest Economics (5).

EDUCATION

Teacher Preparation

The Center for Teaching and Learning (CTL) is the unit for the Teacher Certification program at Central Washington University. Although it is the responsibility of the entire University to prepare our teachers, the CTL serves as the mechanism for a systematic curricular collaboration and communication among the departments that offer teacher education programs, as well as professional programs in school administration, school counseling and school psychology.

Constructivism serves as the philosophical foundation for our teacher preparation program, as we strive to prepare teachers who are facilitators of learning in a diverse world. Endorsement area departments within the CTL Unit are responsible for preparing teachers to be knowledge specialists while the Professional Education Program prepares candidates to master the art and science of teaching. Teacher certification requires completion of an endorsement specialist strand leading to a State primary endorsement and completion of the required Professional Education Program.
Requirements for Secondary (Discipline-Specific) School Teaching

Students preparing to teach at the secondary level (junior and senior high school) must complete a major in a subject area in which a full-time teaching assignment normally can be expected (see list of appropriate majors in the Divisions of Instruction, College of Education and Professional Studies section of the catalog.) Majors of 60 or more credits do not require an accompanying minor.

Students preparing to teach on the secondary level must be advised in the appropriate academic departments. In addition to completing the required professional courses via Option I or Option II, students in secondary teaching majors must take EDCS 424, Reading in the Content Fields.

DEPARTMENT OF EDUCATION

The required foundation and professional courses for teacher preparation and licensure are administered by the Department of Education. These courses are designated by the course prefixes EDF and EDCS.

Faculty
Chair: David Shorr, Ph.D.
Black 101

Professors
Osman Alawiye, Ph.D., J.D., Curriculum and Instruction, Law
Linda S. Beath, Ph.D., Curriculum and Instruction
Rebecca S. Bowers, Ed.D., Curriculum and Instruction
Minerva L. Caples, Ed.D., Elementary/Secondary/Bilingual/TESL/Social Studies/Language Arts
James L. DePaepe, Ph.D., Special Education
Susan Donahoe, Ph.D., Reading/Language Arts
Dan Fennerty, Ed.D., Special Education
Gail Goss, Ed.D., Reading
Nancy Jurenka, Ed.D., Elementary Education/Reading
David Majsterek, Ed.D., Special Education, Early Childhood Education
James G. Pappas, Ed.D., Administration
Debra Prigge, Ed.D., Special Education
Steven A. Schmitz, Ed.D., Curriculum and Instruction
David Shorr, Ph.D., Early Childhood Education
Alberta Thyfault, Ph.D., Special Education
Henry Williams, Ed.D, Curriculum and Instruction

Associate Professors
Carol Butterfield, Ph.D., Elementary Education/Reading/Bilingual Education/TESL
Christina Curran, Ph.D., Special Education
Cory Gann, Ph.D., Early Childhood Education
Kim M. Jones, Ph.D., Curriculum and Instruction, Supervision
Connie Lambert, Ph.D., Special Education
Dennis L. Martinen, Ed.D., Curriculum and Instruction, Supervision
Barbara A. Phillips, Ph.D., Supervision
Keith Salyer, Ph.D., Elementary Education
Andrea C. Sledge, Ph.D., Reading, Language Arts
Don B. Woodcock, Ph.D., Curriculum and Instruction, Supervision

Assistant Professors
Marvin Britto, Ph.D., Instructional Technology
Leland Chapman, Ph.D., Administration
Catherine Conner, Bilingual Education/TESL
Tina Georgeson, Ed.D., Elementary Education/Early Childhood Education
Craig Hughes, Ph.D., Bilingual Education/TESL
Ian Loverro, Ph.D., Curriculum and Instruction
Steve Nourse, Ed.D., Curriculum and Instruction, Supervision
Lee Plourde, Ph.D., Curriculum and Instruction, Supervision, Administration
Gary Shelly, Ph.D., Administration

Lecturers
Janie Matheson
Cindy Vielbig

Endorsement
Art (Visual Arts)
Bilingual Education
Biology
Chemistry
Drama
Early Childhood Education
Earth Science
Elementary Education
English
English as a Second Language
English/Language Arts
Family and Consumer Sciences
Foreign (World) Languages
Health/Fitness
Library Media
Marketing Education
Mathematics
Music General, Choral and Instrumental Physics
Reading
Science: Breadth Area
Social Studies
Special Education: K-12 and Birth-3 Technology

Administering Department
Art
Education: Teacher Education Programs
Biological Sciences
Chemistry
Theatre Arts
Education: Teacher Education Programs
Geological Sciences
Education: Teacher Education Programs
English
Education: Teacher Education Programs
English
Family and Consumer Sciences
Foreign Languages
Physical Education, Health Education and Leisure Services
Education: Curriculum and Supervision (only Graduate)
Administrative Management and Business Education
Mathematics
Music
Physics
Education: Teacher Education Programs (also Graduate)
Science Education
Social Science
Education: Teacher Education Programs
Industrial and Engineering Technology
Students must be endorsed for student teaching. One quarter in residence at CWU is required before admission into the Department of Education. Certification to teach in more than one secondary discipline-specific teaching major is also considered. Final responsibility for student teaching placement rests with the Director of Student Teaching.

In addition to a major and/or minor, students must complete the Professional Education Program. Students completing a Special Education major or minor must complete EDCS 424 or EDRD 308 for those also seeking an Elementary Major as part of the Professional Education Program. All other Education Program majors or minors do not require the completion of this course. Also, at least 75 percent of the endorsable major or minor must be completed prior to EDCS 442 (Student Teaching).

**Bachelor of Arts in Education Department Majors and Minors**

**Early Childhood Education Major**

This major satisfies the endorsement for Early Childhood Education. This major is intended to prepare students to become birth through grade 3 teaching specialists. Students who elect this major are strongly advised to simultaneously complete the Elementary Education Major (see a department advisor as to how this may be effectively accomplished). Also, EDCS 442 (Student Teaching) of the Education Program should be completed at the K-3 level. Students are advised to take EDEC 292, 331, and 332 as the initial portion of their studies. Successful completion of EDEC 493 is expected before student teaching. Exceptions may be granted by the department chair in unusual circumstances. EDEC 292 and EDEC 493 will be graded S or U.

**Required Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDEC 292, Assisting in the Child-Centered Classroom</td>
<td>5</td>
</tr>
<tr>
<td>EDEC 331, Child Development</td>
<td>3</td>
</tr>
<tr>
<td>EDEC 332, Theories in Child Development</td>
<td>3</td>
</tr>
<tr>
<td>EDEC 333, ECE Curriculum: Pre-Kindergarten</td>
<td>3</td>
</tr>
<tr>
<td>EDEC 334, ECE Curriculum: Kindergarten-Primary</td>
<td>3</td>
</tr>
<tr>
<td>EDEC 448, Parent Involvement</td>
<td>3</td>
</tr>
<tr>
<td>EDEC 493, Practicum in Early Childhood Education</td>
<td>15</td>
</tr>
</tbody>
</table>

Total 45

**Elementary Education Major**

This major satisfies the endorsement for Elementary Education. Students who elect this major will be endorsed to teach in regular, self-contained elementary classrooms. EDRD 308, EDRD 420 and EDEL 323 must be taken prior to EDCS 442 (Student Teaching).

**Required Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDRD 309, Reading I</td>
<td>5</td>
</tr>
<tr>
<td>EDRD 312, Teaching Elementary School Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>EDRD 420, Teaching the Language Arts</td>
<td>4</td>
</tr>
<tr>
<td>ENG 421, Teaching Children's Literature (3) OR ENG 422, Literature for the Middle School (4)</td>
<td>3-4</td>
</tr>
<tr>
<td>ART 330, Art in the Elementary School</td>
<td>4</td>
</tr>
<tr>
<td>HED 446, Health Education Curriculum for Elementary Teachers</td>
<td>3</td>
</tr>
<tr>
<td>MUS 326, Music in the Classroom</td>
<td>3</td>
</tr>
<tr>
<td>PE 334, Physical Education Activities for the Elementary School</td>
<td>3</td>
</tr>
<tr>
<td>SCED 322, Science Education in the Elementary Classroom</td>
<td>3</td>
</tr>
<tr>
<td>EDEL 420, Methods and Materials in the Social Sciences - Elementary</td>
<td>3</td>
</tr>
</tbody>
</table>

Total 45-46

*EDRD 308 is a prerequisite for EDRD 309.

**Either EDRD 421 or ENG 422 may be taken depending upon the grade level the student is expecting to teach.

**ENG 422 has prerequisites of ENG 302 and ENG 303.
### Special Education Major

The Special Education majors offered are specifically designed to prepare teachers for meeting the diverse tasks required in teaching individuals with disabilities. Students electing special education teaching must follow one of the plans outlined below. EDF 302 must be taken prior to or concurrently with EDSE 311.

**Required Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDF 302</td>
<td>Introduction to Special Education</td>
<td>4</td>
</tr>
<tr>
<td>EDF 311</td>
<td>Foundations of Special Education</td>
<td>3</td>
</tr>
<tr>
<td>EDF 410</td>
<td>Behavior Management for Students with Disabilities</td>
<td>3</td>
</tr>
<tr>
<td>EDF 421</td>
<td>Assessment of Students with Disabilities</td>
<td>3</td>
</tr>
<tr>
<td>EDF 422</td>
<td>Teaching Strategies, Curriculum and Materials for Students with Disabilities</td>
<td>5</td>
</tr>
<tr>
<td>EDSE 426</td>
<td>The Child with Language Disabilities OR EDEC 415, Child Language Acquisition</td>
<td>3</td>
</tr>
<tr>
<td>EDSE 431</td>
<td>Program Management for Students with Disabilities</td>
<td>4</td>
</tr>
<tr>
<td>EDSE 432</td>
<td>Career Education for Students with Disabilities</td>
<td>4</td>
</tr>
<tr>
<td>EDSE 433</td>
<td>Pre-School for Students with Developmental Delays</td>
<td>3</td>
</tr>
<tr>
<td>EDSE 460</td>
<td>Collaboration with Parents, Paraprofessionals, and Community Agencies</td>
<td>4</td>
</tr>
<tr>
<td>EDSE 461</td>
<td>Assessment of Students with Disabilities</td>
<td>4</td>
</tr>
<tr>
<td>EDSE 495</td>
<td>Practicum</td>
<td>16</td>
</tr>
</tbody>
</table>

**Total** 72

### Bilingual Education / Teaching English as a Second Language Minor

This minor satisfies the endorsements for Bilingual Education and English as a Second Language. This minor serves the goals and requirements of students wishing to teach in classrooms characterized by cultural and linguistic diversity. The Bilingual/TESL minor leads to K-12 endorsements in Bilingual Education and English as a Second Language. Note the foreign language requirement below.

**Required Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDBL 312</td>
<td>Foundations in Bilingual Education</td>
<td>3</td>
</tr>
<tr>
<td>EDBL 318</td>
<td>Culture and Curriculum</td>
<td>3</td>
</tr>
<tr>
<td>EDBL 433</td>
<td>Educational Linguistics</td>
<td>3-4</td>
</tr>
<tr>
<td>EDBL 435</td>
<td>Bilingual Education in the Content Area</td>
<td>3</td>
</tr>
<tr>
<td>EDBL 438</td>
<td>Teaching English as a Second Language</td>
<td>3</td>
</tr>
<tr>
<td>EDBL 439</td>
<td>Testing English as a Second Language</td>
<td>2</td>
</tr>
<tr>
<td>EDBL 440</td>
<td>Reading English as a Second Language</td>
<td>3</td>
</tr>
<tr>
<td>EDBL 492</td>
<td>Practicum</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total** 24

### Reading Minor

This minor satisfies the endorsement for Reading. The Reading Minor, with campus and field experiences, is designed to prepare reading teachers and strengthen background preparation of elementary teachers. Because EDRD 308 is a prerequisite for five required courses (EDRD 410, EDRD 411, EDRD 412, EDRD 413 and EDRD 493) and EDRD 309 is a prerequisite for four required courses (EDRD 410, EDRD 412, EDRD 413 and EDRD 493), the minor should be commenced in the junior year. *EDRD 493 also requires permission of the department (designated as the instructor of EDRD 493).* Permission will not be granted until four required courses in the Reading minor, excluding prerequisite courses, are completed or will be completed the quarter prior to enrollment.

**Required Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDRD 410</td>
<td>Teaching Word Recognition Skills</td>
<td>3</td>
</tr>
<tr>
<td>EDRD 411</td>
<td>Teaching Comprehension</td>
<td>3</td>
</tr>
<tr>
<td>EDRD 412</td>
<td>Assessment of Reading Skills</td>
<td>3</td>
</tr>
<tr>
<td>EDRD 413</td>
<td>Methods and Materials for Reading Instruction</td>
<td>3</td>
</tr>
<tr>
<td>EDRD 421</td>
<td>Teaching Children's Literature</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total** 29-30
EDCS 424, Teaching Reading in Content Fields ........................ 3
EDRD 493, Reading Practicum ........................ 5
Advisor Approved Electives selected from, but not limited to the following: ........... 3
EDRD 414, Teaching Reading in a Multi-cultural Setting (3)
EDRD 415, Reading for the Gifted (3)
EDRD 416, Strategies, Techniques and Materials for Teaching Reluctant Readers (3)
EDRD 417, Reading Readiness and Beginning Reading (3)
EDRD 418, Reading and Linguistics (3)
EDRD 419, Storytelling Techniques (3)
EDBL 440, Reading English as a Secondary Language (3)

Total 26

Special Education Minor

The Special Education programs offered are specifically designed to prepare teachers for meeting the diverse tasks required in teaching individuals with disabilities. The minor may serve as a “pre-endorsement” plan for those wishing to add the special education endorsement at a later date. See a special education advisor for your individualized pre-endorsement plan.

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDSE 310, Introduction to Special Education</td>
<td>4</td>
</tr>
<tr>
<td>EDSE 410, Behavior Management for Students with Disabilities</td>
<td>3</td>
</tr>
<tr>
<td>EDSE 411, Assessment of Students with Disabilities</td>
<td>4</td>
</tr>
<tr>
<td>EDSE 422, Teaching Strategies, Curriculum, and Materials for Students with Disabilities</td>
<td>5</td>
</tr>
<tr>
<td>EDSE 431, Program Management for Students with Disabilities</td>
<td>4</td>
</tr>
<tr>
<td>EDSE 432, Career Education for Students with Disabilities</td>
<td>3</td>
</tr>
<tr>
<td>EDSE 433, Preschool for Children with Developmental Delay</td>
<td>3</td>
</tr>
<tr>
<td>EDSE 460, Collaboration with Parents, Paraprofessionals, and Community Agencies</td>
<td>4</td>
</tr>
</tbody>
</table>

Total 33

Endorsements for Special Education

Students who hold a current teaching certificate and are endorsed in other areas may earn endorsement in special education. See a Special Education Advisor for more information.

Teaching English as a Second Language (TESL) Minor

This minor satisfies the endorsement for English as a Second Language. This minor prepares students to teach in classrooms where second language students are enrolled. While the Bilingual/TESL minor leads to a Bilingual education endorsement, the TESL minor leads to an English as a second language endorsement. Students must complete, or have already completed, one year of study in a foreign or second language or the equivalent (at either the high school or university level).

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDBL 312, Foundations in Bilingual Education</td>
<td>3</td>
</tr>
<tr>
<td>EDBL 318, Culture and Curriculum</td>
<td>3</td>
</tr>
<tr>
<td>EDBL 432, Second Language Acquisition and Related Methodologies</td>
<td>3</td>
</tr>
<tr>
<td>EDBL 433, Educational Linguistics (3) OR ANTH 381, Language in Culture (4)</td>
<td>3-4</td>
</tr>
<tr>
<td>EDBL 438, Teaching English as a Second Language</td>
<td>3</td>
</tr>
<tr>
<td>EDBL 439, Testing English as a Second Language</td>
<td>2</td>
</tr>
<tr>
<td>EDBL 440, Reading English as a Second Language</td>
<td>3</td>
</tr>
<tr>
<td>EDBL 492, Practicum</td>
<td>3</td>
</tr>
<tr>
<td>TESL minor advisor approved electives</td>
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</tr>
</tbody>
</table>

Total 27-28

Bilingual Education Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDBL 296, Individual Study (1-6)</td>
<td>3</td>
</tr>
<tr>
<td>EDBL 298, Special Topics (1-6)</td>
<td>3</td>
</tr>
<tr>
<td>EDBL 299, Seminar (1-5)</td>
<td>3</td>
</tr>
<tr>
<td>EDBL 312, Foundations in Bilingual Education (3)</td>
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<tr>
<td>EDBL 318, Culture and Curriculum (3)</td>
<td>3</td>
</tr>
<tr>
<td>EDBL 396, Individual Study (1-6)</td>
<td>3</td>
</tr>
<tr>
<td>EDBL 398, Special Topics (1-6)</td>
<td>3</td>
</tr>
<tr>
<td>EDBL 432, Second Language Acquisition and Related Methodologies (3)</td>
<td>3</td>
</tr>
</tbody>
</table>

Total 87

Student who hold a current teaching certificate and are endorsed in other areas may earn endorsement in special education. See a Special Education Advisor for more information.

Teaching English as a Second Language (TESL) Minor

This minor satisfies the endorsement for English as a Second Language. This minor prepares students to teach in classrooms where second language students are enrolled. While the Bilingual/TESL minor leads to a Bilingual education endorsement, the TESL minor leads to an English as a second language endorsement. Students must complete, or have already completed, one year of study in a foreign or second language or the equivalent (at either the high school or university level).

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<tbody>
<tr>
<td>EDBL 312, Foundations in Bilingual Education</td>
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<tr>
<td>EDBL 318, Culture and Curriculum</td>
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</tr>
<tr>
<td>EDBL 432, Second Language Acquisition and Related Methodologies</td>
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<td>EDBL 433, Educational Linguistics (3) OR ANTH 381, Language in Culture (4)</td>
<td>3-4</td>
</tr>
<tr>
<td>EDBL 438, Teaching English as a Second Language</td>
<td>3</td>
</tr>
<tr>
<td>EDBL 439, Testing English as a Second Language</td>
<td>2</td>
</tr>
<tr>
<td>EDBL 440, Reading English as a Second Language</td>
<td>3</td>
</tr>
<tr>
<td>EDBL 492, Practicum</td>
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<tr>
<td>TESL minor advisor approved electives</td>
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</tbody>
</table>

Total 27-28

Bilingual Education Courses

<table>
<thead>
<tr>
<th>Course</th>
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</thead>
<tbody>
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<td>EDBL 296, Individual Study (1-6)</td>
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</tr>
<tr>
<td>EDBL 298, Special Topics (1-6)</td>
<td>3</td>
</tr>
<tr>
<td>EDBL 299, Seminar (1-5)</td>
<td>3</td>
</tr>
<tr>
<td>EDBL 312, Foundations in Bilingual Education (3)</td>
<td>3</td>
</tr>
<tr>
<td>EDBL 318, Culture and Curriculum (3)</td>
<td>3</td>
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<tr>
<td>EDBL 396, Individual Study (1-6)</td>
<td>3</td>
</tr>
<tr>
<td>EDBL 398, Special Topics (1-6)</td>
<td>3</td>
</tr>
<tr>
<td>EDBL 432, Second Language Acquisition and Related Methodologies (3)</td>
<td>3</td>
</tr>
</tbody>
</table>

Total 87

Special Education Minor

The Special Education programs offered are specifically designed to prepare teachers for meeting the diverse tasks required in teaching individuals with disabilities. The minor may serve as a “pre-endorsement” plan for those wishing to add the special education endorsement at a later date. See a special education advisor for your individualized pre-endorsement plan.

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDSE 310, Introduction to Special Education</td>
<td>4</td>
</tr>
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<td>EDSE 410, Behavior Management for Students with Disabilities</td>
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<td>EDSE 411, Assessment of Students with Disabilities</td>
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<td>EDSE 422, Teaching Strategies, Curriculum, and Materials for Students with Disabilities</td>
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<td>EDSE 431, Program Management for Students with Disabilities</td>
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<td>EDSE 432, Career Education for Students with Disabilities</td>
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<td>EDSE 433, Preschool for Children with Developmental Delay</td>
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<td>EDSE 460, Collaboration with Parents, Paraprofessionals, and Community Agencies</td>
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Total 33

Endorsements for Special Education

Students who hold a current teaching certificate and are endorsed in other areas may earn endorsement in special education. See a Special Education Advisor for more information.
permission of the instructor. Instructional approaches and methods in reading and writing in the Spanish language. The course is taught in English and Spanish.

EDBL 490. Cooperative Education (1-12). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U. Formerly ECE 490 OR SPED 490. Students may not receive credit for both.

EDBL 492. Practicum (1-15). Prerequisite, permission of the Teacher Education Programs department. This course will provide students with experience working in bilingual education and/or English as a second language settings. Grade will be S or U. Students may accumulate no more than 15 hours of practicum credit.

EDBL 496. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ECE, ED, OR SPED 496.

EDBL 498. Special Topics (1-6). Formerly ECE, ED, OR SPED 498.

EDBL 499. Seminar (1-5). May be repeated. Formerly ECE, ED, OR SPED 499.

Education Courses — Curriculum and Supervision

EDCS 296. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ED 296.

EDCS 298. Special Topics (1-6). Formerly ED/ECE 298.

EDCS 299. Seminar (1-5). May be repeated. Formerly ED/ECE 299.

EDCS 300. Pre-Autumn Field Experience (4). A laboratory experience course in the first phase of Option I in the teacher preparation program. The course deals with the opening of school, professional relationships, school/community relationships, school district organization, instructional support and resource services. Students are assigned in off-campus centers for approximately four weeks prior to fall quarter. Grade will be S or U. Formerly ED 300. Students may not receive credit for both.

EDCS 309. Civic Engagement (2). Student will use program of study content knowledge to improve a community situation. EDCS 309 and UNIV 309 are equivalent courses. May be repeated for credit.

EDCS 311. Teaching: Classroom Management and Assessment (5). Prerequisites, CWU’s EDF 301 or EDF 301A, PSY 314, and full admission to the Teacher Preparation Program. Basic principles of curriculum planning, classroom management, guidance techniques and classroom assessment. Formerly ED 311. Students may not receive credit for both.


EDCS 316. Educational Technology (3). Prerequisites, CWU’s EDF 301, or EDF 301A, PSY 314, and full admission to the Teacher Preparation Program. CS 101 or IT 101 recommended prior to enrollment. Students will explore a variety of concepts and resources related to the appropriate and effective integration of technology/media in school settings. EDCS 316 and BSED 316 are equivalent courses. Formerly ED 316. Students may not receive credit for more than one.

EDCS 392. Practicum (3-5). Prerequisite, permission of Education Department. Practical experience in a state approved K-12 educational setting. Grade will be S or U. Formerly ED 392. Students may not receive credit for both.

EDCS 396. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly EDCS 396.

EDCS 398. Special Topics (1-6). Formerly EDCS 398.

EDCS 424. Reading in the Content Fields (3). Prerequisites, CWU’s EDF 301 or EDF 301A, PSY 314, and full admission to the Teacher Preparation Program. For intermediate and secondary school teachers. Focuses on the techniques needed by students to become efficient readers in various subject areas. Formerly ED 424. Students may not receive credit for both.

EDCS 431. Multicultural Education (3). Prerequisite, Prior or concurrent enrollment in CWU’s EDF 301 or EDF301A and completed application to the Teacher Preparation Program. A course addressing cultural differences/diversity (e.g., ANTH 130, ETS 101, or SOC 365) is recommended prior to enrolling in EDCS 431. Race, nationality, minority groups, income groups, urban and rural groups, and methods of teaching and measuring intergroup relations. Formerly ED 431. Students may not receive credit for both.

EDCS 442. Student Teaching (5-16). Prerequisites, admission to the Teacher Preparation Program, 3.0 cumulative GPA the last 45 credits, successful completion of professional sequence, and at least 75 percent of major and minor completed. Students must attend the seminar which accompanies the student teaching experience. The seminar will meet a total of 20 clock hours during the quarter, normally at a time other than school hours, and at a place designated by the University supervisor. All assignments for student teaching are made through the office of student teaching. In order to qualify for certification to teach in more than one specialization, students must meet all requirements as listed in the undergraduate catalog for each specialization. Students must demonstrate their competence by student teaching a full quarter for each specialization for which they wish to be endorsed. Grade will be S or U. Formerly ED 442. Students may not receive credit for both.

EDCS 444. Educational Issues and Law (3). Prerequisite, prior or concurrent enrollment in CWU’s EDF 301 or EDF 301A and completed application to the Teacher Preparation Program. Major legal and ethical issues confronting educators, including implications for identifying and reporting child abuse. Formerly ED 444. Students may not receive credit for both.

EDCS 450. Media Development (3). Introduction to design and production of various instructional materials from manual to more complex computer techniques.

EDCS 482. Instruction and Assessment for the Middle Level: Grades 5th - 8th (3). Prerequisites, EDF 301, PSY 314, EDCS 311, and admission to Teacher Certification program. This course provides the future middle level educator with comprehensive skills in instructional methods, curriculum alignment, lesson development, and assessment methodology within the middle school environment.

EDCS 490. Cooperative Education (1-12). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U. Formerly ECE 490 OR SPED 490. Students may not receive credit for both.

EDCS 491. Workshop (1-6). Laboratory facilities will be included as part of the workshop; specialists will lead discussions on various problems concerning education. With the approval of Department Chair, course may be designated for regular letter grade or S or U, depending upon course objectives and method of instruction. Formerly ED 491.

EDCS 492. Practicum (1-15). Prerequisite, permission of the Chair of the Department of Curriculum and Supervision.
Experience working in educational settings. Grade will be S or U. Students may accumulate no more than 15 hours of practicum credit. Formerly ED 492.

EDCS 493. Classroom Management and Discipline (2). Prerequisites, EDF 310, EDF 302, and PSY 314. Course addresses effective classroom management techniques to promote positive impact on P-12 learners.

EDCS 496. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ECE/ED/SPED 496.

EDCS 498. Special Topics (1-6). Formerly ECE/ED/SPED 498.

EDCS 499. Seminar (1-5). May be repeated. Formerly ECE, ED, OR SPED 499.

**Early Childhood Education Courses**

EDEC 292. Assisting in the Child-Centered Classrooms (5). Students work with children in ECE classrooms, learning and practicing the fundamentals of guidance, curriculum implementation and maintaining the physical environment. Students participate in a 2-hour seminar each week. May be taken twice for credit with the permission of the division head. Grade will be S or U. Formerly ECE 292. Students may not receive credit for both.

EEDC 296. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ED 296.

EDEC 298. Special Topics (1-6). Formerly EDC 298.

EDEC 299. Seminar (1-5). May be repeated. Formerly ECE 299.

EDEC 310. Infant Education (3). Needs and characteristics of infants and toddlers. Enrichment opportunities and effects on development. Implications for persons in care giving roles. Formerly ECE 310. Students may not receive credit for both.

EDEC 331. Child Development (3). Developmental characteristics of children from conception to eight years. Includes observation techniques. EDEC 331 and FCSF 331 are equivalent courses. Formerly ECE 331. Students may not receive credit for more than one.

EDEC 332. Theories in Child Development (3). Comparison of major theories. EDEC 332 and FCSF 332 are equivalent courses. Formerly ECE 332. Students may not receive credit for more than one.

EDEC 333. ECE Curriculum: Pre-Kindergarten (3). Prerequisites, EDEC 292 and EDEC 331 or 332. Historical influences and knowledge of child development, psychological theories and contemporary models as bases for curriculum development and implementation in pre-kindergarten settings. Formerly ECE 333. Students may not receive credit for both.

EDEC 334. ECE Curriculum: Kindergarten-Primary (3). Prerequisite, EDEC 331 or 332 or PSY 314. Historical influences and knowledge of child development/psychological theories/contemporary models as a basis for curriculum development and implementation in kindergarten through primary settings. Formerly ECE 334 OR ED 334. Students may not receive credit for both.

EDEC 346. Programs and Approaches in ECE (3). Comparative study of the influences of traditional programs and contemporary models in program development for young children. Formerly ECE 346. Students may not receive credit for both.

EDEC 347. History and Philosophies of Early Childhood Education (3). Prerequisite, one psychology course. Focuses on select historical events and figures that have shaped the pedagogical and philosophical development of the field of early childhood education. Formerly ECE 347. Students may not receive credit for both.

EDEC 354. Childhood Learning (3). Prerequisite, EDEC 331 or 332. Origins and applications of learning/developmental theory emphasizing individual, child-centered education. Formerly ECE 354. Students may not receive credit for both.

EDEC 396. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ECE 496.

EDEC 398. Special Topics (1-6). Formerly ED OR ECE 398.

EDEC 415. Child Language Acquisition (3). Prerequisite, a course in child or human development (e.g., EDEC/FCSF 331, or EDEC/FCSF 332, or PSY 314) or introductory linguistics (e.g., ANTH/ENG 180) or permission of instructor. Language acquisition birth through eight years; aspects of phonological, grammatical, and semantic development in a natural language environment. Projects include transcription and grammatical analysis of a young child’s speech. Formerly ECE 415. Students may not receive credit for both.

EDEC 421. Play in Childhood (3). Prerequisite, either EDEC 331 or 332 or permission of instructor. Definitions, developmental aspects, and curricular implications of play. Formerly ECE 421. Students may not receive credit for both.

EDEC 423. Materials and Manipulatives in ECE (2). Strategies are investigated for developing games and learning opportunities through the use of classic ECE manipulatives. The potential for fostering mathematical teaching knowledge and skills is emphasized.

EDEC 430. Principles and Practices of Caregiving (3). Prerequisite, EDEC 331 or equivalent. Out-of-home care of children: causes and trends; developmental needs of infants and children as they relate to substitute care; parameters of program quality and practice. On-site evaluation of programs. EDEC 430 and FCSF 430 are equivalent courses. Formerly ECE 430. Students may not receive credit for more than one.

EDEC 432. Child Development Research (3). Prerequisite, FCSF/EDCE 331 or permission. The influence of family patterns and interaction on infant and child development; current research. EDEC 432 and FCSF 432 are equivalent courses. Formerly ECE/ED 432. Students may not receive credit for more than one.

EDEC 443. Lab Experience/Teaching ECE (3). Prerequisite, permission of the director. Assist ECE professors in teaching those courses which involve outside observation or participation. Formerly ECE 443. Students may not receive credit for both.

EDEC 444. Classroom Management in an ECE Classroom (3). This course provides students the opportunity to explore, apply, synthesize and evaluate techniques and strategies for creating positive classroom climates through organization and management techniques.

EDEC 447. Curriculum Exploration (3). Prerequisite, EDEC 493 or permission of the director. Guided exploration of curriculum or guidance needs as identified by student self-evaluation. Consistency with the student’s personal philosophy and child development will be emphasized. Formerly ECE 447. Students may not receive credit for both.

EDEC 448. Parent Involvement (3). Parent-child and parent-school interactions as educational and developmental aids. Emphasis upon the school’s use of the home and community for educational purposes. Formerly ECE/ED 448 OR ECE 445. Students may not receive credit for both.

EDEC 465. Directing ECE Programs (3). Prerequisite, permission of the director. Budgeting, governmental requirements, staffing, nutritional and health care, parental involvement, community and agency liaison, and the integration of developmental/educational curriculum. Formerly ECE 465. Students may not receive credit for both.

EDEC 489. Issues in Early Childhood Education (3). Formerly ECE 489 and 499.1. Students may not receive credit for both.
EDEC 490. Cooperative Education (1-12). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U. Formerly ECE 490 OR SPED 490. Students may not receive credit for both.

EDEC 493. Practicum and Issues in ECE (6-15). Prerequisites, EDEC 333 and 334 or permission. Grade will be S or U. Formerly ECE, EDCS 493.1. Students may not receive credit for both.

EDEC 494. Advanced Practicum (3-10). Prerequisite, EDEC 493 or permission of the Chair of the Department of Curriculum and Supervision. A course designed to meet special needs as determined by the student, his/her advisor and the director. Grade will be S or U. Formerly ECE, EDCS, EDEC 493.2. Students may not receive credit for both.

EDEC 495. Teaching in the Early Childhood Classroom (5). Prerequisites, EDEC 493 and permission. Students prepare and investigate a child-centered classroom. Course includes both laboratory and seminar components. Formerly ECE 495. Students may not receive credit for both.

EDEC 496. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ECE, ED, OR SPED 496.

EDEC 498. Special Topics (1-6). Formerly ECE, ED, OR SPED 498.

EDEC 499. Seminar (1-5). May be repeated. Formerly ECE, ED, OR SPED 499.

Elementary Education Courses

EDEL 296. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ED 296.

EDEL 298. Special Topics (1-6). Formerly ED/ECE 298.

EDEL 299. Seminar (1-5). May be repeated. Formerly ED/ECE 299.

EDEL 323. Teaching Elementary School Mathematics (3). Prerequisite, Math 164 or permission of instructor. Methods and materials for helping children learn mathematics with emphasis on the use of manipulatives, problem solving, cooperative learning, and communication. Formerly ED 323. Students may not receive credit for both.

EDEL 396. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ECE 396.

EDEL 420. Methods and Materials in the Social Sciences - Elementary (3).

EDEL 427. Primary Arithmetic Program (3). Prerequisite, EDEL 323 or equivalent. Methods of teaching mathematical concepts. Construction and use of manipulative aids and games. Formerly ED 427. Students may not receive credit for both.

EDEL 428. Intermediate and Upper Grade Arithmetic Program (3). Prerequisite, EDEL 323 or equivalent. Methods of teaching and materials utilized in teaching metrics, word problems, charting, graphing, statistics, probabilities, coordinates, negative numbers, and gaming. Includes use of the calculator as an instructional strategy. Formerly ED 428. Students may not receive credit for both.

EDEL 468. Teaching Problem Solving Techniques for Upper Elementary and Middle School Mathematics (3). Prerequisites: EDEL 323, EDF 301, EDCS 311, and admission to Teacher Education. Methods and materials for helping the upper elementary/middle school (5th – 8th grade) student learn mathematics with emphasis on appropriate manipulatives, teaming, problem solving, and communication strategies.

EDEL 477. Middle School Students and Their Environment (4). Prerequisites: EDF 301, PSY 314, and admission to Teacher Education. An in depth exploration of the development learning needs of 5th – 8th grade students and the physical, social, and management systems utilized by middle level education programs. The major focus of this course is to create developmentally appropriate classroom practices that merge educational developmental needs.

EDEL 490. Cooperative Education (1-12). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U. Formerly ECE 490 OR SPED 490. Students may not receive credit for both.

EDEL 492. Practicum (1-15). Prerequisite, permission of the Teacher Education Programs of the department. Experience working in educational settings. Arrangements are made through the office of student teaching. Grade will be S or U. Students may accumulate no more than 15 hours of practicum credit.

EDEL 496. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ECE, ED, OR SPED 496.

EDEL 498. Special Topics (1-6). Formerly ECE, ED, OR SPED 498.

EDEL 499. Seminar (1-5). May be repeated. Formerly ECE, ED, OR SPED 499.

Education Foundation Courses

EDF 100. Improvement of Basic Reading Skills (1-2). May be repeated. Credits will not be allowed toward meeting graduation requirements. Grade will be S or U. Formerly ED 100.


EDF 296. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ED 296.

EDF 298. Special Topics (1-6). Formerly EDCS 298.

EDF 299. Seminar (1-5). May be repeated. Formerly EDCS 299.

EDF 301. Teaching: An Orientation (3). Prerequisite, completed application to the Teacher Preparation Programs. Teaching as a career and essential features of preparation. Study of the teacher’s role and function in the school; characteristics of good teachers; preparation for professional competencies and certification; the American public school system; and the responsibilities of schools in a democratic society. Formerly ED 301. Students may not receive credit for both.

EDF 301A. Introduction to Teacher Education (1). Prerequisite, completed application to the Teacher Preparation Programs. Provides an overview of state regulations/requirements regarding teachers and K-12 students and CWU’s framework for addressing these and other accrediting standards. Course required of teacher preparation students otherwise exempt from completing CWU’s EDF 301.

EDF 302. Introduction to Students with Exceptionalities (4). Prerequisites, prior or concurrent enrollment in CWU’s EDF 301 or 301A and completed application to Teacher Preparation Programs. Designed to introduce effective teaching strategies and strategies for adapting standard instruction to meet the needs of a range of students found in the typical classroom. This course provides information about students considered disabled as well as gifted and students with multicultural heritages. Formerly SPED 301. Students may not receive credit for both.
EDF 396. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ECE 396.

EDF 398. Special Topics (1-6). Formerly ED OR ECE 398.

EDF 490. Cooperative Education (1-12). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U. Formerly ECE 490 OR SPED 490. Students may not receive credit for both.

EDF 496. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ECE, ED, OR SPED 496.

EDF 498. Special Topics (1-6). Formerly ECE, ED, OR SPED 498.

EDF 499. Seminar (1-5). May be repeated. Formerly ECE, ED, OR SPED 499.

Reading Education Courses

EDRD 296. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ED 296.

EDRD 298. Special Topics (1-6). Formerly ED/EC 298.

EDRD 299. Seminar (1-5). May be repeated. Formerly ED/EC 299.

EDRD 308. Reading I (3). First of two courses designed to prepare prospective teachers to teach reading in elementary school classrooms. Deals with processes and products of the reading act; methods and materials; assessment procedures and instruments. Formerly ED 308. Students may not receive credit for both.

EDRD 309. Reading II (5). Prerequisite, EDRD 308. Content and methodology of readiness, vocabulary development, phonics and structural analysis, comprehension and study skills. Formerly ED 309. Students may not receive credit for both.

EDRD 396. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ECE 396.

EDRD 398. Special Topics (1-6). Formerly ED OR ECE 398.

EDRD 410. Teaching Word Recognition Skills (3). Prerequisite, EDRD 308. Methods for teaching the word recognition skills will be developed. Decoding as an aid to comprehension, including phonetic analysis, context clues, structural analysis, and sight vocabulary. Formerly ED 410. Students may not receive credit for both.

EDRD 411. Teaching Comprehension (3). Prerequisite, EDRD 308 or permission. Comprehension strategies and techniques; techniques for vocabulary development. Formerly ED 411. Students may not receive credit for both.

EDRD 412. Assessment of Reading Skills (3). Prerequisite, EDRD 308 or permission. Assessment instruments, procedures and interpretive skills for determining student reading levels and needs. Emphasizes the selection, administration and interpretation of tests. Formerly ED 412. Students may not receive credit for both.

EDRD 413. Methods and Materials for Reading Instruction (3). Prerequisites, EDRD 308 and 309. Strategies for classroom management, implementation of learning theories. Formerly EDRD 413. Students may not receive credit for both.

EDRD 414. Teaching Reading in a Multi-Cultural Setting (3). Prerequisite, EDRD 308 or permission. Strategies for teaching reading and developing language skills in a multi-cultural setting. Formerly EDRD 414. Students may not receive credit for both.

EDRD 415. Reading for the Gifted (3). Prerequisite, EDRD 308 or permission. Techniques for identifying and challenging the superior reader. Formerly ED 415. Students may not receive credit for both.

EDRD 416. Strategies, Techniques and Materials for Teaching Reluctant Readers (3). Prerequisite, EDRD 308 or permission. Motivational techniques and non-conventional materials for teaching reluctant readers. Formerly ED 416. Students may not receive credit for both.

EDRD 417. Reading Readiness and Beginning Reading (3). Prerequisite, EDRD 308 or permission. Language development and discrimination skills for beginning readers. Formerly ED 417. Students may not receive credit for both.

EDRD 418. Reading and Linguistics (3). Prerequisite, ANTH/ENG 180 or permission of instructor. Reading instruction built on an understanding of how language functions. Linguistic theory and information for developing strategies, methodologies and techniques for teaching children to read. Formerly ED 418. Students may not receive credit for both.

EDRD 419. Storytelling Techniques (3). Storytelling in the integrated curriculum. Students become familiar with a variety of stories and demonstrate the ability to tell stories. Formerly ED 419. Students may not receive credit for both.


EDRD 421. Teaching Children's Literature (3). The types of literature suited to children in grades 1-6; includes reading and evaluation of material from early folklore to present day books for children. Students may not receive credit for EDRD 421 and ENG 432. Formerly ED 421. Students may not receive credit for both.

EDRD 490. Cooperative Education (1-12). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U. Formerly ECE 490 OR SPED 490. Students may not receive credit for both.

EDRD 493. Reading Practicum (3-5). Prerequisites, EDRD 308 and 309 and permission of Teacher Education Programs Department. Practical experience working with children in classroom settings. Grade will be S or U. Formerly ED, EDCS 493. Students may not receive credit for both.

EDRD 496. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ECE, ED, OR SPED 496.

EDRD 498. Special Topics (1-6). Formerly ECE, ED, OR SPED 498.

EDRD 499. Seminar (1-5). May be repeated. Formerly ECE, ED, OR SPED 499.

Special Education Courses

EDSE 296. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ED 296.

EDSE 310. Introduction to Special Education (4). Designed to introduce prospective teachers to the legal requirements of special education including eligibility, programming, and instruction. Skills necessary for collaborative relationships in the multidisciplinary team process will also be emphasized.

EDSE 311. Foundations of Special Education (3). Designed to provide prospective teachers with the necessary foundations for successful completion of the special education course of study including end-of-program assessment, undergraduate research, and written and oral communication skills. Formerly EDSE/SPED 303.

EDSE 396. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ECE 396.

EDSE 398. Special Topics (1-6). Formerly ED/EC 398. Students may not receive credit for both.

EDSE 410. Behavior Management for Students with Disabilities (3).
Fundamentals of behavior change related to the education of students with disabilities. Monitoring individual student progress and utilizing data collected for program instructional change. Formerly SPED 410. Students may not receive credit for both.

EDSE 411. Assessment of Students with Disabilities (4). Selecting, administering, scoring, and interpreting formal assessment tools. Designing and using informal testing techniques. Formerly SPED 411. Students may not receive credit for both.

EDSE 422. Teaching Strategies, Curriculum, and Materials for Students with Disabilities (5). Prerequisites, EDSE 310, 311, EDSE 410, and EDSE 411 or permission of instructor. Individual, small group and large group teaching strategies essential to individualized education programs, and selection, evaluation, and adaptation of commercially available materials, including computer applications.

EDSE 425. Deaf Culture (3). History and culture of the deaf. Social, educational, economic and psychological environments within the deaf community. Formerly SPED 425. Students may not receive credit for both.

EDSE 426. The Child with Language Disabilities (3). Prerequisite, a course in child or human development or permission of instructor. An exploration of the child with language disabilities (age birth-6) from the perspective of normal language development, assessment strategies, and remedial techniques. Recommended for teachers of children with mild and severe disabilities. Formerly SPED 426. Students may not receive credit for both.

EDSE 427. American Sign Language I (3). Introduces educational use of ASL including conversationally relevant signs, finger-spelling, numbers, grammatical principles and features of American Sign Language. Not accepted as general education credit. Formerly SPED 427. Students may not receive credit for both.

EDSE 428. American Sign Language II (3). Prerequisite, EDSE 427 or permission of instructor. Educational use of ASL structure emphasized as well as both expressive and receptive skills in fingerspelling and sign emphasized. Not accepted as general education credit. Formerly SPED 428. Students may not receive credit for both.

EDSE 429. American Sign Language III (3). Prerequisite EDSE 428 or permission of instructor. Educational use of ASL including basic signing and grammar skills with emphasis on conversation with deaf individuals, video stories and class activities. Not accepted as general education credit. Formerly SPED 429. Students may not receive credit for both.

EDSE 431. Program Management for Students with Disabilities (4). Prerequisites, EDSE 410, 411, and 422 or permission of instructor. Designed to introduce prospective teachers to the legal requirements of special education including eligibility, programming, and instruction. Also emphasizing skills necessary for collaborative relationships in the team process. Formerly SPED 431. Students may not receive credit for both.

EDSE 432. Career Education for Students with Disabilities (3). Prerequisites, EDSE 410, 411 and 422 or permission of instructor. Career awareness, prevocational, and vocational education. Formerly SPED 432. Students may not receive credit for both.

EDSE 433. Pre-school for Students with Developmental Delays (3). An overview of services for children with disabilities, aged birth-6, including legislation, risk factors, educational development, alternative delivery systems and intervention approaches and environments. Formerly ECE 302 OR SPED 302 or EDSE 302. Students may not receive credit for more than one.

EDSE 460. Collaboration with Parents, Paraprofessionals, and Community Agencies (4). Designed to introduce prospective teachers to the legal requirements of special education including eligibility, programming and instruction. Also emphasizing skills necessary for collaborative relationships in the team process. Formerly SPED 460. Students may not receive credit for both.

EDSE 481. Child Abuse and Neglect: Implications for School Personnel (1). Prerequisite, Admission to Teacher Education Program. Survey of research with emphasis on characteristics, legal issues, identification, procedures, and reporting systems. Formerly SPED 481. Students may not receive credit for both.

EDSE 483. Promoting Phonological Awareness in Resource Rooms (1). Prerequisite, junior standing or permission of instructor. Philosophy and practice of resource room strategies to promote literacy among students with reading difficulties will be presented. Students will evaluate/develop literacy instructional programs.

EDSE 489. Research and Inquiry (2). Prerequisites, EDSE 310, EDSE 311, EDSE 410, EDSE 422. Capstone course involving extensive research into a category of disability and related issues, includes synthesis and oral presentation of research findings.

EDSE 490. Cooperative Education (1-12). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U. Formerly ECE 490 OR SPED 490. Students may not receive credit for both.

EDSE 491. Workshop (1-6). Formerly SPED 491.0 to 491.9.

EDSE 495. Practicum (5-16). Prerequisites, all core classes and full admission to the Teacher Education program. Practical experience with children having learning, behavioral or physical disabilities; using behavioral management techniques in an effort to bring the child up to maximum potential as determined by his/her flexibility, sociality and capacity. Grade will be S or U. Formerly SPED, EDCS 495. Students may not receive credit for both.

EDSE 496. Individual Study (1-6). Prerequisite, permission of instructor. May be repeated. Formerly ECE, ED, OR SPED 496.

EDSE 498. Special Topics (1-6). Formerly ECE, ED, OR SPED 498.

EDSE 499. Seminar (1-5). May be repeated. Prerequisite, EDSE 303. Formerly ECE, ED, OR SPED 499.

Undergraduate Courses/Programs on Reserve

The following program is on reserve: Elementary Education Minor.

The following courses are on reserve and may be offered subject to program needs: EDCS 319. Cursive and Manuscript Writing; EDCS 423. Reading in the Secondary School; EDCS 432. Implementing the Career Education Concept; EDCS 446. Directed Observation; EDCS 485. Paraprofessional Training/ Supervision; EDCS 487. Group Processes and Leadership; EDCS 488. Group Dynamics and the Individual; EDF 401. Contemporary Movements; ESE 402, Identifying the Gifted Child; ESE 403, Creativity for the Gifted; ESE 405, Methods and Materials for the Gifted; ESE 412, Teaching strategies for Students with Disabilities; ESE 424, Mainstreaming; ESE 430, Curriculum and Materials for Students with Disabilities; ESE 437, The Gifted Student; ESE 482, Due Process of Law and Special Education; ESE 485, Teaching Children With Behavior Problems; ESE 486, Utilization of Direct Instruction Materials.
ENERGY STUDIES
Director: James L. Huckabay
Department of Geography and Land Studies
Lind 117A

Students interested in investigating energy issues are encouraged to pursue the following interdisciplinary minor which provides:

1. An introduction to the technical concepts and language relevant to energy.
2. An investigation of current and projected energy use patterns and their associated environmental conflicts.
3. A study of the legal, institutional, and economic factors that influence energy policy.

Energy Studies Minor
The following interdisciplinary minor provides a modest technical background so students may better understand and appreciate energy issues as they are explored from the perspective of various specialists.

Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>IET 210</td>
<td>Energy Sources and Power</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 343</td>
<td>Energy Resource Alternatives</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 443</td>
<td>Energy Policy</td>
<td>5</td>
</tr>
<tr>
<td>PHYS 111, 111LAB</td>
<td>Introductory Physics, and Lab</td>
<td>5</td>
</tr>
</tbody>
</table>

Select from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 462</td>
<td>Economics of Energy, Resources and Environment (5)</td>
</tr>
<tr>
<td>MET 412</td>
<td>Alternate Energy Systems (5)</td>
</tr>
</tbody>
</table>

Total 21

With the approval of the Director of Energy Studies, the student will select appropriate electives to meet personal and professional goals.

ENGLISH

Faculty
Chair: Toni Culjak
Language and Literature 423

Professors
Liahna Armstrong, American Literature, Popular Culture, Film
Patsy Callaghan, Rhetoric, World Literature, English Education
Toni Culjak, American, World and Multicultural Literature
Bobby Cummings, Rhetoric, English Education, Writing on Computers
Philip B. Garrison, Non-fiction Prose, Poetry Writing, World Literature, Mythology, American Literature
Loretta Gray, Applied Linguistics, Composition
Charles Xingzhong Li, Linguistics, TESOL, Linguistic Approaches to Literature
Terry Martin, English Education, Women's Literature
Steven Olson, American Literature, Film
Joseph Powell, Creative Writing, Modern Poetry
Sura Rath: Director, Douglas Honors College; Literary Critical Theory, Literature of the South
Gerald J. Stacy, English Renaissance Literature
Christine A. Sutphin, Victorian Literature, English Novel, Women's Literature

Associate Professors
Laila Abdalla, English Medieval and Renaissance Literature
George Drake, British Literature, English Novel
Paulus Pimomo, British Literature, Post Colonial Studies

Assistant Professors
Karen Gookin, Composition
Judith Kleck, Composition
Virginia Mack, Composition
Christopher Schedler, American Literature
Katharine Whitcomb, Creative Writing

Emeritus Professors
Robert M. Benton, American Literature
Mark W. Halperin, Poetry Writing, Folk Literature, Modern Poetry
John L. Vifian, Eighteenth-century Literature, English Novel

General Departmental Information
Study in the English Department helps students better understand and appreciate the English language and its literature. The Department offers undergraduate and graduate work in American, British, and World Literature, in English Language Studies, in English Education, and in Writing. Work in English leads to greater skill in communication, and since literature is about people, a better understanding and appreciation of it can lead to a better understanding and appreciation of them. Study in English is an excellent preparation for a wide range of careers.

Departmental Honors in English
The honors program in English recognizes the superior scholarship of those students who are able to complete successfully an advanced individual study and writing project. To qualify for the program, students must have completed 25 credits in their major, have an overall GPA of 3.0 and 3.4 in English, and be recommended by three faculty members, including two from the Department of English.

The Chair of the Department, as Director of the program, will appoint an honors advisor and two readers to approve and direct the studies of each student who is admitted. Honor students, under the direction of their advisor, will enroll in English 496 (a three-credit course to be taken in addition to those required for the major in English) and prior to their last quarter in residence will complete a study culminating in the writing of an honors paper, an essay treating a subject appropriate for undergraduate English study and reflecting an awareness of the humanistic emphasis of the discipline. Students whose committee and program director accept the honors paper will graduate with departmental honors in English.

Bachelor of Arts

English Major
Students in this major are expected to complete English 302, Poetry and Poetics and ENG 303, Principles of English Studies prior to enrolling in other upper division major requirements.

Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 302</td>
<td>Poetry and Poetics</td>
</tr>
<tr>
<td>ENG 303</td>
<td>Principles of English Studies</td>
</tr>
<tr>
<td>ENG 304</td>
<td>English Linguistics</td>
</tr>
<tr>
<td>ENG 320</td>
<td>English Grammar</td>
</tr>
</tbody>
</table>

Select two English Studies courses: 8

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
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</thead>
<tbody>
<tr>
<td>ENG 383</td>
<td>Literary and Critical Theory</td>
</tr>
<tr>
<td>ENG 340</td>
<td>The Short Story</td>
</tr>
<tr>
<td>ENG 344</td>
<td>Studies in Film</td>
</tr>
<tr>
<td>ENG 448, 449</td>
<td>World Novel I, II</td>
</tr>
<tr>
<td>ENG 451, 452</td>
<td>English Novel I, II</td>
</tr>
<tr>
<td>ENG 475</td>
<td>Modern Poetry</td>
</tr>
<tr>
<td>ENG 478, 479</td>
<td>American Novel I, II</td>
</tr>
</tbody>
</table>

Select four Period courses: 16

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 308, 309</td>
<td>American Literature I, II</td>
</tr>
</tbody>
</table>
Credits from the following areas: 34
Creative Writing Courses:
ENG 212, Fiction Writing (4)
ENG 213, Poetry Writing (4)
ENG 312, Advanced Fiction Writing (4)
ENG 313, Advanced Poetry Writing (4)
ENG 314, Advanced Nonfiction Writing (4)
ENG 412, Advanced Writing Seminar (4)
TH 330, Playwriting (4)
ENG 343, Contemporary Writers Colloquium (4)

Professional Publication Courses:
ADMG 385, Business Communications and Report Writing (5)
COM 201, Introduction to Mass Media (4)
COM 208, Writing Across the Media (4)
COM 347, Copy Editing (4)
COM 348, Publication Design (3)
ENG 310, Technical Writing (4)
ENG 404, Advanced Technical Writing (4)
ENG 412, Advanced Writing Seminar (Professional Writing) (4)
IT 248, Web Fundamentals (2)
IT 288, Business Presentation Applications (2)
IT 389, Desktop Publishing (3)

Elective Credits in English: 8
Elective credits may be taken from any of the 300-level courses above and/or from the following:
ENG 235, Studies in Folklore
ENG 247, Multicultural Literature
ENG 241, The Bible
ENG 242, Literature and Myth

Total 70

English: Writing Specialization
This program combines a liberal arts background in literature with specialized writing courses in creative writing (fiction, poetry, creative non-fiction, screenwriting), business writing, professional writing, scientific and technical writing, editing, and publishing. Students in this major are expected to complete English 301, Rhetoric, and Eng 303, Principles of English Studies, prior to enrolling in other upper-division major requirements.

Required Courses
ENG 301, Rhetoric ................................ 4
ENG 302, Poetry and Poetics ..................... 4
ENG 303, Principles of English Studies .... 4
ENG 320, English Grammar ..................... 4
ENG 323, Editing for Usage, Style, and Clarity .......... 4
ENG 489, Senior Colloquium ................. 2

Total 68

English/Language Arts Teaching Major
This major satisfies the endorsement for English/Language Arts. Students in this program must complete the Professional Education Program requirements for secondary certification available through the Department of Education. Students in this program are expected to complete ENG 302, Poetry and Poetics and ENG 303, Principles of English Studies prior to enrolling in other upper division major requirements. English 422, 430, and 492 are required prior to student teaching. English 430 and 492 must be taken concurrently. All other major requirements must be completed before or be completed concurrently with enrollment in ENG 489. Enrollment in English 489 is by permission.

Required Courses
ENG 302, Poetry and Poetics ..................... 4
ENG 303, Principles of English Studies ........ 4
ENG 383, Literary/Critical Theory .............. 4
ENG 340, Short story (4)
ENG 448, 449, World Novel I, II (4, 4)
ENG 451, 452, English Novel I, II (4, 4)
ENG 475, Modern Poetry (4)
ENG 478, 479, American Novel I, II (4, 4)

Total 68

*Prerequisite, admission to Teacher Education Program and 15 credits of professional sequence.
**Prerequisite, EDCS 311 and 45 credits in English.
***Requires concurrent enrollment in ENG 430.
English Courses

ENG 100D. Developmental English (1-4). Course may be repeated. A study of basic English grammar and conventional usage to improve sentence-level writing skills, with a reading component to improve comprehension as a foundation for academic writing. Credits will not be allowed toward meeting Bachelor's degree requirements. Grade will be S or U. Formerly English 100L.

ENG 100E. English as a Second Language (2-8). Course may be repeated. Intensive, small group instruction for students for whom English is a second language, including preparation for the TOEFL examination and other aspects of English for University study. Credits will not be allowed toward meeting Bachelor's degree requirements.

ENG 100S. Basic English Spelling (3). Required of all students whose verbal skills scores indicate deficiencies in spelling. Course may be repeated. A study of the basic sound-to-spelling correspondences and basic spelling processes in modern American English. The work that the student does will be determined by a diagnostic pre-test.

Credits will not be allowed toward meeting Bachelor's degree requirements. Grade will be S or U.

ENG 100T. Transitional English (4). Course may be repeated. A study of academic written English with review of sentence and paragraph-level skills, such as word usage, sentence structure, organization, grammar, and mechanics with a reading component to improve comprehension of academic English. Students will learn to write unified, coherent paragraphs and short compositions. Credits will not be allowed toward meeting Bachelor's degree requirements. Grade will be S or U. Formerly English 100G.

ENG 100W. Remedial Writing, Basic Writing Skills (1-2). Course may be repeated. Individualized work in basic writing skills of drafting, editing, and proofreading. Intended for students whose problems are less generalized than those dealt with in English 100T. Credits will not be allowed toward meeting Bachelor's degree requirements. Grade will be S or U.

ENG 101. English Composition (4). Prerequisite, adequate ACT, COMPASS, or SAT scores. Develops writing skill in expository prose. Required of all students except those who have passed an exemption examination.

ENG 102. English Composition (4). Prerequisite, a minimum grade of C- or above in ENG 101 or exemption from 101. Develops skills in expression, inquiry, reasoning and research through composing academic essays.

ENG 105. The Literary Imagination: An Introduction to Literature (4). Human experience as it is imagined, interpreted, and made significant in the poetry, prose, fiction, and drama of the major writers of the world. For general education (breadth) credit, prerequisite, Grade of C- or above in ENG 101; must be taken for grade.

ENG 180. Introduction to Linguistics (5). Backgrounds, developments, and relation to other fields of study. ENG 180 and ANTH 180 are equivalent courses. Students may not receive credit for both.

ENG 212. Fiction Writing (4).

ENG 213. Poetry Writing (4).

ENG 235. Studies in Folklore (4). Analysis of literature of oral folk traditions as recorded in tales, songs, fables, anecdotes, toasts and ballads.


ENG 247. Multicultural Literature (4). Prerequisite, grade of C- or above in ENG 101. Literary themes examined through the comparison of works from various cultures.

ENG 296. Individual Study (1-6).

ENG 298. Special Topics (1-6).

ENG 299. Seminar (1-5).

ENG 301. Rhetoric (4). Prerequisites, ENG 102. Study in writing purposes, styles, and genres.

ENG 302. Poetry and Poetics (4). Offers practice in the interpretive reading of poetry, focusing on the elements of poetry and poetic theory.

ENG 303. Principles of English Studies (4). Provides critical reading and writing strategies necessary to studies in English; introduces the expectations and requirements of the major.

ENG 304. English Linguistics (4). Students learn to perform linguistic analysis of aspects of English and to use linguistic concepts to examine literary texts.

ENG 305. English Literature I (4). Prerequisites for English Majors, English Teaching Majors and Language Arts Majors only: English 302 and 303. Historical and critical studies in English literature from Beowulf through Milton.


ENG 307. English Literature III (4). Prerequisites for English Majors, English Teaching Majors and Language Arts Majors only: English 302 and 303. Historical and critical studies in English literature from 1832 to present.


ENG 309. American Literature II (4). Prerequisites for English Majors, English Teaching Majors and Language Arts Majors only: English 302 and 303. Historical and critical studies in American literature from 1865 to the present.

ENG 310. Technical Writing (4). Prerequisite, ENG 102 and junior standing. Practice in writing and editing technical reports.

ENG 312. Advanced Fiction Writing (4). Prerequisite, ENG 212 or instructor’s permission.

ENG 313. Advanced Poetry Writing (4). Prerequisite, ENG 213 or instructor’s permission.

ENG 314. Advanced Nonfiction Writing (4). Prerequisite, ENG 102 or equivalent. A creative writing course in which students will write and read essays.

ENG 320. English Grammar (4). A review of the concepts, terminology, and historical development of traditional grammar, the parts of speech and their functions in sentences, the elements of the sentence and its various patterns.

ENG 321. Grammar in the Classroom (4). This course offers students the opportunity to learn concepts and theories of English grammar and to explore ways to integrate grammar into their teaching.

ENG 322. Editing for Usage, Style and Clarity (4). Prerequisite, ENG 320. In this course, students develop close reading and critiquing skills for assessing and editing writing to meet professional stylistic guidelines.

ENG 328. World Literature I (4). Prerequisites for English Majors, English Teaching Majors and Language Arts Majors only: English 302 and 303. Poetry and prose of both Western and non-Western civilization from 1500 to the present. Formerly ENG 248. Students may not receive credit for both.

ENG 329. World Literature II (4). Prerequisites for English Majors, English Teaching Majors and Language Arts Majors only: English 302 and 303. Poetry and prose of both Western and non-Western civilization from 1500 to the present. Formerly ENG 249. Students may not receive credit for both.


ENG 340. The Short Story (4). Prerequisites for English Majors, English Teaching Majors and Language Arts Majors only: English 302 and 303. Extensive reading and analysis of short stories, including both older and modern writers.

ENG 343. Contemporary Writers Colloquium (4). Prerequisite, ENG 212 or ENG 213. Genre specific seminar (poetry or fiction) with writing workshop element, featuring a schedule of visiting writers. Students will read work by visiting writers, develop critical thinking about craft, attend readings, explore contemporary publishing issues, and write both analytical papers and creative work.

ENG 344. Studies in Film (4). Prerequisites for English Majors, English Teaching Majors and Language Arts Majors only: English 302 and 303. The study of film as an art form, a technological system, an industry, and a social force.


ENG 347. Global Perspectives in Literature (4). Prerequisites, ENG 101 with grade of C- or better; must be taken for grade. An introduction to contemporary non-western and third world literature.


ENG 381. British Drama (4). Prerequisites for English Majors, English Teaching Majors and Language Arts Majors only: English 302 and 303. Origins to the present. Selections to be determined by the instructor. ENG 381 and TH 381 are equivalent courses. Students may not receive credit for both.


ENG 391. Workshop (1-5).

ENG 398. Special Topics (1-6).

ENG 404. Advanced Technical Writing (4). Practice in designing, constructing,
evaluating and testing technical documents for specific purposes and organizational cultures.

ENG 410. Studies in Major British Writers (4). Prerequisites for English Majors, English Teaching Majors and Language Arts Majors only: English 302 and 303. Intensive study of one or two writers. May be repeated for credit under a different subtitle.

ENG 411. Studies in Major American Writers (4). Prerequisites for English Majors, English Teaching Majors and Language Arts Majors only: English 302 and 303. Intensive study of one or two writers. May be repeated for credit under a different subtitle.

ENG 412. Advanced Writing Seminar (4). Prerequisite, one of the following: ENG 312, 313, 314. May be repeated for a maximum of twelve credits.

ENG 413. Studies in Language (4). Investigation into one or more topics from the study of language - its grammar, its rhetoric, or its aesthetics. Recent topics include “Theories of Style,” “Language and Meaning,” “Morphology, Semantics and Spelling,” and “Advanced Syntax.” May be repeated for credit under a different subtitle.

ENG 414. Studies in Major World Writers (4). Prerequisites for English Majors, English Teaching Majors and Language Arts Majors only: English 302 and 303. An intensive study of one to three writers. May be repeated for credit under a different subtitle.

ENG 422. Teaching Young Adult Literature (4). Prerequisites for English Majors, English Teaching Majors and Language Arts Majors only: English 302 and 303. A study of literature written for middle level and early high school students. Prerequisite, admission to Teacher Education Program and completion of at least 15 credits of professional sequence. Prerequisite to EDCS 442, Student Teaching.

ENG 423. History of the Language (4). In this course, students examine the systematic, evolutionary nature of language by focusing on the development of the English language. Formerly ENG 322.

ENG 424. Teaching Reading and Viewing in High School (4). Course focuses on the theory and practice of teaching reading and viewing strategies appropriate for print and non-print texts in high school classrooms.

ENG 430. Teaching Writing in the Secondary School (4). Prerequisite, EDCS 311 and 28 credits in English. Theory into practice course on teaching writing including writing process strategies, assignment design, assessment, and teacher research. Must enroll concurrently in ENG 492.


ENG 452. The English Novel II (4). Prerequisites for English Majors, English Teaching Majors and Language Arts Majors only: English 302 and 303. Intensive study of representative English novels of the later 19th and 20th centuries. Formerly ENG 352. Students may not receive credit for both.

ENG 475. Modern Poetry (4). Prerequisites for English Majors, English Teaching Majors and Language Arts Majors only: English 302 and 303. Study of the major poets and the major developments in the poetry of the modern world, particularly in England and the United States. Formerly ENG 375. Students may not receive credit for both.


ENG 480. Survey of Linguistics (4). Linguistic concepts and the relation between linguistics and other fields of study. Open to seniors and graduate students only. ENG 480 and ANTH 480 are equivalent courses. Students may not receive credit for both.

ENG 485. Manastash (1). Prerequisites, ENG 301 and ENG 303. Students will select and edit manuscripts for publication in, as well as design and construct, the Manastash literary journal.

ENG 488. Teaching Portfolio (2). Prerequisites, Admission of Teacher Education Program and prior or concurrent completion of all other major requirements. Students prepare an end-of-program E-Portfolio which illustrates their mastery of major program and professional sequence competencies.

ENG 489. Senior Colloquium (2). Prerequisites, all other major requirements completed or to be completed concurrently with enrollment in this course; admission by permission. Students prepare an end-of-major portfolio that illustrates their competence in interpreting and composing.

ENG 490. Cooperative education (1-12). An individualized contracted field experience with business, industry, government, or social service agencies. Requires a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated for a total of 12 credits. Grade will be S or U.

ENG 491. Workshop (1-10). Designed to give an opportunity for individual and group study of problems in the teaching of English.

ENG 492. Practicum (2). Prerequisites, EDCS 311 and 28 credits in English or permission of instructor. Practice planning instruction, teaching, and assessing learning. Must enroll concurrently in ENG 430. Grade will be S or U.

ENG 496. Individual Study (1-6). Prerequisite, permission of instructor.

ENG 498. Special Topics (1-6).

ENG 499. Seminar (1-5).

English Programs and Courses on Reserve:

Business and Professional Communications Minor.
ENVIRONMENTAL STUDIES

Director: Christopher Kent
Lind Hall 118A

Environmental Studies Minor

The Environmental Studies minor is designed primarily to serve undergraduate education and environmental literacy. Research and graduate education, and community education and service are other goals. Top priority is given to providing a large number of students with the opportunity to assess the nature, scope, and complexities of present and impending environmental problems. This emphasis on establishing environmental literacy among a broad spectrum of students does not preclude the simultaneous development of a smaller number of highly selected environmental specialists. Ordinarily, development of expertise as an environmental specialist requires specialized work which can be pursued by means of undergraduate majors and graduate programs. Other objectives include the provision of public education programs on environmental issues and the stimulation of interdisciplinary research on environmental problems.

Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENST 301</td>
<td>Earth as an Ecosystem</td>
<td>5</td>
</tr>
<tr>
<td>ENST 302</td>
<td>Ecosystems, Resources, Population, and Culture</td>
<td>5</td>
</tr>
<tr>
<td>ENST 303</td>
<td>Environmental Management</td>
<td>5</td>
</tr>
<tr>
<td>ENST 444</td>
<td>Environmental Policy Formulation</td>
<td>4</td>
</tr>
<tr>
<td>Approved Elective</td>
<td>3-5</td>
<td></td>
</tr>
</tbody>
</table>

Total 22-24

Students choosing an Environmental Studies minor will propose an upper division elective course in consultation with, and subject to, the pre-approval of the ENST Director. This elective course must be taken for a grade and be in a department outside the student’s major. The following courses, however, will automatically be accepted without pre-approval provided they meet the other elective requirements: ANTH/GEOG 440, BIOL 360, ECON 462, ENST 455, GEOG 445, or HIST 354/454.

The minor requires that students finish with a minimum 2.0 GPA for 22-24 program credits, and students must also earn at least a C- on each of the five courses that comprise their ENST program.

Environmental Studies Courses

ENST 298. Special Topics (1-6).
ENST 301. Earth as an Ecosystem (5). Introduction to the concept of our planet as a finite environment with certain properties essential for life. The dynamic nature of the earth’s physical, chemical, geological and biological processes and their interrelated “systems” aspects furnishes the thrust of this treatment.
ENST 302. Ecosystems, Resources, Population, and Culture (5). The physical and cultural dimensions of environmental problems with particular emphasis given to the interaction between ecosystems, basic resources, population dynamics, and culture.
ENST 303. Environmental Management (5). Development of attitudes and perceptions of our environment. Examination of the economic, political and legal mechanisms and philosophical perspectives useful in managing the environment.
ENST 398. Special Topics (1-6).
ENST 444. Environmental Policy Formulation (4) Prerequisite, ENST 301, 302, 303 or permission of instructor. Students will work together in interdisciplinary teams to formulate and justify policy measures they think appropriate to meet some environmental problem investigated.
ENST 455. Environmental Literature (3). Survey of literary works that thematically explore human relationships with place and environment. Sampling of various themes and genres, with a focus on Pacific Northwest.
ENST 490. Cooperative Education (1-12). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U.
ENST 491. Workshop (1-6).
ENST 496. Individual Study (1-6). Prerequisite, permission of instructor.
ENST 498. Special Topics (1-6).
ENST 499. Seminar (1-5).

Undergraduate Courses/Programs on Reserve

The following course is on reserve and may be offered subject to program needs: ENST 448, Energy Use Patterns (5).