WESTERN STATE COLORADO UNIVERSITY

Learning, Elevated.

2015-2016 Undergraduate and Graduate Catalog

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For further information, phone or write:
Office of Admissions
Western State Colorado University
Gunnison, CO 81231
(970) 943-2119
1-800-876-5309

Main Switchboard (970) 943-0120
www.western.edu • admissions@western.edu

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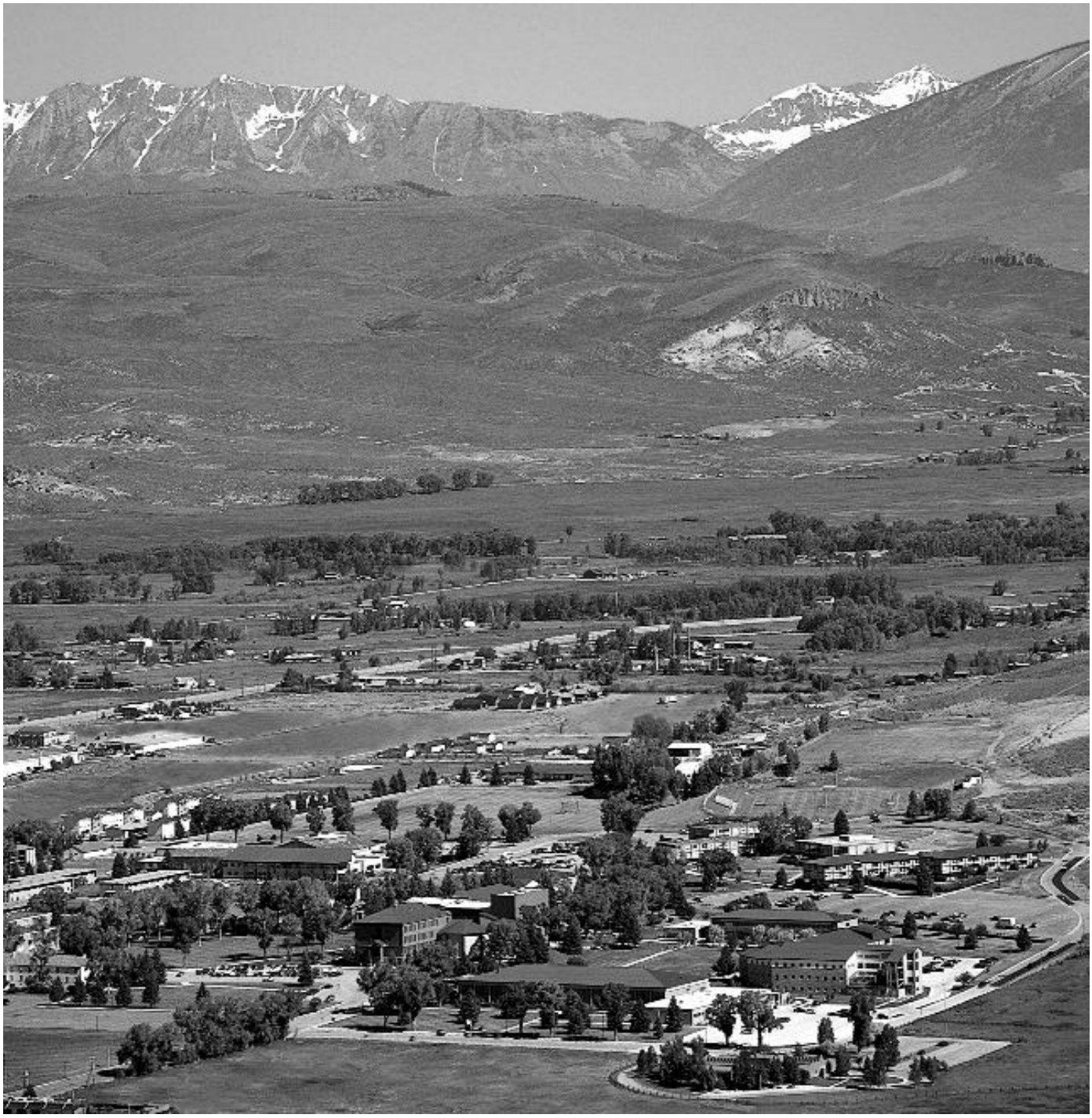

Western State Colorado University is an affirmative action, equal opportunity institution and employer. We encourage applications for admission or employment and participation in other University programs and activities by all individuals.

The University does not discriminate on the basis of race, sex, creed, color, age, religion, national origin, marital status, sexual orientation, or disability in admission or access to, or treatment or employment in, its educational programs or activities. Inquiries concerning Title VI, Title IX, ADA, and Section 504 may be referred to the Affirmative Action Officer (970 943-3140) or to the Office for Civil Rights, U.S. Department of Education, 1244 Speer Boulevard, Suite 300, Denver, Colorado 80204.

No qualified handicapped person shall, on the basis of handicap, be excluded from participation in, or be denied the benefits of, or otherwise be subjected to discrimination, under any academic research, occupational training, housing, health insurance, counseling, financial aid, physical education, athletics, recreation, transportation, other extracurricular or other post-secondary education program or activity to which this sub part applies (Section 504, Rehabilitation Act of 1973, 29 USC 706, Title 45, Section # [84.3.1]).

Accessibility for Individuals with Disabilities

Western's policies insuring equal access to its facilities and services can be reviewed in the Disability Services office. For further information, phone or write: Disability Services, Academic Resource Center, Western State Colorado University, Gunnison, CO 81231, (970) 943-7056.

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PRESIDENT'S MESSAGE

To our students:

What an honor it is for me to introduce our growing catalog of courses to both Western State Colorado University students and those considering enrolling at our university.

The Western academic experience continues to improve in both breadth and quality, as we continue to add academic programs and challenges to support your academic growth and prepare you for life after college. Our university has a century-long tradition of offering a high-quality, customized education at a value you won't find anywhere else. With an outstanding faculty and staff and average classes of just 17 students, we offer a private-college experience for a public-university price.

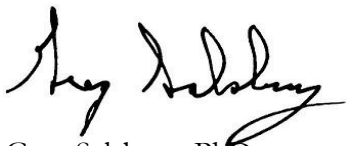
This publication describes Western's courses and academic-degree programs. In addition, you'll see it spells out requirements you must complete to earn your university degree. Please note these requirements as you plan your academic schedule and career.

If you need help understanding our academic offerings or planning your future, please know our dedicated faculty and staff are here to help you grow academically and personally. Western's culture of quality academics and close faculty-student mentorship reflects our commitment to your success. We want to ensure you get a phenomenal education here at Western. And we are here to help you chart a path for continued growth after graduation.

While you study here at Western, we will push you to expand your horizons, broaden your sense of community, and explore and pursue both academic and practical skills excellence that will put you a step ahead of your peers.

That's why we call the Western experience *Learning, Elevated.*

Best wishes for your academic success this year at Western.



Greg Salsbury, PhD
President, Western State Colorado University

GENERAL INFORMATION

Institutional Mission

Western State Colorado University fulfills its statutory mission by promoting intellectual maturity and personal growth in its students and graduates citizens prepared to assume constructive roles in local, national, and global communities. Western helps its students to develop the skills and commitments needed to continue learning for the rest of their lives and strives to elucidate the connections unifying academic domains which have traditionally existed separately: the sciences, the liberal arts, and professional programs. The University provides students with a solid foundation of skills in written and spoken communication, problem solving, critical thinking, and creativity. Our programs encourage a breadth and depth of knowledge, which will serve as a foundation for a professional career or graduate study, and an appreciation of values appropriate to a liberally educated individual. Western's distinctive character emerges from its unity among academic and professional disciplines, its high standards of scholarship, and its unique environment in the mountains of western Colorado.

Institutional Accreditation

Indicators of the status of an university are the agencies from which it has sought and gained recognition. Western State Colorado University is accredited by The Higher Learning Commission and is a member of the North Central Association.

The Higher Learning Commission
230 South LaSalle Street, Suite 7-500
Chicago, IL 60604-1413
(312) 263-0456 (800) 621-7440

Individual academic programs have been accredited, approved, or recognized by discipline-specific professional or governmental agencies, including the following:

Music: National Association of Schools of Music
Teacher Education: Colorado Department of Education;
Colorado Commission on Higher Education;

Institutional accreditation may be reviewed in the Office of the Vice President for Academic Affairs.

Governance

The Colorado Commission on Higher Education (CCHE) is a nine-member board appointed by the Governor and confirmed by the Colorado State Senate that acts as a policy and coordinating board for all public institutions of higher education in Colorado.

Colorado Commission on Higher Education 1560 Broadway, Suite 1600
Denver, CO 80202
(303) 866-2723

Western is governed by the Western State Colorado University Board of Trustees, a nine-member lay board. The trustees are appointed by the Governor to four-year terms. One faculty trustee and one student trustee are elected by their constituents and serve one-year terms.

History of Western

Western was established in 1901. It was the first college on Colorado's Western Slope and is the fourth-oldest public institution in the state.

The school actually opened for classes in 1911 as the Colorado State Normal School. Originally a preparatory college for teachers, Western's role changed when it became Western State College of Colorado in 1923. Though for many years Western was known for its graduates who became teachers, it was, in fact, the first Colorado college designed to teach a primarily liberal arts curriculum, and the liberal arts have remained at the core of Western's academic mission ever since.

Some of Western's most cherished buildings–hallmarks of its lasting durability-were constructed during the lean years of the Depression. Savage Library, the President's House, and Ute Hall are architecturally striking and add character to the campus.

During the post-war years of the 1940s, Western's enrollment soared as veterans took advantage of the GI Bill and new programs were added.

By the 1970s, enrollment was exceeding 3,000, crowding the institution so much that new freshmen often slept in the halls of their dorms for the first few days until rooms became available. During the 1980s, Western began to focus on undergraduate education in three core areas: the liberal arts, teacher education, and professional programs.

Entering its second century of service, Western continues its tradition of providing a high quality education of value while addressing new initiatives, such as campus sustainability. Western is actively engaged in improving environmental awareness and resource efficiency, and students are spearheading many of the sustainability efforts. Starting with the Borick Business Building, which opened in 2007, all new construction on campus adheres to energy efficiency and environmentally sustainable building practices.

The academic year is full of opportunities for students to learn from and become acquainted with outstanding scholars, great thinkers, fine performers, and others from throughout the world. Just as importantly, summer in Gunnison is full of educational opportunities, such as the Summer Teacher Institute.

Western offers a broad range of courses of study in a beautiful mountain setting. Many degree programs take advantage of this environment, which has been called "one of the world's greatest natural laboratories." Western offers students opportunities to study in a wide range of fields, such as business, computer science, communications, the social and behavioral sciences, outdoor leadership,

the arts, the sciences, and teacher education.

Western's excellence also reaches other arenas. Western hosts the only nationally certified university mountain rescue team, and a wilderness pursuits program offers students ample opportunities for self-discovery while exploring the mountains, rivers, and forests that surround the University. The University's vibrant theatre and fine arts departments provide a cultural center for the entire Gunnison Valley.

In athletics, Western traditionally has one of the country's finest small university athletic programs. Western's teams are consistently ranked among the top in the NCAA Division II. Athletic opportunities also include competitive club sports and intramural teams.

Throughout its history, Western has been a source of innovation and excellence, which is reflected in the quality of its programs and in the success and achievements of its graduates. Now in its second century, Western continues to build on its long tradition of excellence.

Governor John Hickenlooper signed HB 1331 on Monday, June 4, 2012 officially changing Western's name to Western State Colorado University. The name change took effect on August 1, 2012.

Leslie J. Savage Library

The staff of the Leslie J. Savage Library provides information, resources, and services designed to advance the intellectual and personal development of members of the University community. When classes are in session, the Library's services are available seven days a week.

Students find the majority of information they seek for course assignments in the Library collection. In addition to over 250,000 volumes and 3,500 films, the collection includes access to over 70,000 electronic books and over 60 electronic journal databases. Special collections include federal and state government documents, books in the Western Colorado History Collection, and the University archives.

The Library makes extensive use of electronic databases to facilitate identifying and locating desired materials. Using the Library's catalog, the search for information can be extended to libraries and databases throughout the United States. Through the Library's resource sharing services, students can borrow materials from other libraries nationwide.

The Library staff gives students the opportunity to become skilled at using the full range of information resources and services. In addition to helping individuals identify and locate desired information, librarians offer group and individual instruction to students as they start to research topics for course assignments. Savage Library provides a welcoming environment for study and research.

The Western State Colorado University Foundation

The Western State Colorado University Foundation, Inc., is a private non-profit corporation founded in 1975 to advance the mission and goals of Western State Colorado University. The Foundation is the primary depository of private gifts from alumni, friends, corporations, and foundations. In the last 10 years, Western State Colorado University has received $50 million in gifts from donors investing in Western's people and mission. Each year, the Foundation gives more than $2 million to the University, with the greatest portion directed to scholarships.

In 1997, the Foundation established The Foundation Scholars Program. This program offers the most prestigious, renewable scholarships awarded at Western to date.

In recent years, the Foundation has increased its role in raising private support for Western. The Foundation receives annual fund contributions, one-time gifts, and major gifts made over a period of years. Many different gift options have been utilized: bequests, cash, securities, savings bonds, real estate, trusts, life insurance, and personal property.

Since Western is a state-assisted institution, private gifts to the Foundation are critical to maintaining and enhancing excellence in faculty and student programs. An annual report of the Foundation is available for those wishing further information. Contact the Foundation at (970) 641-2237, tburggraf@western.edu, or mail inquiries to the Western Foundation, Inc., 909 Escalante Drive, P.O. Box 1264, Gunnison, CO 81230.

Undergraduate Degree Programs

Western State Colorado University offers the following degree programs:

Bachelor of Arts (BA)

- Accounting
- Anthropology
- Art
- Business Administration
- Communication Arts
- Economics
- Education
- English
- Environment and Sustainability
- History
- Music
- Politics and Government
- Psychology
- Recreation and Outdoor Education
- Sociology
- Spanish

The Bachelor of Fine Arts (BFA)

- Art

Bachelor of Science (BS)

- Biology
- Chemistry
- Computer Science
- Exercise and Sport Science
- Geology
- Mathematics

Teacher Licensure

- Elementary Education
- K-12 Education
- Secondary Education

Student Bill of Rights

The Colorado General Assembly enacted the Student Bill of Rights (C.R.S. 23-1-125) to assure that students enrolled in public institutions of higher education have the following rights:

- students should be able to complete their associate of arts and baccalaureate programs in no more than 120 credits unless there are additional degree requirements recognized by the Commission (Colorado Commission on Higher Education);
- a student can sign a four-year graduation agreement that formalizes a plan for that student to obtain a degree in four years, unless there are additional degree requirements recognized by the Commission;
- students have a right to clear and concise information concerning which courses must be completed successfully to complete their degrees;
- students have a right to know which courses are transferable among the state public two-year and four-year institutions of higher education;
- students, upon completion of core general education courses, regardless of the delivery method, should have those courses satisfy the core course requirements of all Colorado public institutions of higher education;
- students have a right to know if courses from one or more public higher education institutions satisfy the students' degree requirements; and
- a student's credit for the completion of the core requirements and core courses shall not expire for ten years from the date of initial enrollment and shall be transferable.

Assessment of Academic Programs and Services

Assessment is the process of collecting, synthesizing, and interpreting information to aid decision making; it includes information gathered about students, instruction, classroom climate, and/or the institution. The assessment process results in feedback to students and the institution with a goal of improving the instructional process.

At Western, assessment begins as students enter the institution and continues after graduation. Students undergo Math and English placement testing in order to enroll in courses that best suit their academic abilities. As students progress through general education and course work in the major, they are evaluated on skills and disciplinary learning and in turn faculty use these results to improve instruction and the curriculum.

Areas of Assessment: The purpose of student and program assessment is to improve student learning and program delivery. Assessment is an ongoing process; therefore, campus-wide and disciplinary goals and objectives must be determined, assessed, evaluated, and reported. Academic programs are assessed by external reviewers and an internal program review process.

Academic Calendar for 2015-2016

Summer Session 2015

May 11	Classes begin
May 25	Memorial Day - no classes
July 4	Independence Day - no classes
August 7	End of Summer Session

Fall Semester 2015

Aug. 24	Classes begin
Sept. 7	Labor Day – no classes
Oct. 9	Mid-Fall break
Nov. 23-27	Thanksgiving break
Dec. 14-17	Final Exams

Spring Semester 2016

Jan. 11	Classes begin
Jan. 18	Martin Luther King Jr. Day - no classes
Feb. 15	Presidents' Day - no classes
March 21-25	Spring break
May 3-6	Final Exams
May 7	Spring Commencement (10:00 a.m.)

*See the University web page for additional information, updates, and future calendars. All calendars are subject to change (http://www.western.edu).

ADMISSIONS POLICIES AND PROCEDURES

All applicants receive a holistic application review and the final admissions decision is based on the student's potential for attaining a degree at Western. Applicants are evaluated on the basis of a variety of factors, including previous academic achievement, test scores, essay, letter of recommendation, rigor of academic history, leadership potential, diversity of experience, and the depth of participation in extracurricular activities.

Academic performance is not the sole criterion of admission to the university. Western State Colorado University recognizes that academic preparation may take several forms and that students contribute to campus in a variety of ways.

How to Apply

All students are encouraged to apply for admission online using The Common Application or at www.western.edu/future-students/applying-western.

Criteria for Admission of First-Time Freshmen

Unless otherwise indicated, all freshman applicants are required to submit the following documents in order to complete an application for admission. In some cases, additional information may be required before an admission decision can be rendered.

All correspondence about undergraduate admissions should be addressed to the Office of Admissions, Western State Colorado University, 600 North Adams Street, Gunnison, CO 81231. All credentials submitted to the Admissions Office become the property of Western State Colorado University and will not be returned.

Application for Admission- All students are encouraged to apply for admission online using The Common Application or at www.western.edu/future-students/applying-western. There is a non-refundable application processing fee.

1. **Official High School Transcripts**- All Freshmen applicants must have their high school submit official transcripts directly to the Admissions Office. Applicants from non-accredited high schools and homeschooled students are considered on a case-by-case basis. Applicants who are not U.S. citizens and have completed their schooling in countries other than the United States (excluding U.S. overseas schools) should see the section on admission of international students.
2. **ACT or SAT Scores**- All Freshmen applicants should request that the Student Profile Reports be sent to Western State Colorado University (profile codes: ACT-0536, SAT-4946). Western does not require the writing portion of either the ACT or SAT.
3. **Personal Essay-** Applicants are asked to write at least a 250 word essay. A student's essay will help the review committee better understand the applicant as a person through leadership potential, diversity of experience, the depth of participation in extracurricular activities and overall interest in attending Western.
4. **A Letter of Recommendation**- A letter from a teacher, school counselor, or other person who can attest to the applicant's personal and professional character and potential to succeed academically at Western.
5. **Completion of High School Classes-** The Admissions Office encourages freshman applicants to complete the following secondary school units by high school graduation:(a) four years of English, (b) four years of math, including Algebra I & II and Geometry (c) three years of natural science (two years lab-based), (d) three years of social science, and (e) two years of academic electives, including foreign language.

Fall 2013 Freshman Class Profile

Middle 50% of Enrolled First-Time Freshmen	
High School GPA:	2.8 - 3.6
ACT Composite:	19 - 24

GED Applicants. Applicants who have not graduated from high school are considered for admission if they have successfully completed a GED program with an average score of 500 overall and a minimum score of 410 in each subject area. All GED applicants are required to submit their ACT or SAT scores, personal essay and one letter of recommendation.

Criteria for Admission of Transfer Students and Students Seeking an Additional Bachelor's Degree

Transfer applicants must submit official transcripts from all prior colleges and universities. Transfer applicants must have a combined grade-point average of at least 2.5 from all prior colleges or universities to be considered for admission. Transfer applicants must have completed at least the same level of high school course work required of freshmen applicants.

Test scores, recommendations, high school records, interviews, and other relevant information may be used in assessing the application for admission. Transfer applicants who have earned fewer than 30 semester credits are required to submit scores from either the ACT or the SAT, along with final high school transcripts.

Grades earned at other institutions are not included in the calculation of grade-point averages at Western.

Admission of International Students

International students seeking admission must submit an application to the Office of Admission by October 1st for the Spring Semester, and May 1st for the Fall Semester of the term for which they apply. Students must also submit official high school and/or

college transcripts in conjunction with their application. All documents in a language other than English must be accompanied by certified English translations of these documents. All official copies of academic transcripts and diplomas of secondary and post-secondary education must be submitted directly to the Western Office of Admissions by the institutions attended. These documents must be original copies with an official signature and bear the school's official seal, or a certified copy.

All academic credit documentation for work completed outside of the United States must submit transcripts to a NACES member credential evaluation service for a course by course evaluation. For a complete list of members, go to: http://www.naces.org/, or http://www.aacrao.org.

Applicants must be graduates of high school or secondary programs equivalent to similar programs in the United States. Applicants from countries where English is not a national language must have a minimum score of 550 on the paper version Test of English as a Foreign Language (TOEFL), an Internet-based Test (iBT) of 80, or a minimum score of 6.5 on the IELTS test.

For international students transferring to Western from another US College or University who have completed 24 semester credit hours or more, and have completed a college level English composition course with a 3.0 GPA or higher, a TOEFL of IELTS score is not required.

To be considered for merit based scholarships, applicants must submit either an ACT or SAT standardized test score directly from the administering organization. http://www.actstudent.org , or http://sat.collegeboard.org/.

Applicants must demonstrate that an adequate sum of money in U.S. currency is available to cover the costs of each year of anticipated study by completing and submitting Western's Affidavit of Support form. Refer to Western's web site for the form and current required amount. Bank statements showing financial solvency must also be provided directly from the Financial Institution where funds are held in conjunction with the Affidavit of Support form. Additionally, a photocopy of the applicant's passport, or, if the applicant is in the U.S., a photocopy of the visa and I-94 in which the applicant entered the country must be provided.

Documents will not be accepted if received via email or fax or in a language other than English. Western will not generate an F-1 visa until all required documents have been received and a student has been officially accepted to the University.

Students Seeking an Additional Undergraduate Degree

Students seeking an additional undergraduate degree must meet all residency and major and/or minor requirements. This includes a minimum of 30 credits in residence at Western. They are considered to have satisfied freshman and sophomore-level General Education requirements by virtue of the work completed for their first undergraduate degree.

Non-Degree Admission

An applicant not wishing to pursue a degree at Western may be admitted as a non- degree student by completing the "Non-Degree Application Form" and submitting a written statement of his/her educational intentions. Western sets policies regarding the non-degree admissions process, criteria for acceptance, limitation of credit, and the courses available to non-degree students.

Should the student wish to pursue a degree in the future, a regular application form must be completed, and the admissions requirements in effect at that time must be met. A maximum of 12 credits taken as a non-degree student will apply toward a degree at Western. Exceptions may be considered on a case-by-case basis. For further information, contact the Admissions Office.

Concurrent High School Student Enrollment

Qualified high school students, 9th-12th grade, may take courses at Western through the Concurrent Enrollment program, earning both high school and university credit. Western sets policies regarding the admissions process and criteria, limitation of credit, and courses available to Concurrent Enrolled students. Contact Extended Studies for more information.

Deferral Policy for Offers of Admission

Any new student who is offered admission by the undergraduate Admissions Office is allowed to defer their admission to a future term within the same academic year. Students will be allowed to defer their admission only one time. There will be no application fee for the one allowed deferral. For the purposes of this policy, the academic year is defined to be the fall, spring and summer terms of an academic year, in that order.

April 1 is the earliest date that a student can defer an application for fall semester admission to either the next spring or summer term. October 1 is the earliest date that a student may defer their spring semester admission to the summer term.

No student can change their entry status by deferring to a new term. For example, an admitted freshman who plans to enroll at a different college may not use deferral to enter Western at a later date as a transfer student. That student must submit a new application as a transfer student and pay the application fee. A student originally admitted as a non-degree seeking student may not use deferral to enter Western at a later date as a degree seeking new freshman or new transfer student. That student must submit a new application and pay the application fee.

All deferring students will be required to complete a new admission application in order to confirm information, including the new term to which they are deferring, address, phone numbers, residency information and any other information requested on the application form.

Once the new application has been received, the Admissions Office will correspond with the student if additional information is required, e.g. final high school transcripts. The original admission decision will stand unless other negating circumstances occur, such as the student fails to graduate from high school or has unsatisfactory performance at a transfer institution.

Readmission of Former Students

Students who leave Western and wish to return are required to apply for readmission. Upon readmission, a student will receive the same academic standing under which she/ he left. For example, a student who left the University in good standing will be

readmitted in good standing; a student who left while on academic probation will be readmitted on academic probation.

Students who have attended other institutions during their absence from Western must also request that official transcripts be sent to Western State Colorado University by all colleges or universities attended. Courses that have a letter grade of "C-" or better may be considered for transfer credit. Grades earned at other institutions are not included in the calculation of grade-point averages at Western. Contact the Office of the Registrar or navigate to www.western.edu/reg/forms to obtain a readmission application.

Transfer Credit, AP Credit, CLEP, Other Credit

Undergraduate Transfer Credit Policies and Procedures

College-level academic courses with grades of C- or better, completed at an institution accredited by a regional accrediting agency, are generally accepted. Western accepts up to 90 credits, combined total, from accredited institutions, military credit, AP, IB, and CLEP exam.

- Western only applies grades earned through Western toward the calculation of GPA.
- Western will only grant upper division credit if the transfer course is taken at an upper division level, regardless of Western equivalency.
- No credit will be granted for remedial or vocational-technical courses; except for some military training or as part of an articulation agreement.
- Courses recommended by the American Council on Education may be considered for credit.
- Total credit permitted under CLEP, AP and other programs leading to credit by examination is limited to 40 semester credits.
- Continuing students must receive approval in advance for transfer credit.

Exceptions to evaluations of transfer credit by the Office of the Registrar may be requested by the appropriate academic department.

Credits accepted in transfer that are comparable to those offered at Western, or are State guaranteed transfer General Education courses (gtPathways), may apply toward satisfying requirements of the major and minor programs. Non-equivalent courses, or those excluded from acceptance toward any of Western's program requirements, may be accepted as electives.

Transfer credit accepted on a provisional basis from a college, which is a candidate for accreditation (as recommended in the American Association of Collegiate Registrars and Admissions Officers Transfer Credit Practices), can only be validated by the student completing 30 credits at Western with a 2.000 cumulative grade-point or better.

Foreign Institutions

Credit will be considered for courses taken at foreign institutions that are formally recognized as an institution of higher education by a given country's Ministry of Education. The same general parameters apply for course content and grades as they do for U.S. credit consideration.

Study Abroad

Credit earned from non-Western Study Abroad programs are treated as transfer credit.

Credit for Advanced Placement

Western awards credit for Advanced Placement in all subject areas. A minimum score of 3 is required for credit to be granted for most AP tests (for some tests, a score of 4 is required). Scores must be submitted by the College Board directly to the Admissions Office.

Credit for International Baccalaureate Program

Western recognizes the International Baccalaureate (IB) Program. Western grants credit based on performance on individual IB exams for students who have completed the IB diploma program as long as all scores are 4 or greater. Students who have not completed the diploma program may be awarded credits for individual IB certificate courses as long as the scores are 4 or greater. For further information on how IB certificates will be awarded credit, contact the Office of the Registrar. Official IB scores must be sent to the Admissions Office from the International Baccalaureate Organization.

Credit for Transfer from Two-Year Colorado Public Colleges

Articulation agreements and transfer guides have been developed with all of the Colorado two-year institutions. Transfer students from Colorado two-year programs who graduate with an Associate of Arts or Associate of Science degree will be considered to have satisfied Western's General Education Program.

Credit for Transfer from Non-Traditional Programs

Western may accept credits for both military service training and non-traditional training as recommended by the American Council of Education. The maximum number accepted by Western toward a Bachelor's degree is 30 semester credits. Western will not grant credit for "life experience", that is, credit for experience gained from "work-related" activities, unless demonstrated through CLEP.

Credit for College Level Examination Program (CLEP)

Western will award credit for both the general and subject CLEP exams for a maximum award of 18 semester credits for CLEP examinations. In awarding credit, Western generally follows the recommendations of the American Council on Education, who award on the basis of a scaled score of 50, with the exception of some foreign language exams. For a list of subjects and courses awarded CLEP credit, contact the Office of the Registrar. Scores must be submitted by the College Board directly to the Office of the Registrar.

Resolution of Transfer Disputes among Colorado Institutions

Students transferring from Colorado institutions may file an appeal of Western's evaluation of their transfer credits by adhering to the following procedure. The Office of the Registrar is responsible for the appeals process. The appeal must be filed in writing to the Office of the Registrar of Western State Colorado University within 15 calendar days of notification of the evaluation. Failure to file in this timely manner means that the original evaluation will be binding. Western will respond to any timely appeal in writing within 15 calendar days of the receipt of the appeal.

If the initial appeal does not resolve the dispute, the student may appeal in writing to the student's previous institution(s) within 15 calendar days. The presidents of the two institutions (or their representatives) may then resolve the dispute. If the issue is still not resolved, the student may file an appeal with the Colorado Commission on Higher Education (CCHE) within 15 calendar days of receipt of written notification by Western of the presidents' decision. The CCHE may then resolve the dispute. The decision of CCHE will be final and binding.

TUITION AND FEES

Listed below are the estimated basic costs of attending Western State Colorado University during 2015-2016. These costs are subject to change. Costs are presented here for information only.

Full-time Students

Tuition for:	16-Week Semester	Academic Year
Resident Tuition		
Total Tuition	$4047	$8094
College Opportunity Fund	($ 1125)	($2250)
Cost to Student	$2,922	$5844
Non-Resident Tuition	$8424	$16,848

* Part-Time Students

Tuition for part-time students is based on a per-credit charge. The estimated rates for 2015-2016 are $243.50 per credit for resident students (after application of the College Opportunity Fund Stipend) and $702 per credit for non-residents. For tuition purposes, "part-time" is defined as fewer than 12 credits in a 16-week semester.

Tuition Surcharge

Students enrolled for more than 18 credits in a 16-week semester will pay a tuition surcharge. The tuition surcharge is a per-credit charge at the basic resident or non- resident rate.

Mandatory Fees (estimated)

Mandatory fees have been approved by the Board of Trustees to pay for special services, including the programs operated by the Student Government Association. The estimated cost of all mandatory fees for a full academic year for 2015-2016 is $2607.00. Mandatory fees are prorated for part-time students.

Optional Fees (estimated)

The following 2015-2016 optional fees will be assessed to each student's account: Renewable Energy Fee - $15, Mountaineer Field House Fee - $50 and Scholarly Activity Fee - $10. Any or all of these fees may be waived by contacting the Cashier's Office at (970)943-3003, cashiers@western.edu, or by visiting the office in person at Taylor Hall 314. Student's wishing to waive optional fees must do so by the full term drop deadline. The date of the drop deadline for any given semester can be found by visiting www.western.edu/registrar.

Room and Board Costs (estimated)

Western provides students several housing options in a variety of residence halls. Apartments are available to returning students. Below are examples of estimated living expenses for 2015-2016. For a comprehensive list of housing and meal plan fees, please visit http://www.western.edu/sites/default/files/2015-2016_Room_and_Board_Rates_web.pdf

Room Costs for:	16-Week Semester	Academic Year
Double-Mears, Escalante, Ute Complex	$2,461.50	$4,923
Two bedroom, unfurnished-Chipeta Apartments	$2,985.5	$5,971
Two bedroom, unfurnished-Pinnacles Apartments	$3,142	$6,285

All students residing in University residence halls (non-apartments) are required to purchase a meal plan. It is suggested that students living in apartments carry a meal plan, but it is not required.

Board Costs for:	16-Week Semester	Academic Year
Blue Mesa Plan	$2,400	$4,801
Mountaineer Plan	$2,192	$4,384
Crimson Plan	$1,936	$3,872

Residence Life Requirement

Information about the online housing selection process will be e-mailed to the student's western.edu official e-mail account beginning in the spring. All first and second-year students are required to live in on-campus housing and purchase a meal plan unless excused by the Housing Appeal Committee for one of the following reasons: (1) the student is married; (2) the student is living with parent(s) or a legal guardian; (3) the student has previously lived on campus for two terms at another institution; (4) the student is at least 21 years of age by the first day of classes.; or (5) the student is an honorably discharged veteran.

Deposit

A $100 housing deposit is required with the housing application. This deposit reserves a space on campus for the academic year. Cancellations must be submitted in writing to the Residence Life office before July 1st for the fall semester and November 17th for the spring semester to receive a full refund of the $100 housing deposit. After these dates, housing deposits are non-refundable.

Payment of Charges

Tuition and fees are due the first day of classes. Students will be mailed a billing statement before the beginning of each semester with an estimate of charges. Western State Colorado University will not register a student, release a diploma, provide a transcript, or supply placement or other University services to any current student or former student who has an outstanding financial obligation to the University.

Per state statute, failure to pay a financial obligation to the University when it is due may result in an account being placed with a collection agency and such action being reported to a credit bureau. In addition, an account may be charged legally allowable collection charges and attorney fees to help secure payment of the debt owed the University.

Late Charges

In each of the 16-week semesters and in the summer session, a date is established after which payment is considered late. This date is available from the Cashier's Office.

The late charge begins at $50 for students who do not pay by the due date. Accounts not in good standing by the last day of each semester will be assessed an additional $50 late charge. Failure to pay the bill in time will result in removal from courses and restrict access to school services.

Refund of Charges

The following refund policies are in place at Western State Colorado University:

When a student officially withdraws from Western (see Academic Policies section on Withdrawal from the University), tuition and fees are refunded according to the following schedule for a full term 16-week semester:

100% refund	through the end of the official drop period
50% refund	for the period between 15% and 25% of the term
25% refund	for the period between 25% and 50% of the term

*Students taking a course(s) in a part of term that ends prior to the end of the full term semester will not receive a refund, in whole or part, once the final meeting time for that course(s) has concluded.

Please refer to the Office of the Registrar website for specific dates of the official drop period.

If a student officially withdraws from Western, the housing and meal plan charges will be refunded according to the following schedule:

Prorated by week through the end of the official drop period

50%	For the period between 15% and 25% of the semester
25%	for the period between 25% and 50% of the semester
0%	for the period after 50% of the semester

Please refer to the Office of the Registrar website for specific dates of the official drop period.

Students who officially withdraw from Western, or who simply stop attending classes, are subject to repaying all or part of any financial aid received, depending on their length of actual attendance.

Changes in Tuition and Fees

Tuition rates are established each year by the Board of Trustees, and student fees are recommended by the Student Government Association and approved by the Trustees. The University reserves the right to change any of these costs at the beginning of any academic semester.

Colorado Residency

New students are classified as in-state or out-of-state students for tuition purposes on the basis of information provided on the application for admission and on other relevant forms. Applicants may be required to submit evidence substantiating their claim of in-state eligibility.

To be eligible for a change to in-state status, students must submit petitions with appropriate documentation. The forms, deadline information, and explanation of the Colorado tuition classification statutes are available online.

Tuition classification is governed by Colorado statutes and by judicial decisions that apply to all state-funded institutions in Colorado and is subject to change without notice.

FINANCIAL AID

Western offers financial aid designed to help bridge the gap between the expected family financial contribution and the cost of attending the university. All students admitted are encouraged to apply for financial aid. Student financial aid is awarded after a student has been accepted for enrollment and the financial aid application is complete. It is strongly recommended that financial aid applications and supporting documents be submitted by April 1.

Applying for Aid

Western State Colorado University utilizes the Free Application for Federal Student Aid (FAFSA) to determine eligibility for all financial aid. This form is available online at: http://www.fafsa.ed.gov. The FAFSA should be filed as soon as possible after January 1 each year.

Grants

Grants need not be repaid. By completing the FAFSA, a student is automatically applying for consideration of the following grants: Federal need-based and/or Colorado Resident need-based grant.

Scholarships

Scholarships need not be repaid. Western State Colorado University offers numerous scholarship opportunities for both incoming and continuing students.

Employment Programs

Western's student employment program is funded through federal, state, and institutional sources. Students may work as many as 20 hours per week, and wages vary according to the job. It may be possible to work on campus even if you are not otherwise eligible for financial aid.

Loan Programs

Loans must be repaid. The FAFSA must be completed to receive consideration for any of the following loans: Federal Perkins Loan Program, Federal Direct Stafford Loan Program, and Federal Direct PLUS Program.

STUDENT PROGRAMS AND SERVICES

Programs and services in support of the academic education at Western are offered in the spirit of American educator John Dewey, who believed that the learning experience should not just be a "preparation for future living" but also the guided and intelligent practice of life in the present.

Thus, the goal of those involved in these programs and services at Western is to provide opportunities for students to "apply the curriculum"; to question thoughtfully; to reason clearly; to either compete vigorously or to cooperate sensitively, depending on the challenge; and otherwise to fully embrace the human condition and the responsibilities and opportunities it affords.

The programs offer students the opportunity for direct participation in activities involving their mental, physical, spiritual, or career-related development.

The services assist students both in making their way through Western and in making the transition to their post-graduate lives. These programs and services include cultural, academic, and diversity-related programs and services, educational and career- related programs and services, and recreational and athletic programs.

The programs and services offered in each of these categories are described briefly in the pages that follow. They are described in more detail in the *Student Handbook* (http://www.western.edu/current-students/student-affairs).

Co-Curricular Programs

Art Exhibitions. Western's art faculty, advanced art students, and visiting artists provide a steady rotation of shows and exhibits in the Quigley Hall Gallery and community galleries.

University Media. Students manage and operate the University newspaper (*Top O' the World*), radio station (KWSB-FM), and an annual magazine (*Western Pathfinder Magazine*), and film/video production unit (Mountaineer Media).

Enrichment Convocations and Lectures. Each semester, Western arranges for special on-campus presentations by distinguished professionals, government officials, visiting faculty, and other guests from the world beyond the campus.

Headwaters Conference. Each fall, Western invites an interdisciplinary gathering of scholars, writers, poets, storytellers, public officials, and others involved in the cultural development of the Southwest to discuss issues and problems of common concern to Southwesterners.

Honorary Organizations and Departmental Clubs. Western has student chapters of several national honorary organizations and departmental clubs which allow students to pursue their disciplinary studies outside the classroom. These groups include: Alpha Kappa Delta (Sociology), Alpha Zeta (Spanish), Gamma Chapter of Tri Beta (Biology), Phi Alpha Theta (History), Psi Chi (Psychology), Sigma Tau Delta (English), Art League, Association for Students of Exercise and Sports Science (ASESS), Chemistry Club, English Club (Wordhorde), NAfME, Pre-Health Club, Politics Club, Psychology Club, Sociology Club and Sustainability Coalition (Environmental Sustainability).

LEAD Office. The Leadership, Engagement, and Development (LEAD) Office creates and provides leadership development opportunities and actively engages students into the Western and local community. This office also maintains support for annual programs such as Orientation, Senior Reception, Family Weekend, and Community Clean-up as well as promoting service opportunities. The LEAD Office is located in University Center 118.

Living/Learning Communities. Living/Learning Communities are places within the traditional residence halls where students are assigned to live based upon their area of academic interest, where academic engagement is emphasized, and where the students' social experience is integrated into their academic experience creating a unique residential environment.

Mountain Rescue Team. The team is a fully certified university-based search and rescue team. They are a highly trained and dedicated group which has gained national attention a number of times for search and rescue work in the surrounding mountains.

Multicultural Center. This Center exists to offer educational, social, psychological, and emotional support for students from culturally or racially diverse backgrounds, however, the office is open to anyone. Activities help students from diverse backgrounds develop their special talents, aid in the retention of these students, and broaden the cross-cultural understanding of all students, staff, faculty, and the administration. The Multicultural Center is located in the University Center. Housed in the Multicultural Center are four clubs: Amigos, the Asian/ Pacific Islander Club (APIC), Black Student Alliance (BSA), and the Native American Student Council (NASC).

Music Programs. Each semester, programs by the orchestra, chorus, jazz band, and other groups are featured, as well as individual recitals by music faculty members, advanced music students, and guests.

Peak Productions. Each year students work in conjunction with communication arts faculty to present five or six full-length theatre productions, including some which are written and directed by students.

Program Council. Each year the Program Council, a student-run organization, sponsors bands, speakers, performers, and other entertainers for concerts and presentations.

Residence Life Focus Programs. Throughout the year, speakers and other presenters focus on issues of gender, race and ethnicity, health, and other concerns relevant to life in and beyond the residence halls.

Religious Organizations. Western has two student religious organizations: Christian Challenge, Fellowship of Christian Athletes (FCA), and Ignite. In addition, churches of all denominations in the community welcome participation from students.

Student Government Association (SGA). The SGA is Western's student government comprised of representatives from the academic disciplines and from all other student organizations. SGA meets weekly to make decisions on most aspects of student participation in the life and operation of the University, including expenditures of student fees. All students are welcome to attend meetings.

Educational and Career-related Services

Academic Advising. Western State Colorado University places great value on the relationship built between a student and his/her academic advisor. Each freshman is assigned an advisor to assist with course selection, registration, and understanding academic policies and procedures. Any student who needs registration information or advising services may contact the Academic Resource Center (Taylor Hall 300) for assistance or referrals.

Academic Resource Center. The Academic Resource Center provides the following services:

- **Career Services.** Career Services provides information to students related to career choices and job-search skills. The Career Services Coordinator provides support through résumé and cover letter review, workshops, listing of internships and jobs, and the Career, Job, and Internship Fair.
- **Disability Services.** As the key office for providing resources and academic accommodations for students with disabilities, the Academic Resource Center offers students a variety of services to assist them as they pursue their academic and career goals. Some of these services may include extended time for tests, an alternative testing site, notetakers, accessible technology including screen readers and voice-to- text software, written material in alternate format, and other academic adjustments as appropriate, depending on students' needs. In order to receive services, students must submit appropriate documentation of disability to verify eligibility under Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act.
- **Exploratory Program.** The Exploratory Program is an advising program for students who have not yet declared a major. All Exploratory students will be advised through the Academic Resource Center and will receive tailored assistance regarding declaring a major.
- **International Student Services.** A variety of services are available to international students, such as visa assistance, orientation, advising on personal and academic matters, employment information, international club membership, and opportunities to participate in numerous cultural and social activities.
- **Learning Skills Assistance.** The Academic Resource Center staff provides academic counseling to help students develop effective study habits. This assistance, which is offered both individually and through workshops, provides students with skill-building techniques in areas such as textbook reading, memorization, test taking, note taking, organization, and time management. Students wishing to enhance their motivation, develop an understanding of their own individual learning styles, and improve their overall study skills are encouraged to use the Academic Resource Center's resources.
- **National Student Exchange.** The National Student Exchange (NSE) program gives eligible students the opportunity to study at one of over 200 colleges and universities across the United States and its territories for up to one academic year.
- **Study Abroad.** Students are encouraged to take advantage of the many opportunities to study abroad, including programs sponsored by Western and programs offered through other colleges, universities, and agencies.
- **Testing Services.** The Academic Resource Center administers Accuplacer, CLEP, and correspondence exams by appointment.
- **Turning Point.** Turning Point is a program for students on academic probation. The program is designed to assist students in identifying the cause of their academic difficulty and how to achieve academic success.

Information Technology Services. Information Technology Services provides technical resources and support to all constituents of the campus community. This includes computing resources, printing, Internet access, telephone services, and electronic support of classrooms. Students will find a learning environment at Western that is enhanced by a variety of computer resources designed to improve the quality of education and to promote active learning. All students are given a Western e-mail and system account which grants them access to the numerous online resources available from the University. These resources include applications, class registration, fee payment, financial aid inquiries, network storage, campus software, and course grades. Access to local and national resources is accomplished via a variety of modern computer laboratories or through a campus-wide wireless network and a high-speed Internet connection. The highlight of the services offered to students is the IT Helpdesk, which assists students with all their computing problems, including their personal computers, smartphones and game consoles.

Extended Studies. The mission of Extended Studies is to extend Western's educational opportunities for life-long learning. Extended Studies is an integral part of the University. Both credit and non-credit courses are offered, and some classes are offered for graduate credit.

Student Services. The Office of Student Affairs and the LEAD Office provide a strong support system designed to help students make the most of their Western experiences. Staff members are readily available to assist students with the wide array of integrated services and programs offered through both offices. The staff also provides helpful connections to other campus resources, such as academic advising and tutoring. Programs connected with the Office of Student Affairs (TAY 301) and the LEAD Office (University Center 118) include the following:

- **Student Employment.** The LEAD office provides information about jobs available to Western students. The LEAD office receives job listings, including work-study positions, from on-campus departments and off-campus employers.
- **Testing Services.** The Office of Student Affairs administers many nationally coordinated exams, including the ACT, GRE Subject and General Tests, LSAT, MPRE, PLACE, PRAX-IS Series, and SAT.
- "**The SWEET Life**" exists to help students have a safe and healthy experience while attending Western. To accomplish this goal, "The SWEET Life" organizes alternative activities and awareness campaigns, provides outreach and education, and plans programming to address the varied number of health and wellness issues that exist on university campuses. One unique aspect of the approach is that "The SWEET Life" encourages positive decision making and responsible use. "The SWEET Life" wants to ensure that students are provided the necessary skills, information, and support to make the better, healthier, and ultimately more productive decision with respect to drug and alcohol use, sexual behavior and relationships, stress and mental wellness, and overall health. "The SWEET Life" collaborates with campus groups to provide education to the entire campus community and partners with GCSAPP and the BACCHUS Initiatives of NASPA to provide a comprehensive approach to prevention and wellness education for Western students.

Recreational and Athletic Programs

Intercollegiate Athletics. Western State Colorado University is a member of the Rocky Mountain Athletic Conference, participating under the rules and guidelines of the National Collegiate Athletic Association (NCAA) Division II. The University fields men's teams in football, basketball, cross-country running, track and field (indoor and outdoor), and wrestling. Western's women's teams represent the University in basket- ball, volleyball, cross-country running, soccer, swimming, and track and field (indoor and outdoor).

Intramural Program. Western's intramural program is organized and run by the Student Government Association with funding from student fees. Organized activities include men's and women's leagues in basketball, flag football, and soccer. There are also coeducational competitions in softball, volleyball, dodgeball, floor hockey, disc golf, and ultimate frisbee.

Club Sports. Club sports provide the opportunity for student-athletes to participate in sporting competitions against other college, university, or club teams. Club sports teams compete against teams across Colorado, the Rocky Mountains, and the United States. Club sports teams include: skiercross/boardercross, and freeride skiing; baseball; cheerleading; men's lacrosse; men's and women's hockey; men's and women's mountain biking, cyclocross, and road cycling; men's and women's rugby; and men's soccer.

Wilderness Pursuits. Wilderness Pursuits (WP) is a co-curricular, professionally managed outdoor program that provides rafting, kayaking, mountaineering, hiking, skiing, ice climbing, sea kayaking, and cycling adventures throughout Colorado and the Intermountain West at deep discounts. WP also rents state-of-the-art camping, kayaking, backpacking, skiing, snowshoeing, and mountaineering equipment for nominal fees. WP provides resources and information for planning private expeditions such as maps, books, and videos. WP maintains ski and bike shop repair areas with free access to tools and supplies. Students and staff of all abilities are welcome to participate in WP programs. WP also implements contract programs, such as the Wilderness Based Orientation, the Peter Terbush Memorial Outdoor Leadership Summit, and other programs by special arrangements.

Special Services

Campus Health Center. The Health Center is organized and staffed to assist students in various ways, including:

- Counseling Services: Licensed counselors provide individual, group, marital, and family counseling. Full-time students, faculty, and staff are eligible for seven(7) free counseling sessions per year.
- Medical Services: A physician's assistant provides routine and referral medical care.
- Public Health: A staff of registered nurses provides family planning services, as well as AIDS testing and counseling.

Ombudsperson. This service offers assistance or referrals regarding University policies, procedures, and regulations and assists in resolving student-based problems and conflicts. The Ombudsperson is also readily accessible to students as a neutral and informal mediator whose role is to promote fair and equitable treatment at Western.

Tenderfoot Child and Family Development Center. A fully licensed day- care center for up to 140 children, six weeks to 12 years old.

Westerners In Transition (WIT). This program assists women and men of all ages who do not fit into the usual profile of a single student attending the University directly from high school. WIT guides the incoming student in navigating the processes of admissions, financial aid, registration, and other important steps involved in matriculating at Western. Western's staff is committed to assisting WIT students through all of the important steps in their university careers. WIT students will network with other individuals who share their experiences as adult learners and who can provide essential mentoring. The program provides personal advising, mentoring, workshops, a newsletter, networking, leadership opportunities, grants, and scholarships. The WIT office is located in University Center 122.

Student Handbook

Additional student services, policies, and standards of conduct are described in the *Student Handbook,* available online and published annually by the Office of Student Affairs (http://www.western.edu/current-students/student-affairs).

ACADEMIC POLICIES

Academic success, a goal that we want all students to achieve, can be measured in many ways. This section identifies and explains the standards that Western has established as measures of academic success and indicates the policies and procedures that apply to the students who fail to meet the standards. The Provost/Vice President for Academic Affairs, in consultation with the Faculty Academic Policies Committee and the Faculty Senate, is responsible for the development and implementation of these academic standards and policies.

Unit of Credit

Western uses the semester hour as the basic unit of credit. The semester credits assigned to a course are based on the specific learning objectives and the expected outcomes. The University's assigned semester hours are consistent with the Federal definition of a credit hour and the Colorado Commission on Higher Education's minimum class times for credit courses. The minimum expectation for one semester credit is one hour of classroom or direct faculty instruction and a minimum of two hours of out-of-class student work each week approximately fifteen weeks of seminars and lecture-based classes. An equivalent amount of work is required in laboratories, internships, practica, online, studio work, and other academic work leading toward the award of credit hours.

Course Numbering System

Following is an explanation of the numbers used in identifying courses offered at Western:

001-099 Preparatory skills courses not counted toward the required 120 credits for a bachelor's degree. Students enrolled in preparatory skills courses will be assessed tuition separately for those courses.

100-199 Courses primarily for freshmen.

200-299 Courses primarily for sophomores. Freshmen may take them after consultation with an advisor. Many 200-level courses have specific prerequisites which must be completed prior to enrolling.

300-399 Courses primarily for juniors and generally not open to freshmen. Sophomores may enroll after consultation with their academic advisor.

400-499 Courses primarily for seniors and generally not for freshmen and sophomores.

Student Classification by Class Level

Students are classified according to the number of semester credits they have earned.

Classification	Semester Credits Earned
Freshmen	0-29
Sophomores	30-59
Juniors	60-89
Seniors	90+

Academic Load

A standard course load over a 16-week semester is 15 credits. This is the most common load leading to graduation in four years. Students are discouraged from carrying an overload. An overload is defined as more than 18 credits in a 16-week semester. Under no circumstances is a student to enroll for more than 21 credits in a 16-week semester.

Summer semester is 13-weeks. A student may enroll in no more than 15 credits without special approval. The maximum credits for each session are as follows:

Parts of Term	Full Load	Overload by Petition*
Maymester	3 credits	4 credits
1st 5 week session	6 credits	7 credits
2nd 5 week session	6 credits	7 credits
10 week session (occurs during both 5 week sessions)	12 credits	13-14 credits

Under no circumstances is a student to enroll for more than 18 credits in the 13-week summer semester.

*Petitions for overload may be obtained on the Office of the Registrar website in the forms link. Petitions must be signed by the student's advisor, chair of the student's major department. If the student's cumulative grade point average is below 3.000, the petition also requires approval of the Vice President for Academic Affairs. Students taking an overload are assessed a surcharge for each overload credit.

The completed petition must be submitted to the Office of the Registrar.

Registration

Advising

All Western State Colorado University students are assigned an academic advisor who can assist them in developing their

educational plans and accomplishing career and life goals. Academic advisors are important resources as students develop course schedules. Consultation with an academic advisor is required before registration.

Course Descriptions

Course descriptions provide a summary of the course content. If there is a prerequisite that must be met before a student can register for the course, this information is stated in the course description. Prerequisites may include specific courses, class standing, declared major, and other requirements. If there is a corequisite course in which a student must be registered, this information is also stated in the course description. The *Course Schedule*, available prior to registration, includes information about courses offered in the given semester, such as the names of instructors, class meeting times and locations, and additional requirements.

Registration Procedures

New students are required to participate in new student orientation. Information about registration and orientation is mailed to all new students admitted to the University. Currently enrolled students may register during the present semester for the next semester or summer session. Registration timelines and procedures are detailed on the *Office of the Registrar* website.

Late Registration

Students should register for classes prior to the beginning of the semester. While they may register during the first week of the semester, students must understand that the limited availability of classes may prevent them from obtaining complete schedules. Late registrants may be assessed additional fees.

Add/Drop

After classes have begun in a 16-week semester, students may add an open class without petition until 5 p.m. on the fourth day of the semester. After the fourth day and until the end of the official drop period, students may add a course only with approval by the instructor. The add deadline for any course that meets for less than 16 weeks is two days. The student is responsible for understanding and communicating with the instructor, understanding course policies, and understanding any consequence of adding a course after the first class meeting.

Students may drop a course during the first 15% of the class meetings. This rule applies for both classes that meet for a full semester and classes that meet in sessions shorter than a full semester. (Note the difference between this rule and "withdrawal" explained on the next page.)

Western State Colorado University faculty reserve the right to drop students from class rolls if they miss the first class meeting. Not all instructors require attendance at the first class meeting, but many do. Students are strongly encouraged to attend all their first class meetings. If circumstances such as weather or flight arrangements prevent students from attending the first class session, it is the student's responsibility to contact the instructor of each course to request that their seat in the class be held.

Class Attendance and Participation

Faculty and students have shared responsibility in the education process. Class attendance and participation is the student's responsibility. The interactions a student has with the instructor and fellow students represent a significant portion of the learning process in coursework. Therefore, class attendance and participation is essential for a successful education. Instructors may set attendance and participation policies for each of their courses, which are specified in the course syllabus. If a student violates an attendance or participation policy, instructors may withdraw a student from class, lower the earned grade, and deploy other actions as specified by the course policy.

An important responsibility for students is to be prepared for class. Such preparation for the average student expecting an average grade ("C") typically requires 2-3 hours of studying or other types of preparation for every hour of coursework.

Variable Credit Courses

Variable Credit courses are courses which may be offered for a range of credits. The range of credits is set by the discipline, and is published in the catalog and class schedule. The types of courses generally encompassed by the term "variable credit" include Field Experience, Internship (described below), Independent Study, Directed Study, Practicum, Senior Thesis, and Research Problems. The learning objectives and academic requirements for these courses are established between individual faculty and individual students, and have specific academic outcomes defined before the course work begins.

Students must register for variable credit courses prior to beginning the studies associated with the course. Internship hours or study completed before the course registration is complete will not be counted towards the hours required for the course credit.

The student must be enrolled for the credits during the term in which the studies begin. This coursework is part of a student's academic load for the semester. A request for changes to variable credit registration after the work begins may be considered through a petition process in extenuating circumstances. The petition must be signed by the instructor for the variable credit course, the department chair, and the Registrar.

To register for a variable credit course, the student must submit a completed and signed Variable Credit Course form to the Office of the Registrar. Some disciplines may have additional requirements for registration in Variable Credit Courses. Substituting variable credit courses for required courses in the major or minor is at the discretion of the discipline; no variable credit course may be used to meet General Education requirements.

Internships

Internships offer students the opportunity to combine academic credit with work in their career field. The learning objectives and academic requirement for these experiences are established in collaboration with the student's faculty advisor, based on the employer's job description. The faculty advisor, employer, and student sign off on the learning objectives, agreeing in advance what the internship will entail. Students earn credit based on the number of hours to be worked, which is determined in advance. Each academic department establishes a requirement for the number of hours to be worked for each credit earned. Employers complete an evaluation of the intern at the end of the experience which faculty use in assessing the student's performance and grade.

Minimum eligibility requirements for internships are a 2.000 GPA and completion of at least 12 credits in the academic area of the internship. The internship policy of individual disciplines may be more stringent. Assignment of internship credit toward

requirements of a degree program is to be decided by the academic area of the internship, and in no case can it count towards General Education requirements.

In order for internships to maintain academic integrity, Western State Colorado University and a faculty member must be involved from the initial development of the learning objectives through the completion of the internship.

Students must register for internship credit prior to beginning the work associated with the internship. The student must be enrolled for the credits during the term in which the work is initiated. This course work is part of a student's academic load for the semester.

Taking Courses for No-Credit (NC)

Regularly Enrolled Students. Students may enroll in a course for no-credit (NC), but only at the time of registration. Students may not change from no-credit to credit or from credit to no-credit after the class has begun. Students enrolled for no-credit pay appropriate tuition and fees and are expected to attend classes regularly. No-credit courses are treated as a part of a student's course load for purposes of determining semester course-load limits.

Auditing Courses. Western invites citizens 60 years of age or older to participate in classes at the University on a space-available, no-credit, no-cost basis. (This does not apply to Extended Studies courses.) Students qualified to audit courses in this manner should make arrangements with the Academic Affairs office.

Withdrawal from Individual Courses

After the official add/drop period, a student may only withdraw from a course with approval by the course instructor and the student's academic advisor. Students who obtain these authorizations will receive a grade of "W" (which has no effect on the student's grade-point average; refer to sections on Grades and Grade-Point Average that follow). If two-thirds of the scheduled class time in any given course has been completed, the student is not allowed to withdraw, and a grade for the course (which does affect the student's grade-point average) is recorded. Specific withdrawal deadlines are published on the Office of the Registrar website at http://www.western.edu/registrar.

Course instructors may also withdraw a student from a class for reasons such as inadequate academic progress or attendance, academic dishonesty, or disruptive behavior.

Withdrawal from the University

Students who wish to withdraw from the University, and who are not registered in a short term course that has concluded, may do so in the first two-thirds of any term. Contact the Vice President for Student Affairs to initiate an official withdrawal from the University. Students should also consult with course instructors and their academic advisor.

If two-thirds of the scheduled term has been completed, the student will be allowed to withdraw from the university only under documented, mitigating circumstances such as prolonged illness, a death in the immediate family, etc., and pending approval by the Office of Student Affairs.

After the official Add/Drop period, but before the withdrawal deadline, a student wishing to withdraw entirely from the University will be given a grade of "W" for all courses except variable-credit courses. Once two-thirds of the scheduled class time in any given course has been completed, a student wishing to withdraw from the University will be given a "W" or a "WF" grade for each course

Withdrawal from Variable Credit Courses. After 15% of the course has been completed, a student wishing to withdraw from the University during a term when he or she is enrolled in a variable credit course (i.e., internships, practicums, field experiences, independent studies, etc.) must receive the approval of the supervising instructor. If a student obtains this authorization, a grade of "W" or a "WF" may be assigned. The coordinator of the specific program can explain the guidelines and consequences resulting from dropping or withdrawing from selected courses.

Withdrawal in Absentia. If illness, injury, or other circumstances prohibit a student from being on campus to request withdrawal from the University in person, the student may notify the Student Affairs office (970) 943-2011 and request that the Vice President for Student Affairs act as the student's agent in notifying course instructors and the student's advisor.

Leaving the University

Students leaving the university for a semester or longer and plan to return can complete an application for readmission form. Students returning to Western are given the same priority registration as continuing students when applications for readmissions are received by mid-October for spring course registration and mid-March for fall registration. Students should discuss departure plans with their advisor, as well. Contact the Office of the Registrar for more information about this process.

Prior to departure from Western all students should check out by contacting applicable departments. Students who have on-campus housing must contact Residence Life. Students with financial aid should contact the Student Financial Services/Financial Aid Office for exit counseling and should not be registered for courses in a future term. Additionally, contact the Office of Student Affairs to complete an exit interview.

Transfer Courses

College-level academic courses with grades of C- or better, completed at an institution accredited by a regional accrediting agency, are generally accepted. Western accepts up to 90 credits, combined total, from accredited institutions, military credit, AP, IB, and CLEP exam.

- Western only applies grades earned through Western toward the calculation of GPA.
- Western will only grant upper division credit if the transfer course is taken at an upper division level, regardless of Western equivalency.
- No credit will be granted for remedial or vocational-technical courses; except for some military training or as part of an

articulation agreement.
- Courses recommended by the American Council on Education may be considered for credit.
- Total credit permitted under CLEP, AP and other programs leading to credit by examination is limited to 40 semester credits.
- Continuing students are advised to receive approval in advance for transfer credit.
- Credit earned from non-Western Study Abroad programs are treated as transfer credit.
- To graduate from Western, students must complete a minimum of 30 credits at Western. At least 15 credits in the major and at least 8 credits in the minor. Of the 40 upper division credits, numbered 300 or 400, required for graduation from Western, at least fifteen credits must be courses in the major. Exceptions to evaluations of transfer credit by the Office of the Registrar may be requested by the appropriate academic department.

Additional information regarding transfer policies may be found in the Admission Policies section of the catalog.

Military and Emergency Personnel Deployment

In times of emergency, certain students (including reserve military units, individuals with specialized skills, or firefighters) are called to provide services to the state or country.

When the call for service or emergency deployment is issued, it is often necessary for students to interrupt their coursework in mid-semester without advance notice. The university recognizes that normal refund and withdrawal policies may not be appropriate and therefore will make the following provisions for individuals who leave the institution mid-semester.

Instructors will accommodate student absences of up to twenty percent of the class time for mandatory military training or an emergency or short-term deployment. Students must be given the opportunity to make up missed assignments and tests later, and they cannot be penalized for their absence during their deployment. Students must notify Student Affairs, which will contact all their instructors on their behalf; in order to receive permission to return to the classroom after their short-term training or deployment, activation letters or orders must be submitted to Student Affairs.

- Any student ordered to active duty must:
  - Contact Student Affairs immediately; they must complete and submit a withdrawal form if they wish to withdraw.
  - Provide a copy of activation letter or orders.
  - Notify their instructors of their deployment and make arrangements for withdrawal or delayed completion.
- The Office of the Registrar will withdraw the student with the following conditions:
  - **On or Before the Drop Deadline** - Students will be dropped from all of their courses if ordered to active duty or to respond to a state or national emergency. There will be no notation of that semester enrollment in their transcripts.
  - **After the Drop Deadline** - Students will have a choice to:
    1. Be dropped with W grades. A notation of "Military or Emergency Services Withdrawal" will be made under the semester of deployment in the student's transcript.
    2. In consultation with the instructors, receive a grade of incomplete if:
       a. At least 50% of the work has been completed.
       b. The student has obtained a C or better in the class thus far.
       c. Student and instructor share a plan for the completion of the course work with the department chair. Class work must be completed within one calendar year. If the student remains deployed or has recently completed deployment he/she may request an extension through the Registrar's Office.

Rebates and Financial Aid:

Students who choose to be withdrawn will receive a full refund of all tuition and fees, including room and board. Veterans' Aid payments may have to be repaid to the funding agency under certain circumstances, and the Veteran's Certifying Official will assist with the paperwork.

If the student is receiving financial aid, the Veteran's Certifying Official will work with the Financial Aid Office to determine the best refund for the student (based on the Department of Education's rules governing financial aid).

Western realizes that active duty and emergency personnel students may encounter extreme and unforeseeable circumstances during their educational career. We are committed to helping these students succeed no matter what challenges come their way. Therefore, the offices of Academic Affairs, Student Affairs, and the Office of the Registrar are willing to review and potentially make additional accommodations for cases in which these students encounter exceptional situations or circumstances.

Grades and Grade-Point Average

For the purpose of calculating a student's grade-point average (which determines academic standing), numerical values are assigned to letter grades on the following scale:

A	= 4.000 grade points	C	= 2.000 grade points
A-	= 3.760 grade points	C-	= 1.670 grade points
B+	= 3.330 grade points	D+	= 1.330 grade points
B	= 3.000 grade points	D	= 1.000 grade points
B-	= 2.670 grade points	D-	= 0.670 grade points
C+	= 2.330 grade points	F	= 0.000 grade points

Computation of Grade-Point Average (GPA)

Only grades earned through Western are used to calculate GPA. To obtain grade points earned in a course, multiply the number of credits per course by the numerical points for the grade earned in the course. Following is an example of a GPA calculation for 12

credits earned by a student taking four courses with each course worth three credits.

Course #1 – Grade Earned = B	(3 cr) X (3.000 pts)	=9.000 grade points
Course #2 – Grade Earned = C+	(3 cr) X (2.330 pts)	=6.999 grade points
Course #3 – Grade Earned = C	(3 cr) X (2.000 pts)	=6.000 grade points
Total GPA credits = 12	Total grade points	=30.000

A student's semester GPA is calculated by dividing total grade points by total GPA credits (30.000/12 = 2.500 GPA). A student's cumulative GPA is calculated by dividing all grade points earned by all GPA credits.

All grade-point averages at Western are calculated to three decimal places and all requirements specifying grade-point averages (e.g., scholarships) are stated in terms of three decimal places.

Repetition of Courses

A student who has received a low grade in a course can improve his/her cumulative grade-point average by repeating that course and earning a higher grade. If the student repeats a course under the same title and/or number, only the credits and grade points of the most recent enrollment in that course (even if the repeated course grade is lower) are used in determining whether a requirement has been met and in calculating that student's cumulative GPA. In addition, the following conditions apply to repeating a course:

Variable-credit courses are handled as exceptions to the policy on course repetition. A student who wishes to enroll in a variable-credit course to repeat credit previously taken under that course number, but not for additional available credit under that same course number, must contact the Office of the Registrar.

Students wishing to repeat and replace the grade from a course taken on National Student Exchange or a Study Abroad program must send a letter of petition to the Registrar.

Course work repeated after the undergraduate degree has been recorded on the student academic record will not be included in the undergraduate GPA.

Grades Assigned Other than A, B, C, D, F

At the discretion of the faculty member teaching the course, a student who is unable to complete a course for reasons beyond the student's control (e.g., illness) may be assigned an "Incomplete" (IN). The student must have completed more than one-half of the course work at an acceptable level at the time of the request for an "Incomplete." The student and the faculty member must agree upon a plan for the completion of the work within a time period not to exceed one calendar year. When faculty give an "Incomplete", they must designate the student's existing grade in the course, the work to be completed for the "Incomplete" to be removed, and also indicate the grade that will be automatically given after one year if the work is not satisfactorily completed.

A grade of "Technical Failure" (TF) indicates that the student discontinued participation in the course without official approval. A "TF" is assigned 0.000 grade points.

Selected courses have been approved to be graded as "Satisfactory/Unsatisfactory" only and are so noted in their course descriptions. Only grades of "S" or "U" may be recorded for courses so designated. The grade of "S" is equivalent to letter grades of C- or above. The grade of "U" is equivalent to the letter grades of D+ or below, and no credits are earned. In no case may the grade of "S" or "U" be converted to a traditional letter grade. The S/U grade cannot be used in classes which allow the letter grades A-F.

Some courses or projects are intended to last longer than one semester. Such courses may be designated by the department or department chair at the time of registration and will be given an "In Progress" designation at the end of the semester. The "In Progress" (IP) designation can be used for a maximum of one year, the end of which a grade must be assigned. Grades of "IN," "IP," "NC," "W," "S," and "U" are not counted in the computation of a student's grade-point average (GPA). Since "S" is not counted in calculation of grade point, it does not assist the student toward inclusion on the Dean's List or Honors designation at commencement.

"Incomplete" (IN) or "In Progress" (IP) grades completed after the undergraduate degree has been posted will not be included in the undergraduate GPA.

Attendance-Related Grades

A course grade of "Technical Failure" (TF) may be assigned by course instructors for students who failed to attend classes but who did not officially withdraw from the course. "TF" is assigned 0.000 grade points for purposes of computing grade-point averages. Whether students have completed enough of the course to be assigned a grade other than "W," "TF," or "IN" (see sections explaining letter grades) is determined by the respective course instructors.

Grade Corrections

Faculty members must submit requests for grade corrections to the Registrar within one year following the recording of the incorrect grade.

Academic Standing

The faculty recognizes that the adjustment to university life may have a negative effect on the early academic performance of some students. To allow for this adjustment period, the 2.000 cumulative grade-point average requirement (ultimately necessary for graduation with a bachelor's degree) is not immediately imposed on beginning students, though all students should strive to achieve at least the minimum level of a 2.000 GPA every semester.

A sliding scale of categories of "academic deficiency" is applied to students who fall below this minimum. Students who are notified that they fall into any of these categories should re-examine their academic goals and their study habits and should avail themselves of the services provided by Western to help them to succeed academically. Students who perform at less than a 2.000 level, even if they are not technically "academically deficient," should take steps to improve their academic performance.

Academic Dean's List

Students who have attained a grade-point average of 3.70 during a semester, while carrying a full course load, will be placed on the Academic Dean's List. A full course load is 12 or more credits of letter-graded courses in a 16-week semester or six or more credits of letter-graded courses in a summer session.

Good Standing

Students whose cumulative grade-point average exceeds that which would place them on probation are considered to be in good standing. This minimum grade-point average is defined in the section below titled "Academic Probation."

Academic Alert

Students who have cumulative grade-point averages of 2.000 or higher are sent notices at the end of any semester in which they receive a semester grade-point average lower than 1.500, alerting them that corrective action should be taken to improve their performance.

Academic Probation

Students are placed on academic probation when their cumulative grade-point average falls below the minimum required (see below). It is an early warning that students should take steps to improve academic performance. Students are placed on academic probation if they:

- are in the first semester of enrollment at Western (regardless of the number of credit for which they are enrolled) and receive a semester GPA below 1.500;
- have attempted fewer than 10 credits and have less than a 1.750 cumulative GPA at the end of a non-probationary semester;
- have attempted between 10 and 44 credits and have less than a 1.880 cumulative GPA at the end of a non-probationary semester; or
- have attempted 45 or more credits and have less than a 2.000 cumulative GPA at the end of a non-probationary semester.

Students are expected to raise their cumulative grade-point average to the required level during the probationary semester. Academic probation ends when the student achieves the required cumulative grade-point average. Students on probation achieving at least a 2.000 semester grade-point average (even though the cumulative grade-point average has not reached the specified level), may be permitted to continue for an additional probationary semester.

Academic Suspension

Academic suspension notices are issued at the end of fall, spring, and summer semesters to all students who, during a probationary semester, fail to achieve at least a 2.000 semester grade-point average and do not have the cumulative grade-point average required to be in good standing:

- Students who have attempted fewer than 10 credits and have less than a 1.750 cumulative GPA at the end of a probationary semester are placed on academic suspension.
- Students who have attempted between 10 and 44 credits and have less than a 1.880 cumulative grade-point average at the end of a probationary semester are placed on academic suspension.
- Students who have attempted 45 or more credits and have less than a 2.000 cumulative grade-point average at the end of a probationary semester are placed on academic suspension.

In addition, *any* student who earns less than a 1.000 GPA in any semester may be placed on academic suspension.

The period of suspension is for one calendar year. A student to whom such a suspension notice is issued at the end of a fall semester is eligible to return a year later, at the beginning of spring semester. A student suspended at the end of the spring semester is eligible to return a year later, at the beginning of the summer session. A student suspended at the end of the summer semester is eligible to return a year later, at the beginning of the fall session. In order to return to Western after serving the specified academic suspension period, the suspended student must apply for readmission through the Registrar.

Credits earned at another institution during a period of academic suspension are evaluated by the criteria explained in the Admissions Policies and Procedures section of this *Catalog*.

Students who believe that exceptional circumstances contributed to their suspension may submit a written petition, through the Registrar, to the Academic Appeals Committee (a sub-committee of the Faculty Academic Policies Committee). The petition form is available from the Registrar and must be submitted no later than five working days before the start of any semester during which that student wishes to re- enroll at Western. Each petition is reviewed by the Academic Appeals Committee to determine whether the appeal is granted.

The Academic Appeals Committee is authorized to specify conditions, beyond those described in these general policies, which reinstated students must meet in order to continue at Western.

Academic Dismissal

If a student returns from a period of academic suspension, the student's academic standing will be "probation after suspension." If she/he does not earn a 2.000 or higher semester grade-point average during any semester prior to earning or exceeding the cumulative grade-point average required at that point in his/her academic career, no further probationary semester is allowed, and the student is issued an immediate notice of academic dismissal.

Readmission from an academic dismissal is possible only by action of the Academic Appeals Committee, according to the established procedures of that committee. The committee will not accept for review any dismissal appeal petition before two calendar years have transpired since the dismissal. If a student is granted readmission following academic dismissal, credits earned at another institution are evaluated by the criteria explained in the Admissions Policies and Procedures section of this *Catalog*.

Errors in Determining Academic Suspension/Dismissal

Students whose suspension or dismissal resulted from an error in grading or recording will be readmitted (the suspension or

dismissal will be removed from their academic records) upon receipt by the Registrar of written notification from the appropriate faculty member. Such errors in grading or recording should be resolved before the Add Deadline of the semester the student is to be readmitted.

Academic Amnesty

Students who have not attended Western State Colorado University for six years or more may, upon returning to Western, petition for academic amnesty. Academic amnesty allows students to count prior credits earned at Western of "C-" and above in meeting total graduation requirements. It also allows students to have a fresh start in their overall grade-point average, as the previous credits attempted at Western will not be used in calculating the overall grade-point average. Petitions by students may be submitted, through the Registrar, to the Faculty Academic Policies Committee. Students must submit petitions for academic amnesty before the end of their first term of re-entry. Academic Amnesty will be granted to a student only once.

Graduation Requirements

Four-year Graduation Plan

Western State Colorado University has adopted a four-year graduation plan. If a student signs the four-year graduation plan agreement, fulfills all of the conditions, and is still unable to graduate in four years, the University will absorb the cost of the additional course work required for the degree. The four-year graduation plan is available on the Academic Affairs web page.

Operative University Catalog

All first-time entering students are allowed six years from their entering date as degree- seeking students to complete requirements in force at the time of their entrance to Western. During the six-year period, students may elect to satisfy requirements specified in a *Catalog* more recent than the one under which they entered. Students must, however, indicate to the Registrar which *Catalog* they want used for the evaluation of their credits when they request a "Graduation Audit." Students who do not complete requirements within the six-year time limit must meet all the requirements of the *Catalog* in effect the year in which they apply for graduation. Exceptions to this policy will be considered on a case-by-case basis.

Each operative Catalog year begins at the start of the summer session and ends with the conclusion of the following spring semester.

Readmitted or currently enrolled students who choose, or are required to use, a Catalog more recent than the one in effect when they entered must satisfy all requirements in the new Catalog with the following exception: They are allowed to use courses already posted to the permanent record in satisfying the General Education requirements.

General University Requirements

A minimum of 120 semester credits is required for graduation. Of the 120 total credits required, students must earn 40 credits in upper-division courses (those courses numbered 300 and above). Fifteen of these 40 upper-division credits must be earned in courses that are part of the standard or comprehensive major programs.

At the time of graduation, students are required to have a minimum overall cumulative grade-point average of 2.000 or better, as well as a 2.000 or better grade-point average in their major and minor.

All requirements specified in this section are minimums; some programs require levels beyond these minimums.

Resident Credit Requirements

Every candidate for a degree must earn a minimum of 30 credits from Western State Colorado University. This 30-credit minimum must include: a) at least 15 credits in the major, and b) at least eight credits in the minor. No more than 9 semester hours of a student's final credits will be accepted in transfer. These final credits must be selected in consultation with his or her faculty advisor. Credit earned for student teaching, independent study, internships, and other courses that may require off-campus experiences are treated as "resident" credit if the student has registered for that credit through Western directly. If a student registers for courses at another institution, regardless of the auspices under which such registration occurs, then such courses cannot be counted as "resident" credit at this University.

Major and Minor Requirements

Each student is obligated to meet either: (a) the requirements of a standard major program and a minor in another discipline, requiring a minimum of 30 credits earned in the major and a minimum of 18 credits earned in the minor; or (b) the requirements of a comprehensive major program, requiring a minimum of 48 credits with no minor required. The requirements of some majors and minors exceed these minimums. Students must complete a capstone requirement (minimum of 2 credits) as part of the standard or comprehensive major. Capstone courses are incorporated in the degree requirements listed in the Academic Programs section of this *Catalog*.

A student may earn a second or additional major by completing the requirements of each major.

A student may earn a second or additional emphasis within a major by completing the requirements of each emphasis, which must include a minimum of 18 unduplicated credits. To graduate with both a B.F.A. and either a B.A. or B.S., a student must complete the requirements of both degrees and complete a minimum of 150 credits. Students earning both a B.A. and a B.S. must complete the requirements of both degrees. All degrees, majors, emphases, and minors desired must be declared on the application for the Bachelor Degree.

General Education Requirements

All students must complete the Western State Colorado University General Education Program including the Essential Skills and the Liberal Arts requirements. Specific requirements are described in the General Education section of this *Catalog*.

Graduation with Honors

In order to graduate with honors, a student must have an overall cumulative grade- point average at Western State Colorado University as follows:

Cum Laude	3.500 - 3.749
Magna Cum Laude	3.750 - 3.899
Summa Cum Laude	3.900 – 4.000

In order to be recognized for honors at a commencement ceremony, a student must have achieved the required cumulative grade-point average in all work completed at Western the semester prior to commencement. A student must also have a minimum of 40 GPA credits in residence at Western. Up to eighteen of these credits may be in progress during the final semester. Any honors status which is posted to a student's permanent record upon graduation will reflect the grade-point average that student earned on all work completed at Western.

Graduation Requirement Audit

Students are responsible for meeting all academic requirements. The University assists students in monitoring their academic progress by providing an academic advisor, copies of the student's permanent records, and DegreeWorks, an online advising and graduation audit tool. Students must submit the Intent to Graduate form during the semester in which they expect to earn their 89th credit hour. The Registrar reviews the audit and communicates with the student and the student's academic advisor on requirements not yet completed.

Application for and Awarding of the Degree

Students are required to file an "Application for the Bachelor Degree" with the Office of the Registrar during the first two weeks of the semester in which they expect to complete all degree requirements. Degrees are awarded at the end of the semester in which all degree requirements are completed provided all requirements are completed and grades recorded within 25 working days after the last day of that semester. If requirements are not completed and recorded within that period, the graduation date for the diploma and transcript is the semester during which the work is completed and grades recorded. In this case, students must notify the Office of the Registrar when all requirements are completed and file a new "Application for the Bachelor Degree".

Commencement

All students who complete requirements for graduation and are entitled to receive degrees are encouraged to participate in commencement exercises. In order to participate in commencement a student must have nine or fewer credits left to complete graduation requirements and be registered for those credits the following summer and/or fall term. Students must be in good standing and must submit a request to be included in the commencement ceremony to the Registrar during the first two weeks of the semester in which the commencement is held.

Academic Integrity

As members of the academic community, students are expected to recognize and uphold standards of intellectual and academic integrity. The University assumes, as a basic and minimum standard of conduct in academic matters, that students will be honest and that they will submit for credit only the products of their own efforts. Both the ideals of scholarship and the need for practices that are fair require that all dishonest work be rejected as a basis for academic credit. They also require that students refrain from any and all forms of dishonorable conduct in the course of their academic work. Dishonest work may include, but is not limited to, the following infractions:

Plagiarism. Presenting another person's work as one's own, including para- phrasing or summarizing of the works of another person without acknowledgment and the submitting of another student's work as one's own is considered plagiarism.

Plagiarism frequently involves a failure to acknowledge in the text, notes, or foot-notes the quotation of paragraphs, sentences, or even a few phrases written or spoken by someone else.

Cheating on Examinations. Giving or receiving unauthorized help before, during, or after an examination is considered cheating. Examples of unauthorized help include the use of notes, texts, or "crib sheets" during an examination (unless specifically approved by the instructor).

Unauthorized Collaboration. Submission for academic credit of a work product, or a part thereof, represented as being one's own, which has been developed in substantial collaboration with assistance from another person or source, is a violation of academic honesty. It is also a violation of academic honesty to knowingly provide such assistance. Collaborative work specifically authorized by an instructor is allowed.

Falsification. It is a violation of academic honesty to misrepresent material or fabricate information in an academic exercise or assignment (e.g., false or misleading citation of sources or the falsification of the results of experiments or of computer data).

Multiple Submissions. It is a violation of academic honesty to submit substantial portions of the same work for credit more than once without the explicit consent of the instructor(s) to whom the material is submitted for additional credit.

Consequences of Violations

Violations of academic integrity may result in the following: a grade of "F" or a "zero" for the assignment, an "F" for the course, withdrawal from the course, or suspension or expulsion from the University. Serious violations of academic integrity are reported to the Office of Academic Affairs.

Academic Due Process for Students

It is the objective of these procedures to provide for the prompt and fair resolution of the types of problems described herein which students may experience at Western:

Definitions

Complaint. An informal claim by an affected student that a faculty member or an academic administrator has violated, misinterpreted, or improperly exercised his/her professional duties.

Complainant. An affected student who makes a complaint.

Grievance. A written allegation by an affected student that a faculty member or an academic administrator has violated, misinterpreted, or improperly exercised his/her professional duties. The grievance should include the possibility of a remedy.

Grievant. An affected student who files a grievance.

Respondent(s). The faculty member(s) and/or academic administrator(s) identified by the affected student as causing or contributing to the complaint or grievance.

Grievance Committee. A committee composed of one faculty member selected by the grievant, one faculty member selected by the respondent, and three faculty members selected by the Vice President for Academic Affairs (or assignees).

Time Limits. When a number of days are specified herein, they shall be understood to exclude Saturdays, Sundays, holidays, University vacation days, and other days when the University is not in session and holding classes.

Academic Administrator. Professional personnel of the University, other than teaching faculty, who are in positions to make academic decisions affecting students, including but not limited to, department chairs, Associate Vice President for Academic Affairs, Vice President for Academic Affairs, and the President.

Informal Complaint Procedure

The complainant shall discuss the problem with the respondent(s). If the problem is not mutually resolved at this time, the complainant shall confer with the immediate supervisor(s) of the respondent(s). (This usually will be the Chair(s) of the Department(s) to which the respondent(s) is assigned.)

If satisfactory resolution is still not achieved, the complainant must confer with the Vice President for Academic Affairs or selected representative.

Formal Grievance Procedure

If the complaint is not suitably resolved, the student has the right to file a grievance with the Vice President for Academic Affairs within six months of the time that the grievant could or should have known of the action which is the basis of the problem.

This written allegation shall indicate what has already been done to resolve the complaint. Preservation of relevant documents and of precise records of actions taken is advantageous.

The grievance committee shall be formed under the supervision of the Vice President for Academic Affairs, and a hearing shall be scheduled within 15 days after that officer receives the written grievance from the grievant.

The grievance committee shall hear testimony from the grievant, the respondent, and whomever else it deems appropriate.

Within 15 days after completion of the hearing(s), the grievance committee shall submit its findings to the Vice President for Academic Affairs for implementation as deemed appropriate by that officer. A copy of the finding of the committee and of the implementing decision of the Vice President for Academic Affairs shall be given to the grievant and the respondent.

The grievant may withdraw the grievance at any point in the proceedings by doing so in writing to the Vice President for Academic Affairs.

The Vice President for Academic Affairs may grant an extension of the time limit for good cause.

If the grievance has not been resolved satisfactorily after the above procedures have been completed, the grievant is advised that he/she may appeal to the President of Western State Colorado University, and ultimately, to the Board of Trustees.

GENERAL EDUCATION

The General Education Program provides a foundation for analytical discovery, independent thinking, and informed and engaged citizenship. General Education courses require students to engage the knowledge, perspectives, and methods of specific disciplines while developing essential skills. In so doing, students increase their understanding of themselves, the natural world, the bases of our society and institutions, the larger world, and their relationships. These courses offer a foundation for further studies and continued intellectual growth.

The thirty-five credit General Education Program contains two components:
Essential Skills (9 credits) and the Liberal Arts (26 credits).

I. Essential Skills (9 Credits)

The purpose of the Essential Skills requirements is to provide students with the tools needed to reason, write, speak, read, quantify, and use information and technology in new ways of thinking and doing. The acquisition, application, and integration of the Essential Skills are practiced through the General Education curriculum and within courses in the disciplines during the students' university careers.

Students must earn a minimum grade of "C-" in the following courses to fulfill the Essential Skills requirement:

First Writing Course (3 credits)

ENG 102 Academic Writing (GT- CO1)*	3 cr

Enrollment in English 102 Academic Writing and English 102 Honors Academic Writing requires reading and writing abilities consistent with the university entry-level expectations defined by the Colorado Commission on Higher Education. Consult with an advisor for English course prerequisites.

Second Writing Course (3 credits).

COM 202 Academic Writing and Inquiry	3 cr

Mathematics Course (3 credits).

The mathematics requirement varies by program of study (major, emphasis, minor). Many programs have specific requirements beyond the University minimum. In all cases, these specific requirements satisfy the University Mathematics Course requirement. To select the appropriate courses, see the Academic Programs section of this *Catalog*.

If there is no specific mathematics requirement within a program of study, the minimum Mathematics Course requirement of the University may be satisfied by passing, with a minimum grade of "C-,"any university-level mathematics course numbered 100 or above. Mathematics essential skills courses include the following:

MATH 105 Mathematics for the Liberal Arts (GT-MA1)*	3 cr
MATH 131 Mathematics for the Social Sciences (GT-MA1)*	3 cr
MATH 140 College Algebra (GT-MA1)*	3 cr
MATH 141 Precalculus	4 cr
MATH 151 Calculus I (GT-MA1)*	4 cr
MATH 209 Mathematics for Elementary School Teachers I	3 cr
MATH 213 Probability and Statistics (GT-MA1)*	3 cr

*Colorado State Guaranteed General Education Transfer Course.

Enrollment in university-level mathematics courses (numbered 100 or above) requires mathematics abilities consistent with the university entry-level expectations defined by the Colorado Commission on Higher Education. Students should consult with their advisors about which mathematics course is appropriate.

II. Liberal Arts (26 Credits)

Each of the courses included in the Liberal Arts program extends the development of Essential Skills while examining the social sciences, natural sciences, and the arts and humanities. Courses in the Liberal Arts program may also satisfy major and/or minor requirements.

AREA I: Social Sciences (9 credits) Courses in Area I focus on the following goals:

- Students use social science methods and reasoning.
- Students demonstrate knowledge of how historical, political, economic, cultural, or social contexts shape the human environment.
- Students demonstrate knowledge of how individuals relate to the social world, past and present.

Nine credits are required from the courses listed below. Students must choose from three disciplines.

ANTH 107 Introduction to General Anthropology (GT-SS3)*	3 cr
BUAD 101 Business of Life	3 cr
ECON 201 Macroeconomics (GT-SS1)*	3 cr
ENVS 100 Introduction to Environment and Sustainability (GT-SS2)*	3 cr
GEOG 110 World Regional Geography (GT-SS2)*	3 cr
GEOG 120 Introduction to Human Geography (GT-SS2)*	3 cr
GEOG 250 Geography of North America (GT-SS2)*	3 cr
HIST 101 World History to 1500 (GT-HI1)*	3 cr
HIST 102 World History Since 1500 (GT-HI1)*	3 cr
HIST 126 U.S. History to 1865 (GT-HI1)*	3 cr

HIST 127 U.S. History Since 1865 (GT-HI1)*	3 cr
HIST 250 History of the Middle East (GT-HI1)*	3 cr
HIST 254 A History of Africa (GT-HI1)*	3 cr
HIST 260 Introduction to Latin American History (GT-HI1)*	3 cr
PHYS 115 Physics of Music	3 cr
POLS 117 Introduction to Political Ideas (GT-SS1)*	3 cr
POLS 180 Introduction to American Politics (GT-SS1)*	3 cr
POLS 255 Introduction to Comparative Politics (GT-SS1)*	3 cr
POLS 260 Introduction to World Politics (GT-SS1)*	3 cr
PSY 100 General Psychology (GT-SS3)*	3 cr
SOC 101 Introduction to Sociology	3 cr
SOC 168 Social Problems	3 cr

*Colorado State Guaranteed General Education Transfer Course.

AREA II: Natural Sciences: (8 credits) Courses in Area II focus on the following goals:

- Students demonstrate knowledge of scientific viewpoints.
- Students use the scientific method.
- Students evaluate the impacts of science and technology on society.
- Students demonstrate scientific literacy.

Eight credits are required from the courses listed below:

ANTH 218 Physical Anthropology (with laboratory)	4 cr
BIOL 120 Studies in Biology (GT-SC2)*	3 cr
BIOL 130 Environmental Biology (GT-SC2)*	3 cr
BIOL 135 Environmental Biology Laboratory (GT-SC1)*	1 cr
BIOL 150 Biological Principles (with laboratory) (GT-SC1)*	4 cr
BIOL 151 Diversity and Patterns of Life (with laboratory)	4 cr
BIOL 200 Environmental and Public Health (GT-SC2)*	3 cr
CHEM 100 Contemporary Chemistry (GT-SC2)*	3 cr
CHEM 101 Introduction to Inorganic Chemistry (GT-SC2)*	3 cr
CHEM 111 General Chemistry I (GT-SC2)*	3 cr
CHEM 112 General Chemistry Laboratory I (GT-SC1)*	1 cr
CHEM 113 General Chemistry II	3 cr
CHEM 114 General Chemistry Laboratory II	1 cr
GEOL 101 Physical Geology (GT-SC2)*	3 cr
GEOL 105 Physical Geology Laboratory (GT-SC1)*	1 cr
PHYS 110 Solar System Astronomy (GT-SC2)*	3 cr
PHYS 120 Meteorology (GT-SC2)*	3 cr
PHYS 125 Energy and the Environment (GT-SC2)*	3 cr
PHYS 140 Introductory Physics (with laboratory) (GT-SC1)*	4 cr
PHYS 170 Principles of Physics I (with laboratory) (GT-SC1)*	4 cr
PHYS 171 Principles of Physics II (with laboratory) (GT-SC1)*	4 cr
PHYS 200 General Physics I (with laboratory) (GT-SC1)*	4 cr
PHYS 201 General Physics II (with laboratory) (GT-SC1)*	4 cr
SCI 110 Habitable Planet (with laboratory)	4 cr
SCI 120 Living Planet (with laboratory)	4 cr
SCI 210 Dynamic Planet (with laboratory)	4 cr

*Colorado State Guaranteed General Education Transfer Course.

AREA III: Arts and Humanities (9 credits). Courses in Area III focus on the following goals:

- Students enhance their appreciation of the modes of creative expression.
- Students ask fundamental questions of value and meaning.
- Students survey a variety of ways humans have perceived their world.
- Students explore the ways in which the human environment is shaped by social, cultural, linguistic, religious, philosophical, and historical circumstances.
- Students gain increased awareness of the moral and ethical dimensions of the human condition.

Nine credits are required from the courses listed below. Students must choose from three disciplines.

ART 105 Introduction to Art (GT-AH1)*	3 cr
COM 119 Introduction to Film	3 cr
COM 121 Introduction to Theatre (GT-AH1)*	3 cr
COM 151 Introduction to Mass Media (GT-AH1)*	3 cr
COM 216 Dramatic Literature and Script Analysis	3 cr
ENG 150 Introduction to Literature	3 cr

ENG 205 Introduction to Creative Writing	3 cr
ENG 230 Environmental Literature (GT-AH2)*	3 cr
ENG 232 Borderlands: Race, Class, and Gender	3 cr
ENG 237 Women and Literature	3 cr
ENG 238 Literary Culture of the American West	3 cr
ENG 248 Film Arts: Film as Literature/Literature as Film	3 cr
ENG 250 Critical Approaches to Literature	3 cr
ENG 254 Formula Fiction	3 cr
ENG 255 Ancient World Literature (GT-AH2)*	3 cr
ENG 270 Folklore	3 cr
MUS 100 Fundamentals of Music (GT-AH1)*	3 cr
MUS 135 Introduction to Algorithmic Music	3 cr
MUS 140 Introduction to Music (GT-AH1)*	3 cr
MUS 240 Perspectives in Music	3 cr
MUS 245 History of Rock and Roll	3 cr
PHIL 101 Introduction to Philosophy (GT-AH3)*	3 cr

*Colorado State Guaranteed General Education Transfer Course.

Colorado State Guaranteed General Education Transfer Courses

Western State Colorado University students who transfer to another Colorado public college or university may facilitate the transferring of general education credits by completing courses designated as State Guaranteed General Education Transfer Courses. Upon acceptance to another Colorado public college or university, students may have up to 31 credits of successfully completed (C- or better) State Guaranteed General Education Transfer Courses meet specific general education requirements of the receiving institution. Courses must incorporate specific content and competency areas as defined by the State Guaranteed General Education Transfer Curriculum. For more information regarding State Guaranteed General Education Transfer Courses and the 31-credit State Guaranteed General Education Transfer Curriculum, please consult the Colorado Department of Higher Education website: http://highered.colorado.gov.

Credits earned in general education courses not designated as State Guaranteed General Education Transfer Courses routinely transfer to other colleges and universities as deter- mined by the receiving institution. A student transferring credits to another college or university should consult with the receiving institution to determine how transferred credits may meet particular general education requirements.

GT-CO1: Colorado Guaranteed General Education Transfer Course, Introduction to Writing
GT-MA1: Colorado Guaranteed General Education Transfer Course, Mathematics
GT-SS1: Colorado Guaranteed General Education Transfer Course, Economics of Political Systems
GT-SS2: Colorado Guaranteed General Education Transfer Course, Geography
GT-SS3: Colorado Guaranteed General Education Transfer Course, Human Behavior, Culture, or Social Frameworks
GT-HI1: Colorado Guaranteed General Education Transfer Course, History
GT-SC1: Colorado Guaranteed General Education Transfer Course, Natural Sciences with Laboratory
GT-SC2: Colorado Guaranteed General Education Transfer Course, Natural Sciences without Laboratory
GT-AH1: Colorado Guaranteed General Education Transfer Course, Arts and Expression
GT-AH2: Colorado Guaranteed General Education Transfer Course, Literature and Humanities
GT-AH3: Colorado Guaranteed General Education Transfer Course, Ways of Thinking

ACCOUNTING (ACC)

At Western, we believe that the best accountants are those with the greatest breadth in their undergraduate education. Thus, Accounting majors at Western are required to take a full range of General Education courses while still completing all necessary accounting and related business courses. This approach results in graduates who have over half of their course work in liberal arts disciplines, but who still meet all educational requirements to become certified public accountants. This method of accounting education, together with the rigors inherent in the study of accounting, combine to create an outstanding program with outstanding students. In addition, as with other disciplines at Western, students can count on small classes with caring and dedicated faculty.

Western State Colorado University offers three programs of study in Accounting: a Comprehensive Major: Professional Emphasis, a Comprehensive Major: Financial Analysis Emphasis, and a Standard Accounting Major.

The Professional Emphasis is intended to provide the appropriate educational background for students interested in professional accountancy (CPA) as a career, or the pursuit of a graduate degree in accounting, business, or law. The course work leading to graduation with a Comprehensive Accounting Major is composed of five areas: 1) general education and elective courses; 2) supporting tool courses; 3) Accounting Nucleus courses; 4) supporting courses in Accounting, Business Administration and Economics; and 5) a Capstone Course. Students completing one of the Comprehensive Majors do not need a minor area of study.

Students interested in becoming a Certified Public Accountant (CPA) should be aware that all states now require or will soon require 150 credits to be licensed as a CPA. In Colorado, this requirement went into effect July 1, 2015. The Professional Emphasis in accounting is designed to meet all the requirements for a Colorado CPA candidate to sit for the CPA exam. This can be done after graduation with the bachelor's degree and a total of 120 credits. Before being certified as a CPA, the candidate must then complete a total of 150 credits, including additional accounting and business credits. This can be accomplished by completing the Professional Emphasis in Accounting, a Standard major in Business Administration, and a second auditing course (ACC 415), for a total of 66 credits. A work experience requirement must also be met. Students should consult with an Accounting faculty advisor to develop an appropriate academic program.

The Financial Analysis Emphasis in Accounting is designed for students who are interested in careers in accounting or finance but who do not intend to seek CPA certification. This emphasis includes courses in the traditional areas of managerial finance, financial institutions, investments, and economics, and also requires a substantial core of accounting courses. This approach maximizes the post-graduate opportunities available to students. Students completing the Financial Analysis Emphasis do not need a minor area of study.

The Standard Accounting Major is appropriate for students who have a strong interest in both accounting and another discipline. It does not offer the integrated breadth provided in the comprehensive majors. Students pursuing a Standard Major must also complete a minor area of study or have a second major in another discipline. The Standard Major does not provide sufficient preparation for someone interested in professional accountancy, but provides an excellent preparation for graduate study or for careers that make use of accounting information. The selection of a minor area of study (or a second major) that complements a Standard Accounting Major should be made with the aid of an advisor.

Many majors are student members of the Colorado Society of Certified Public Accountants and the American Institute of Certified Public Accountants. To graduate, all majors must have a grade-point average of 2.500 or better in all courses required in the major and complete each of the following courses with a minimum grade of "C": ACC 201 Introduction to Financial Accounting, ACC 202 Introduction to Managerial Accounting, ACC 301 Intermediate Financial Accounting I, ACC 302 Intermediate Financial Accounting II, ACC 320 Advanced Management Accounting, and ACC 350 Income Tax.

FACULTY

Assistant Professor Steve Crowley; Lecturer Kathy Ridgeway.

DESCRIPTION OF THE PROGRAMS

All Accounting Majors require a minimum of 18 credits of Tool Courses and the 12- credit Accounting Nucleus.

Tool Courses

ACC 201 Introduction to Financial Accounting	3 cr
ACC 202 Introduction to Managerial Accounting	3 cr
ECON 202 Microeconomics	3 cr
One of the following:	
MATH 140 College Algebra	3 cr
MATH 141 Precalculus	3 cr
MATH 151 Calculus I	4 cr
One of the following:	
ECON 216 Statistics for Business and Economics	3 cr
MATH 213 Probability and Statistics	3 cr
One of the following:	
BUAD 220 Computer Applications in Business.	3 cr
CS 120 Information Management and Analysis	3 cr

Students are strongly encouraged to complete all Tool Courses before enrolling in Accounting Nucleus courses.

Accounting Nucleus

ACC 301 Intermediate Financial Accounting I	3 cr
ACC 302 Intermediate Financial Accounting II	3 cr
ACC 320 Advanced Management Accounting	3 cr
ACC 350 Income Tax	3 cr

Accounting Major: Standard Program

A minimum of 42 credits is required including 18 credits of Tool Courses, the 12-credit Accounting Nucleus, and the following:

ACC 498 Accounting Ethics	3 cr
BUAD 210 Legal Environment of Business	3 cr
Two of the following:	
ACC 340 Accounting Information Systems	3 cr
ACC 410 Auditing	3 cr
ACC 450 Advanced Financial Accounting	3 cr
ACC 460 Advanced Income Tax	3 cr

Accounting Major: Comprehensive Programs

PROFESSIONAL EMPHASIS

A minimum of 57 credits is required including 18 credits of Tool Courses, the 12-credit Accounting Nucleus, and the following:

ACC 340 Accounting Information Systems	3 cr
ACC 410 Auditing	3 cr
ACC 450 Advanced Financial Accounting	3 cr
ACC 498 Accounting Ethics	3 cr
BUAD 210 Legal Environment of Business	3 cr
BUAD 270 Principles of Marketing	3 cr
BUAD 315 Business Law	3 cr
BUAD 360 Managerial Finance	3 cr
One of the following:	
BUAD 333 Organizational Behavior	3 cr
BUAD 350 Human Resource Management	3 cr

FINANCIAL ANALYSIS EMPHASIS

A minimum of 57 credits is required including 18 credits of Tool Courses, the 12-credit Accounting Nucleus and the following:

ACC 460 Advanced Income Tax	3 cr
BUAD 210 Legal Environment of Business	3 cr
BUAD 311 Essential Excel Skills for the Workplace	1 cr
BUAD 312 Advanced Excel Applications	2 cr
BUAD 360 Managerial Finance	3 cr
BUAD 461 Investments	3 cr
BUAD 491 Strategic Management	3 cr
ECON 201 Macroeconomics	3 cr
Two of the following:	
ECON 301 Intermediate Macroeconomics	3 cr
ECON 316 Econometrics	3 cr
ECON 361 Money, Banking, and Financial Markets	3 cr

Accounting Minor

A minimum of 18 credits is required:

ACC 201 Introduction to Financial Accounting	3 cr
ACC 202 Introduction to Managerial Accounting	3 cr
ACC 301 Intermediate Financial Accounting I	3 cr
Accounting electives	9 cr

Capstone Course Requirement. The following courses in the Accounting Major fulfill the capstone course requirement: ACC 498 Accounting Ethics (Standard Accounting Major or Professional Emphasis); or BUAD 491 Strategic Management (Financial Analysis Emphasis).

ACCOUNTING COURSES

ACC 197 Special Topics **1-6 credits**

ACC 201 Introduction to Financial Accounting **3 credits**

An introduction to the field of accounting with emphasis on corporate financial statements. Financial statements are viewed as a communication device conveying the financial health of a business to interested parties. The objective of this first course is to teach

students to read, analyze, and interpret these financial statements. The emphasis is on developing critical thinking and problem-solving skills using accounting concepts. Students are exposed to the steps used by accountants to record, measure, and process financial information. Cash flow analysis is contrasted with the accrual basis of accounting; the concepts of asset valuation and income measurement are discussed. Accounting majors must pass this class with a minimum grade of "C". Prerequisites: university-level mathematics requirement with a minimum grade of "C-", or instructor permission.

ACC 202 Introduction to Managerial Accounting **3 credits**

An introduction to the preparation, uses, and analysis of common management accounting information. Topics include cost-volume-profit analysis, capital budgeting and present value applications, cash budgets, financial statement analysis, taxes, and management decisions, plus a brief introduction to modern cost accounting, with emphasis on activity-based costing systems. The development of problem-solving and analytical abilities is given primary importance throughout the course. Accounting majors must pass this class with a minimum grade of "C". Prerequisites: MATH 140, MATH 141, or MATH 151 with a minimum grade of "C-"; and ACC 201 with a minimum grade of "C".

ACC 297 Special Topics **1-6 credits**

ACC 301 Intermediate Financial Accounting I **3 credits**

Rigorous and comprehensive study of the means by which generally accepted accounting principles are used to generate the publicly-available in formation disseminated by modern U.S. corporations. Theoretical and practical critic isms and alternatives to current accounting practice are also considered, as is the idea of accounting as an information feedback system that allows individuals and organizations to reshape their environment. In addition, students are exposed to the realities of the economic and political climate surrounding the accounting standard-setting process. Accounting majors must pass this class with a minimum grade of "C". Prerequisites: MATH 140, MATH 141, or MATH 151 with a minimum grade of "C-"; and ACC 201 with a minimum grade of "C".

ACC 302 Intermediate Financial Accounting II **3 credits**

Continuation of ACC 301. As the ACC 301-02 sequence progresses, increased emphasis is placed on the relationship of modern accounting and information theory to current accounting practice. In addition, students are expected to develop an insight into the behavioral and economic consequences of the financial reporting process. Accounting majors must pass this class with a minimum grade of "C." Prerequisite: ACC 301.

ACC 320 Advanced Management Accounting **3 credits**

A study of the information needed by managers for planning, control and decision making. Both the tools needed to generate this information and the principles involved in evaluating the information are covered. Topics include: breakeven analysis; product and process costing, including activity-based costing, standard costing and joint costs; cash budgets and forecasting; relevant costs and non-routine decisions; the direct vs. absorption costing tradeoff; and capital budgeting. The overall level of difficulty in this course is generally consistent with the level of difficulty encountered on typical management accounting problems found on the Uniform CPA Examination. Accounting majors must pass this class with a minimum grade of "C". Prerequisites: ACC 202 and ACC 301.

ACC 340 Accounting Information Systems **3 credits**

A dual-purpose course which explores the theoretical view of information systems, while at the same time exposing the student to actual off-the-shelf accounting software. The course alternates between textbook readings and discussions and several case studies which require the student to create a computerized accounting system for a fictional client. After completing the course, the student is expected to possess the ability to computerize a manual accounting system, to understand system theory underpinnings of accounting information systems, and to have developed a view of the implications of expected technological advances on management information systems in general and accounting systems in particular. Prerequisite: BUAD 220 or CS 120. Prerequisite or corequisite: ACC 301.

ACC 350 Income Tax **3 credits**

An introduction to the federal income tax system. Emphasis is on the ways in which the U.S. income tax laws influence personal and business behavior and decision making, and how the tax laws can be used to accomplish various economic and social objectives. Topics covered include an introduction to tax research, principles of income and deduction, tax liability, and tax credits. Individual taxation is the primary focus, but the basic principles apply to most forms of business organization as well. Accounting majors must pass this class with a minimum grade of "C". Prerequisite: minimum sophomore standing.

ACC 397 Special Topics **1-6 credits**

ACC 410 Auditing **3 credits**

An introduction to the field of auditing including an examination of the standards and methods used by certified professional accountants when attesting to the fairness of corporate financial statements. Specifics topics include the accounting professional code of ethics, generally accepted auditing standards (GAAS), internal controls, sampling techniques, audit planning, and specific audit procedures. Government policies concerning auditors' responsibilities for fraud detection are also discussed. Prerequisite: ACC 302.

ACC 415 Information Technology Auditing **3 credits**

Building on concepts covered in ACC 410 (Auditing), the course emphasizes the process of auditing information technology (IT), IT governance and management, IT acquisition, development and implementation, IT maintenance and support, and protection of IT assets. The course will present tools, concepts, and techniques necessary to properly audit IT. Prerequisites: ACC 340 and ACC 410.

ACC 450 Advanced Financial Accounting **3 credits**

An overview of the financial accounting theory, practice, problems, and reporting requirements for various economic entities. These include partnerships, foreign branches and subsidiaries, state and local governments, colleges and universities, hospitals, voluntary organizations, and the modern parent/subsidiary corporate structure. The approach taken in this course is that there are common information needs which each of these entities must satisfy. While the specific approach used to satisfy this need is dependent on a variety of factors, the common thread is that useful information is being generated for the consumers of that information. Prerequisite: ACC 302.

ACC 460 Advanced Income Tax **3 credits**

A continuation of federal income taxation, with emphasis on property transactions, corporations, partnerships, and fiduciaries. A

primary objective is decision-making from an after-tax point of view, that is, how taxes affect behavior. Topics include the tax effects of organizing, operating, and liquidating partnerships and corporations. Tax research methodology and the federal estate and gift tax are also covered. Prerequisite: ACC 350.

ACC 491 Seminar in Accounting **3 credits**

A boardroom approach to problem solving through research, discussion, and analysis.

ACC 492 Independent Study **1-6 credits**

A singular investigation into a unique problem arrived at between the researcher and the advisor.

ACC 497 Special Topics **1-6 credits**

ACC 498 Accounting Ethics **3 credits**

Investigates and explores the ethical responsibilities faced by professional accountants in all fields. Students will read, discuss, and analyze case studies regarding ethical situations and issues confronted by the accounting profession. The AICPA Code of Professional Conduct will be studied, as well as foundational ethical theory and an approach for identifying and analyzing ethical issues, with a focus on current events. Students are expected to make significant written and oral contributions to the class. This is the capstone course for the Standard Accounting Major and the Professional Emphasis. Prerequisite: senior status.

ACC 499 Internship in Accounting **1-6 credits**

Experiences designed especially for the uninitiated student. Internships provide guided, counseled, and progressive experience under a dual tutelage program of a businessperson and an academician. Graded Satisfactory/Unsatisfactory only.

ANTHROPOLOGY (ANTH)

Anthropology is the scientific study of humans that is holistic and cross-cultural. Through anthropology a student achieves a broad geographical and temporal perspective of human biological and cultural adaptations. This perspective includes an understanding of cultural diversity in our own society, in our world at large, and in the past.

The Anthropology Standard Major provides students with a challenging, scholarly educational experience. Training in archaeology, physical anthropology, and cultural anthropology involves classroom, laboratory, and field work. Students majoring in Anthropology at Western apply information from the classroom as they participate in field studies. Majors are required to attend an Anthropology field school. The field school gives students hands-on field experience in anthropology. Laboratory skills are an important feature of the Anthropology curriculum, and students have the opportunity to participate in research with faculty.

Students majoring in Anthropology have used this experience to further careers in archaeology, cultural anthropology, forensics, and law enforcement, teaching, community planning, international business, and governmental research. With additional graduate work, careers in archaeology, cultural anthropology, and physical anthropology are possible.

FACULTY

Professors Mark Stiger and Lynn L. Sikkink.
Lecturer David Hyde.

DESCRIPTION OF THE PROGRAM

Anthropology Major: Standard Program

A minimum of 38 credits is required:

ANTH 107 Introduction to General Anthropology	3 cr
ANTH 218 Physical Anthropology (with laboratory)	4 cr
ANTH 219 Archaeology (with laboratory)	4 cr
ANTH 230 Cultural Anthropology (with laboratory)	4 cr
ANTH 265 Anthropological Writing and Statistics	3 cr
ANTH 465 Senior Research Seminar	3 cr
Anthropology electives	9 cr
Two of the following field and laboratory courses	
ANTH 322 Analysis of Material Culture (with laboratory)	4 cr
ANTH 467 Ethnography Field School	4 cr
ANTH 469 Archaeology Field School	4 cr

(ANTH 467 and 469 may be repeated for eight credits).

Anthropology Minor

A minimum of 18 credits, including:

ANTH 107 Introduction to General Anthropology	3 cr
Anthropology Electives	7 cr
(ANTH 467 and ANTH 469 may be repeated for eight credits).	
Two of the following:	
ANTH 218 Physical Anthropology (with laboratory)	4 cr
ANTH 219 Archaeology (with laboratory)	4 cr
ANTH 230 Cultural Anthropology (with laboratory)	4 cr

Capstone Course Requirement. The following course in the Anthropology Major fulfills the capstone course requirement: ANTH 465 Senior Research Seminar.

ANTHROPOLOGY COURSES

ANTH 107 Introduction to General Anthropology **3 credits**
A general introduction to anthropology. All three sub-fields of modern anthropology: cultural anthropology (archaeology and ethnography), physical anthropology, and linguistics are covered. GT-SS3

ANTH 197 Special Topics **1-6 credits**

ANTH 218 Physical Anthropology (with laboratory) **4 credits**
An examination of biological variation in modern human populations and biological evolution of humans as shown by the fossil record. Prerequisite: ANTH 107.

ANTH 219 Archaeology (with laboratory) **4 credits**
A study of the methods and theory of modern archaeology. The emphasis is on how archaeologists understand the past. A general chronology of world prehistory is presented. Prerequisite: ANTH 107.

ANTH 230 Cultural Anthropology (with laboratory) **4 credits**
An exploration of ethnographic theory and methods, and a cross-cultural and comparative examination of societies studied by ethnographers. Prerequisite: ANTH 107.

ANTH 265 Anthropological Writing and Statistics **3 credits**
An introduction to the skills employed in the field of anthropology, using data sets and techniques from anthropological research.

Prerequisites: ANTH 107, ENG 102, and MATH 140.

ANTH 297 Special Topics **1-6 credits**

ANTH 320 Cultural Ecology **3 credits**

An examination of key perspectives, theories, and methods in the study of ecological anthropology. Students learn about the use and definition of the environment by groups from different cultural backgrounds, and build a comparative perspective in so doing. The focus is on contemporary groups, but archaeological examples are used as comparison and to build time-depth in our understanding of cultural ecology. Prerequisite: ANTH 107 or instructor permission.

ANTH 322 Analysis of Material Culture (with laboratory) **4 credits**

A lab course training students in analytical methods in anthropology. Students are responsible for a major project in which they carry out all phases of anthropological research, including research design, background research, hypothesis, analysis, and presentation of results. Materials studied include lithics, fauna, ceramics, and botanical remains. An excellent preparation for (or follow-up to) the Archaeological Field School. Prerequisite: ANTH 219.

ANTH 333 Archaeology of Colorado **3 credits**

A detailed look at the archaeological sequences of Colorado with an emphasis on western Colorado. Time periods from Paleo-Indian to Historic are described. This course is a recommended preparatory course for the Archaeological Field School in Colorado or the Archaeological Field Trip. Prerequisite: ANTH 219.

ANTH 344 Indians of North America **3 credits**

A detailed look at the native people found in North America and their relationships to each other and the non-native settlers of North America. Several case studies are examined in depth. Prerequisite: ANTH 107 or instructor permission.

ANTH 355 Medical Anthropology **3 credits**

An examination of medical systems from various cultural groups, focusing on beliefs, methods of healing, health practitioners, and medical pluralism. Prerequisite: ANTH 107.

ANTH 369 Anthropology Field Trip **1-3 credits**

A field study of archaeological and ethnographic cultures in the western United States. Students camp and tour ancient sites, modern Native American towns, and anthropological museums. This course may be taken for a maximum of six credits.

ANTH 392 Independent Study in Anthropology **1-4 credits**

ANTH 397 Special Topics **1-6 credits**

ANTH 465 Senior Research Seminar **3 credits**

A study of the history and intellectual growth of anthropology is paired with individual work on student projects, which employ theory and methods discussed in class. Students present their work to the university community. Prerequisite: ANTH 265 and senior standing; or instructor permission.

ANTH 467 Ethnography Field School **4 credits**

A field experience in cultural anthropology in which students are immersed in the culture, traditions, and lifeways of a group of people, learning methods of inquiry and anthropological perspectives through hands-on experiences. This course may be taken for a maximum of eight credits. Prerequisite: ANTH 230 or instructor permission.

ANTH 469 Archaeology Field School **4 credits**

A field-experience course in which students learn and perform proper field techniques. Some laboratory work may be involved. This course is offered during the summer session and may be taken for a maximum of eight credits. Prerequisites: ANTH 219 or instructor permission.

ANTH 497 Special Topics

1-6 credits

ART (ART)

The Art faculty emphasizes that the program and courses are important, but equally important is the atmosphere in which the student works—an atmosphere in which the professors are sincerely dedicated to assisting the student, above and beyond the normal classroom expectations. It is this atmosphere that promotes the student's one- on-one involvement with faculty members in the classroom, and more often than not, on a personal basis as well. The student, in working this closely with a faculty member who is professionally active in the art world, feels, sees, and understands what is expected of an artist.

Students majoring in Art may select the Bachelor of Arts degree or the Bachelor of Fine Arts degree.

The Bachelor of Arts degree is designed for the qualified student intending to graduate with a liberal arts background with an in-depth emphasis in Art. The Bachelor of Arts degree in Art consists of a Standard Major and a Comprehensive Major which allows students to specialize in studio art, graphic design, K-12 art education licensure, and art history and theory.

The Bachelor of Fine Arts degree is designed for the qualified student intending to become a professional artist or to pursue graduate study in Art. The Bachelor of Fine Arts degree in Art consists of a Comprehensive Major which allows students to specialize in painting, photography, printmaking, ceramics, jewelry, sculpture, or graphic design.

Admission to the Program. All degree-seeking students who wish to major or minor in Art must be admitted to the Art Program. To be formally admitted to the Art Program, a student must:

1. submit an application for admission;
2. have demonstrated a minimum competency by completing the following courses with a minimum grade of "C":

ART 119 Foundation Drawing I	3 cr
ART 120 Foundation Drawing II	3 cr
ART 171 Foundation Design: Two-Dimensional	3 cr
ART 172 Foundation Design: Three-Dimensional	3 cr
and completed two semesters of:	
ART 000 Exhibition and Convocation Attendance	0 cr

3. submit a portfolio of recent art work;
4. submit a current transcript which shows an overall grade-point average of 2.000.

All majors must have an overall grade-point average of 2.500 or above in order to graduate.

FACULTY

Professors Albert R. Caniff, Jr., Terri J. Murphy, Heather S. Orr, and Don E. Seastrum
Associate Professor S. Chase Hutchison; Assistant Professor Tina Butterfield;
Lecturer Thaddeus K. Smith.

DESCRIPTION OF THE PROGRAMS

Bachelor of Arts Degree in Art

All majors require a total of 24 credits of Art Foundation Courses in addition to specific Art emphasis course requirements. A senior exhibition or an art history senior thesis is required of all majors. A quality representation of the student's artwork from their junior and senior years is used for the senior exhibition.

Art Foundation Courses

Fall offerings

ART 119 Foundation Drawing I	3 cr
ART 171 Foundation Design: Two-Dimensional	3 cr
ART 222 Art History I	3 cr

Spring offerings

ART 120 Foundation Drawing II	3 cr
ART 172 Foundation Design: Three-Dimensional	3 cr
ART 223 Art History II	3 cr

Offered both Fall and Spring

ART 000 Exhibition and Convocation Attendance (six semesters required)	0 cr
ART 319 Intermediate Drawing	3 cr
ART 400 Artist's Portfolio / Senior Exhibition (one semester required)	3 cr

Art Major: Standard Program

A minimum of 36 credits is required, including the 24-credit Art Foundation Courses and 12 credits of Art electives (nine credits must be at the 300- or 400 -level).

Art Major: Comprehensive Programs

STUDIO ART EMPHASIS

Painting, Photography, Printmaking, Ceramics, Jewelry, and/or Sculpture

A minimum of 54 credits is required, including the 24-credit Art Foundation Courses, 24 credits of Art electives (nine credits must be

at the 300- or 400-level), and six credits of non-art supporting courses selected in consultation with an Art advisor.

GRAPHIC DESIGN EMPHASIS

A minimum of 54 credits is required, including the 24-credit Art Foundation Courses, three credits of Art electives, three credits of non-art supporting courses selected in consultation with an Art advisor, and the following 24 credits:

Fall Offerings

ART 246 Introduction to Photography	3 cr
ART 257 Introduction to Printmaking	3 cr
ART 270 Introduction to Graphic Design and Illustration	3 cr
ART 271 Calligraphy / Typography	3 cr
ART 283 Introduction to Airbrush	3 cr

Spring Offerings

ART 370 Intermediate Graphic Design	3 cr

Offered both Fall and Spring

ART 470 Advanced Design and Illustration I	3 cr
ART 471 Advanced Design and Illustration II	3 cr

K- 12 ART EDUCATION LICENSURE EMPHASIS

This program qualifies students for the State of Colorado License in Art Education for K-12 teaching. Specific Education courses required for Art Education Licensure are arranged through the Teacher Education Program (see description under Education).

A minimum of 48 credits is required, including the 24-credit Art Foundation Courses and the following 24 credits:

Six of the following (18 credits total):

Fall offerings

ART 203 Introduction to Ceramics	3 cr
ART 230 Introduction to Sculpture	3 cr
ART 235 Introduction to Jewelry	3 cr
ART 257 Introduction to Printmaking	3 cr
ART 271 Calligraphy/Typography	3 cr
ART 280 Introduction to Painting	3 cr
ART 283 Introduction to Airbrush	3 cr

Two of the following (six credits total):

Spring offerings

ART 303 Intermediate Ceramics	3 cr
ART 330 Intermediate Sculpture	3 cr
ART 357 Intermediate Printmaking	3 cr
ART 380 Intermediate Painting	3 cr

It is recommended that students majoring in the Art Education Licensure Emphasis include COM 119 Theatre and Media Aesthetics, and MUS 140 Introduction to Music, in their General Education Liberal Arts Area III electives.

ART HISTORY AND THEORY EMPHASIS

A minimum of 54 credits is required, including the 24 credits of Art Foundation Courses, six credits of Art electives, six credits of non-art supporting courses selected in consultation with an Art advisor, and the following 18 credits:

Fall offerings

ART 324 Art Criticism and Critical Theory in Contemporary Art	3 cr
ART 421 Art of Mesoamerica and the Andean Region of South America*	3 cr
ART 422 Native American Art of North America*	3 cr

Spring offerings

ART 321 American Art: Colonial to Modern*	3 cr
ART 325 Women Artists*	3 cr
ART 424 Modern Art History, Aesthetics, Theory, and Criticism	3 cr

*Offered every other year.

Bachelor of Fine Arts Degree in Art

To receive and maintain Bachelor of Fine Arts (B.F.A.) in Art candidate status each semester, students must continuously create artwork outside of course assignments that exhibits the highest quality and creativity. When students receive B.F.A. in Art candidate status, they must report to their advisor for continuance in the program. The advisor is responsible for critiques, guidance, and assistance in the completion of the senior exhibition.

At the completion of the B.F.A. Foundation Program, students' portfolios should demonstrate the criteria identified by the Art faculty and B.F.A. acceptance form. The review committee will identify students' portfolios that reflect Bachelor of Fine Arts in Art

degree potential.

Students wishing to apply for candidacy to the Bachelor of Fine Arts in Art Program must: apply no earlier than the spring of their sophomore year and no later than the fall of their junior year, present a portfolio of recent art works, specify an emphasis of study, be in good academic standing, and have completed the following courses with a minimum grade of "C":

ART 119 Foundation Drawing I	3 cr
ART 120 Foundation Drawing II	3 cr
ART 171 Foundation Design: Two-Dimensional	3 cr
ART 172 Foundation Design: Three-Dimensional	3 cr

All Bachelor of Fine Arts in Art Majors require the 36-credit BFA Foundation Courses. All Art courses must be selected in consultation with an Art advisor.

A senior exhibition is required of all majors. A quality representation of students' artwork from the junior and senior years is used for the senior exhibition.

BFA Foundation Courses

Fall offerings

ART 119 Foundation Drawing I	3 cr
ART 171 Foundation Design: Two-Dimensional	3 cr
ART 222 Art History I	3 cr
ART 319 Intermediate Drawing	3 cr
ART 491 Seminar in Art	3 cr
Art History (300 level)	3 cr

Spring offerings

ART 120 Foundation Drawing II	3 cr
ART 172 Foundation Design: Three-Dimensional	3 cr
ART 223 Art History II	3 cr
ART 419 Advanced Drawing	3 cr
Art History (400 level)	3 cr

Offered both Fall and Spring

ART 000 Exhibition and Convocation Attendance (six semesters required)	0 cr
ART 400 Artist's Portfolio / Senior Exhibition	3 cr

TWO-DIMENSIONAL ART: PAINTING EMPHASIS

A minimum of 63 credits is required including the 36-credit BFA Foundation Courses, six credits of Art electives, and 21 credits from the following, which must include 15 credits from one painting medium (painting or watercolor):

Fall offerings

ART 280 Introduction to Painting	3 cr
ART 283 Introduction to Airbrush	3 cr
ART 286 Introduction to Watercolor	3 cr

Spring offerings

ART 380 Intermediate Painting	3 cr
ART 386 Intermediate Watercolor	3 cr

Offered both Fall and Spring

ART 480 Advanced Painting I	3 cr
ART 481 Advanced Painting II	3 cr
ART 482 Advanced Painting III	3 cr
ART 486 Advanced Watercolor I	3 cr
ART 487 Advanced Watercolor II	3 cr
ART 488 Advanced Watercolor III	3 cr

TWO-DIMENSIONAL ART: PHOTOGRAPHY EMPHASIS

A minimum of 63 credits is required including the 36-credit BFA Foundation Courses, six credits of Art electives, and the following 21 credits:

Fall offerings

ART 246 Introduction to Photography	3 cr
ART 270 Introduction to Graphic Design and Illustration	3 cr

Spring offerings

ART 346 Intermediate Photography	3 cr
ART 370 Intermediate Graphic Design	3 cr

Offered both Fall and Spring

ART 446 Advanced Photography I	3 cr
ART 447 Advanced Photography II	3 cr
ART 448 Advanced Photography III	3 cr

TWO-DIMENSIONAL ART: PRINTMAKING EMPHASIS

A minimum of 63 credits is required including the 36-credit BFA Foundation Courses, six credits of Art electives, and the following 21 credits:

Fall offerings

ART 246 Introduction to Photography	3 cr
ART 257 Introduction to Printmaking	3 cr

Spring offerings

ART 357 Intermediate Printmaking	3 cr

Offered both Fall and Spring

ART 457 Advanced Printmaking I	3 cr
ART 458 Advanced Printmaking II	3 cr
ART 459 Advanced Printmaking III	3 cr

One of the following:

ART 280 Introduction to Painting	3 cr
ART 286 Introduction to Watercolor	3 cr

THREE-DIMENSIONAL ART: CERAMICS EMPHASIS

A minimum of 63 credits is required, including the 36-credit BFA Foundation Courses, six credits of Art electives, and the following 21 credits:

Fall offerings

ART 203 Introduction to Ceramics	3 cr
ART 230 Introduction to Sculpture	3 cr
ART 235 Introduction to Jewelry	3 cr

Spring offerings

ART 303 Intermediate Ceramics	3 cr

Offered both Fall and Spring

ART 403 Advanced Ceramics I	3 cr
ART 404 Advanced Ceramics II	3 cr
ART 405 Advanced Ceramics III	3 cr

THREE-DIMENSIONAL ART: JEWELRY EMPHASIS

A minimum of 63 credits is required, including the 36-credit BFA Foundation Courses, six credits of Art electives, and the following 21 credits:

Fall offerings

ART 203 Introduction to Ceramics	3 cr
ART 230 Introduction to Sculpture	3 cr
ART 235 Introduction to Jewelry	3 cr

Spring offerings

ART 335 Intermediate Jewelry	3 cr

Offered both Fall and Spring

ART 435 Advanced Jewelry I	3 cr
ART 436 Advanced Jewelry II	3 cr
ART 437 Advanced Jewelry III	3 cr

THREE-DIMENSIONAL ART: SCULPTURE EMPHASIS

A minimum of 63 credits is required, including the 36-credit BFA Foundation Courses, six credits of Art electives, and the following 21 credits:

Fall offerings

ART 203 Introduction to Ceramics	3 cr
ART 230 Introduction to Sculpture	3 cr
ART 235 Introduction to Jewelry	3 cr

Spring offerings

ART 330 Intermediate Sculpture	3 cr

Offered both Fall and Spring

ART 430 Advanced Sculpture I	3 cr
ART 431 Advanced Sculpture II	3 cr
ART 432 Advanced Sculpture III	3 cr

DESIGN ART: GRAPHIC DESIGN EMPHASIS

A minimum of 63 credits is required, including the 36-credit BFA Foundation Courses, and the following 27 credits:

Fall offerings

ART 246 Introduction to Photography	3 cr
ART 257 Introduction to Printmaking	3 cr
ART 270 Introduction to Graphic Design and Illustration	3 cr
ART 271 Calligraphy / Typography	3 cr

Spring offerings

ART 370 Intermediate Graphic Design	3 cr

Offered both Fall and Spring

ART 375 Magazine Production (one semester required)	3 cr
ART 470 Advanced Design and Illustration I	3 cr
ART 471 Advanced Design and Illustration II	3 cr
ART 472 Advanced Design and Illustration III	3 cr

Art Minor

A minimum of 18 credits is required:

ART 119 Foundation Drawing I	3 cr
ART 120 Foundation Drawing II	3 cr
ART 171 Foundation Design: Two-Dimensional	3 cr
ART 172 Foundation Design: Three-Dimensional	3 cr
Art electives	3 cr
One of the following:	
ART 222 Art History I	3 cr
ART 223 Art History II	3 cr

Capstone Course Requirement. The following course in the Art Major fulfills the capstone course requirement: ART 400 Artist's Portfolio/Senior Exhibition.

ART COURSES

ART 000 Exhibition and Convocation Attendance **0 credits**

Monthly or bi-monthly department gatherings for presentations by exhibiting artists and scholars, or workshops, which enable students to develop their own work and their understanding of the discipline of art. Art majors are required to register for and attend Art 000 every semester of enrollment towards their Art degree; minimum 6 semesters of Satisfactory grade. Graded Satisfactory/Unsatisfactory only.

ART 105 Introduction to Art **3 credits**

An introduction to the visual arts, including consideration of the fundamentals of art making, artistic practice, design, art history, analysis, and interpretation. Students engage with art through a combination of lectures, demonstrations, gallery-based exercises, and/or hands-on studio projects. (Course does not count toward the Art major or minor.) GT-AH1

ART 119 Foundation Drawing I **3 credits**

A foundation course in drawing with special attention to line, value, perspective, texture, and shape. Landscape, still life, and other forms are used as subject matter. The visual elements and principles of organization in relationship to perceiving both flat and illusionary space are explored. Black and white media are exclusively practiced. Prerequisite: Art major or minor status.

ART 120 Foundation Drawing II **3 credits**

A foundation course in drawing, placing emphasis on composition. The study of the essential aspects of drawing (such as gesture, contour, proportions, anatomy, structure, textural surface, and articulation) and their synthesis into a coherent drawing attitude. Included in this course is the introduction of drawing the life form and color. Prerequisite: ART 119.

ART 171 Foundation Design: Two-Dimensional **3 credits**

An introduction to design organization with an emphasis on the exploration of line, value, texture, shape, and color. Prerequisite: Art major or minor status.

ART 172 Foundation Design: Three-Dimensional **3 credits**

A foundation course in design organization with emphasis on the exploration of mass, texture, process, and techniques in the three-dimensional area. Tools and materials are explored. Prerequisite: Art major or minor status.

ART 197 Special Topics **1-6 credits**

ART 203 Introduction to Ceramics **3 credits**

An introduction to the basic techniques and processes of ceramics: pinch, coil, slab, and some wheelwork. Prerequisites: ART 120, ART 171, and ART 172.

ART 222 Art History I **3 credits**

A survey of western and non-western art from approximately 30,000 years ago to the 14th century. Works of art and architecture are examined within the cultural and his- toric context for art-making through world human history. Prerequisite: ENG 102 with a minimum grade of "C" and Art major or minor status.

ART 223 Art History II **3 credits**
A survey of western and non-western art from approximately the 14th century to the present. Works of art and architecture are examined within the cultural and historic context for art-making through world human history. Prerequisite: ENG 102 with a minimum grade of "C" and Art major or minor status.

ART 230 Introduction to Sculpture **3 credits**
An introduction to the various processes of sculpture: carving, modeling, and casting. Aesthetic qualities and craftsmanship of the sculptural forms are emphasized. Prerequisites: ART 120, ART 171, and ART 172.

ART 235 Introduction to Jewelry **3 credits**
An introduction to the creative use of silver and precious gemstones in the making of jewelry. Design and craftsmanship are emphasized. Prerequisites: ART 120, ART 171, and ART 172.

ART 246 Introduction to Photography **3 credits**
An introduction to contemporary photographic techniques incorporating traditional black-and-white analogue photography alongside digital photographic practice and procedure. Lectures introduce topic areas that the student must exercise in lab sessions. Students must supply their own "quality" 35mm or 120mm camera. Prerequisites: ART 120, ART 171, and ART 172.

ART 257 Introduction to Printmaking **3 credits**
An introduction to the basic techniques of printmaking including lithography, wood-cut, etching, and the collagraph. Emphasis is on the traditional approaches in print-making. Prerequisites: ART 120, ART 171, and ART 172.

ART 270 Introduction to Graphic Design and Illustration **3 credits**
An introductory course utilizing the basic fundamentals of art in a broad base of commercial applications. Design in the areas of corporate identity, packaging, illustration, and typography are explored. Illustration, new techniques, materials, and tools used by the designer are emphasized. Prerequisites: ART 120, ART 171, and ART 172.

ART 271 Calligraphy/Typography **3 credits**
A study of individual letter forms as design elements that relate to visual communication. Prerequisites: ART 120, ART 171, and ART 172.

ART 280 Introduction to Painting **3 credits**
An introduction to oil painting, using basic tools, materials, techniques, and the development of compositional methods. Prerequisites: ART 120, ART 171, and ART 172.

ART 283 Introduction to Airbrush **3 credits**
An introduction to the use of the airbrush as a tool for painting, drawing, and design. Multiple use of the tool within traditional and non-traditional directions, as well as tool maintenance, are stressed. Prerequisites: ART 120, ART 171, and ART 172.

ART 286 Introduction to Watercolor **3 credits**
An introduction to both the traditional and contemporary methods of watercolor. The various watercolor media are explored. Prerequisites: ART 120, ART 171, and ART 172.

ART 297 Special Topics **1-6 credits**

ART 303 Intermediate Ceramics **3 credits** An exploration of the expressive possibilities of individual ceramic direction. Students collaborate with the instructor to plan a suitable and particular direction for study. Prerequisite: ART 203.

ART 319 Intermediate Drawing **3 credits**
A study of figure drawing with an emphasis on structure, figure compositions, and portrait studies from the model using various drawing media and techniques. Prerequisite: ART 120.

ART 321 American Art: Colonial to Modern **3 credits**
A survey of the arts of America from the 17th century to the present. Emphasis is placed on uniquely American innovations and expressions, regional distinctions in American art, with a strong component in art of the American West; significant individual artists and trends; and the arts of the many diverse peoples that comprise America. Prerequisite: junior standing or instructor permission.

ART 324 Art Criticism and Critical Theory in Contemporary Art **3 credits**
A survey of contemporary art and art practices through the discipline of art criticism. This seminar course prepares students for senior-level courses and advanced studies in art and art history at the graduate level. A survey of modern and contemporary art since the mid-twentieth century is followed by seminar presentations on selected readings. Prerequisites: ART 222 and ART 223.

ART 325 Women Artists **3 credits**
A survey of women artists and their work from the 16th century (Renaissance) to contemporary times. The contribution of women artists and the changing roles of women in the western tradition of the visual arts are examined within relevant historical, political, social, theoretical, and gender contexts. Prerequisite: junior standing or instructor permission.

ART 330 Intermediate Sculpture **3 credits**
An exploration of the expressive possibilities of individual sculpture direction. Students collaborate with the instructor to plan a suitable and particular direction of study. Prerequisite: ART 230.

ART 335 Intermediate Jewelry **3 credits**
An exploration of the expressive possibilities of individual jewelry direction. Students collaborate with the instructor to plan a suitable and particular direction of study. Prerequisite: ART 235.

ART 346 Intermediate Photography **3 credits**
An intermediate course that explores the expressive possibilities of individual photography direction with an emphasis placed on digital photographic practices and principles. Students collaborate with the instructor to plan a suitable and particular direction of study. Prerequisite: ART 246.

ART 357 Intermediate Printmaking **3 credits**
An exploration of the expressive possibilities of individual printmaking direction. Students collaborate with the instructor to plan a

suitable and particular direction of study. Prerequisite: ART 257.

ART 370 Intermediate Graphic Design **3 credits**

A study of graphic design processes and applications. Emphasis is on the exploration of creative solutions to design problems. Topics include past and current design trends, tools, and computer related graphics. Prerequisite: ART 270.

ART 375 Intermediate Magazine Production **3 credits**

An integration of journalism and art course work into a study of magazine production. Faculty supervise students in design and production work leading to the publication of the *Western Pathfinder Magazine*, in both print and online versions. Prerequisite: ART 370 and instructor permission.

ART 380 Intermediate Painting **3 credits**

An exploration of the expressive possibilities of individual painting direction. Students collaborate with the instructor to plan a suitable and particular direction of study. Prerequisite: ART 280.

ART 386 Intermediate Watercolor **3 credits**

Designed for exploration of the expressive possibilities of individual watercolor direction. Students collaborate with the instructor to plan a suitable and particular direction of study. Prerequisite: ART 286.

ART 390 Workshop in Art **3 credits**

A review and critique of advanced problems in art: two-dimensional, three-dimensional, or design. May be repeated for a maximum of nine credits (three per semester). Prerequisites: minimum junior standing and instructor permission. Students must have completed 300-level course in their chosen emphasis.

ART 397 Special Topics **1-6 credits**

ART 398 Field Study in Art **1 credit**

A 7-10 day course offered at differing national or international sites by Art faculty. Field study classes offer a variety of educational experiences, including workshops, museum/gallery/artist studio visits, study of art historically significant sites, in combination with course lectures and assignments. May be taken up to three times for credit as an Art elective by Art majors or minors. Prerequisite: students must have taken minimally one university-level Art course.

ART 400 Artist's Portfolio/Senior Exhibition **3 credits**

A capstone course in which students develop a portfolio of recent work which enhances preparation for the Senior Exhibition, a career in art, gallery representation, or application to graduate school. Prerequisite: senior standing.

ART 403 Advanced Ceramics I **3 credits**

An advanced exploration of the expressive possibilities of individual ceramic direction. Students collaborate with the instructor to plan a suitable and particular direction of study. Prerequisite: ART 303.

ART 404 Advanced Ceramics II **3 credits**

An advanced exploration of the expressive possibilities of individual ceramic direction. Students collaborate with the instructor to plan a suitable and particular direction of study. Prerequisite: ART 403.

ART 405 Advanced Ceramics III **3 credits**

An advanced exploration of the expressive possibilities of individual ceramic direction. Students collaborate with the instructor to plan a suitable and particular direction of study. Prerequisite: ART 404.

ART 419 Advanced Drawing **3 credits**

An advanced study in figure drawing with emphasis on the figure, expanding visual awareness by developing control of drawing as a tool for research and invention. Problems progress from simple structural analysis to more sophisticated exploration of subject matter, and finally to individual interpretation. Prerequisite: ART 319 and B.F.A. candidate.

ART 421 Art of Mesoamerica and the Andean Region of South America **3 credits**

A survey of the arts of the pre-contact civilizations in Middle America and the Andes. The art and architecture of these ancestral peoples are examined within their cultural contexts. Prerequisite: minimum junior standing or instructor permission.

ART 422 Native American Art of North America **3 credits**

A survey of the arts of the indigenous (First Nations) civilizations in North America, from antiquity to the present era. The art and architecture of these peoples are examined contextually. Prerequisite: minimum junior standing or instructor permission.

ART 424 Modern Art History, Aesthetics, Theory, and Criticism **3 credits**

An exploration of trends and developments in the Western tradition of the visual arts from the mid-nineteenth century to the present, considering Modernism, Post- Modernism, and recent tendencies. The visual arts of these periods are viewed through the lens of theories and ideas that have powered change in Western art, including current revisionist and theoretical considerations in Art and Art History. Prerequisite: minimum junior standing or instructor permission.

ART 430 Advanced Sculpture I **3 credits**

An advanced exploration of the expressive possibilities of individual sculptural direction. Students collaborate with the instructor to plan a suitable and particular direction of study. Prerequisite: ART 330.

ART 431 Advanced Sculpture II **3 credits**

An advanced exploration of the expressive possibilities of individual sculptural direction. Students collaborate with the instructor to plan a suitable and particular direction of study. Prerequisite: ART 430.

ART 432 Advanced Sculpture III **3 credits**

An advanced exploration of the expressive possibilities of individual sculptural direction. Students collaborate with the instructor to plan a suitable and particular direction of study. Prerequisite: ART 431.

ART 435 Advanced Jewelry I **3 credits**
An advanced exploration of the expressive possibilities of individual jewelry direction. Students collaborate with the instructor to plan a suitable and particular direction of study. Prerequisite: ART 335.

ART 436 Advanced Jewelry II **3 credits**
An advanced exploration of the expressive possibilities of individual jewelry direction. Students collaborate with the instructor to plan a suitable and particular direction of study. Prerequisite: ART 435.

ART 437 Advanced Jewelry III **3 credits**
An advanced exploration of the expressive possibilities of individual jewelry direction. Students collaborate with the instructor to plan a suitable and particular direction of study. Prerequisite: ART 436.

ART 446 Advanced Photography I **3 credits**
An advanced exploration of the expressive possibilities of individual photography direction. Students collaborate with the instructor to plan a suitable and particular direction of study. Prerequisite: ART 346.

ART 447 Advanced Photography II **3 credits**
An advanced exploration of the expressive possibilities of individual photography direction. Students collaborate with the instructor to plan a suitable and particular direction of study. Prerequisite: ART 446.

ART 448 Advanced Photography III **3 credits**
An advanced exploration of the expressive possibilities of individual photography direction. Students collaborate with the instructor to plan a suitable and particular direction of study. Prerequisite: ART 447.

ART 457 Advanced Printmaking I **3 credits**
An advanced exploration of the expressive possibilities of individual printmaking direction. Students collaborate with the instructor to plan a suitable and particular direction of study. Prerequisite: ART 357.

ART 458 Advanced Printmaking II **3 credits**
An advanced exploration of the expressive possibilities of individual printmaking direction. Students collaborate with the instructor to plan a suitable and particular direction of study. Prerequisite: ART 457.

ART 459 Advanced Printmaking III **3 credits**
An advanced exploration of the expressive possibilities of individual printmaking direction. Students collaborate with the instructor to plan a suitable and particular direction of study. Prerequisite: ART 458.

ART 470 Advanced Design and Illustration I **3 credits**
An advanced exploration of the expressive possibilities of individual graphic design direction. Students collaborate with the instructor to plan a suitable and particular direction of study. Prerequisite: ART 370.

ART 471 Advanced Design and Illustration II **3 credits**
An advanced exploration of the expressive possibilities of individual graphic design direction. Students collaborate with the instructor to plan a suitable and particular direction of study. Prerequisite: ART 470.

ART 472 Advanced Design and Illustration III **3 credits**
An advanced exploration of the expressive possibilities of individual graphic design direction. Students collaborate with the instructor to plan a suitable and particular direction of study. Prerequisite: ART 471.

ART 475 Advanced Magazine Production I **3 credits**
An advanced integration of journalism and art course work into a study of magazine production. Faculty supervise students in design and production work leading to the publication of the *Western Pathfinder Magazine*, in both print and online versions. Prerequisite: ART 375 and instructor permission.

ART 476 Advanced Magazine Production II **3 credits**
An advanced integration of journalism and art course work into a study of magazine production. Faculty supervise students in design and production work leading to the publication of the *Western Pathfinder Magazine*, in both print and online versions. Prerequisite: ART 475 and instructor permission.

ART 477 Advanced Magazine Production III **3 credits**
An advanced integration of journalism and art course work into a study of magazine production. Faculty supervise students in design and production work leading to the publication of the *Western Pathfinder Magazine*, in both print and online versions. Prerequisite: ART 476 and instructor permission.

ART 480 Advanced Painting I **3 credits**
An advanced exploration of the expressive possibilities of individual painting direction. Students collaborate with the instructor to plan a suitable and particular direction of study. Prerequisites: ART 380.

ART 481 Advanced Painting II **3 credits**
An advanced exploration of the expressive possibilities of individual painting direction. Students collaborate with the instructor to plan a suitable and particular direction of study. Prerequisite: ART 480.

ART 482 Advanced Painting III **3 credits**
An advanced exploration of the expressive possibilities of individual painting direction. Students collaborate with the instructor to plan a suitable and particular direction of study. Prerequisite: ART 481.

ART 486 Advanced Watercolor I **3 credits**
An advanced exploration of the expressive possibilities of individual watercolor direction. Students collaborate with the instructor to plan a suitable and particular direction of study. Prerequisites: ART 386.

ART 487 Advanced Watercolor II **3 credits**

An advanced exploration of the expressive possibilities of individual watercolor direction. Students collaborate with the instructor to plan a suitable and particular direction of study. Prerequisite: ART 486.

ART 488 Advanced Watercolor III **3 credits**

An advanced exploration of the expressive possibilities of individual watercolor direction. Students collaborate with the instructor to plan a suitable and particular direction of study. Prerequisite: ART 487.

ART 490 Workshop in Art **3 credits**

A review and critique of advanced problems in art: two-dimensional, three-dimensional, or design. May be repeated for a maximum of nine credits (three credits per semester). Prerequisites: senior standing and instructor permission. Students must have completed a 400-level course in chosen emphasis.

ART 491 Seminar in Art **3 credits**

An investigation and evaluation of contemporary topics in art. Students are exposed to artistic expression through visiting artist programs, exhibitions, and workshops. Students develop individual research topics. Prerequisites: B.F.A. candidate and senior standing.

ART 492 Directed Study **1-6 credits**

Individualized instruction for advanced students who have taken all the courses in a particular art area and wish to pursue the area further. Prerequisite: junior or senior status with at least 15 credits in Art.

ART 497 Special Topics **1-6 credits**

ART 499 Internship in Art **1-12 credits**

Supervised practical experiences in art for advanced students. With faculty approval, credit earned in this course may be applied to the Major or Minor in Art. Prerequisite: instructor permission.

BIOLOGY (BIOL)

The Biology Program provides a comprehensive educational experience consistent with the liberal arts philosophy of the University. The contemporary curriculum includes hands-on learning through laboratory and field experience. Small classes and low student- to-faculty ratios allow meaningful interaction between biology students and faculty, both in and out of the classroom. Professors advise students' academic scheduling and career options. Students are encouraged to conduct research projects with faculty and to participate in internships with private entities and local agencies.

Biology majors receive broad training in the life sciences leading to a variety of careers. Our graduates pursue entry-level careers in biological research, education, and applied sciences such as wildlife biology, fisheries, and forestry. The Biology Major prepares graduates to succeed in graduate school and professional schools in disciplines such as medicine, dentistry, veterinary medicine, physical therapy, ecology, and wildlife biology.

Five different emphases are offered: Cell and Molecular Biology, Environmental Biology and Ecology, General Biology, Pre-Allied Health, and Secondary Education Licensure. All majors receive training in fundamental biological principles and in supporting sciences appropriate for each emphasis. The Program's flexibility allows students to specialize in areas of their interest.

The Cell Biology/Pre-Medicine Emphasis is recommended for students pursuing careers in biotechnology, graduate programs in laboratory biology, and professional programs in medicine, veterinary medicine, dentistry, and pharmacy.

The Environmental Biology and Ecology Emphasis is recommended for students with career interests in environmental biology including ecology, conservation biology, environmental science, and natural resource management. Students may concentrate in wildlife biology within the Environmental Biology and Ecology Emphasis.

The General Biology Emphasis is our most flexible major. Students pursuing this emphasis work closely with their academic advisor to select from a variety of upper division elective courses and supporting science courses to create a self-designed major in areas such as botany, zoology, molecular ecology, and integrative biology. This emphasis allows students to integrate the study of structure and function at all levels of biological organization from molecules to ecosystems and across all branches of the tree of life. The Allied Health Emphasis is designed for students planning to enter professional programs in nursing, medical technology, chiropractic, optometry, physical therapy, public health, and physician's assistant programs. Because the admission requirements of these schools varies greatly, students must consult with their advisors to design a curriculum that meets their professional interests.

The Secondary Licensure Emphasis qualifies students for the State of Colorado License in Secondary Science Education.

FACULTY

Professors Kevin D. Alexander, Robin A. Bingham, and Peter H. Gauss;
Associate Professors Shan M. Hays and Cassandra L. Osborne;
Thornton Chair in Biology Patrick A. Magee; Lecturers Amy Honan and Megan Sherbenou.

DESCRIPTION OF THE PROGRAMS

The courses listed for each of the following emphases are the minimum requirements. Higher-level supporting courses may be appropriate for students pursuing certain careers. Students should consult with their advisors for proper course selections. All majors require a Capstone Course.

Biology Major: Comprehensive Programs

All Biology majors require the 18-credit Biology Nucleus.

Biology Nucleus

BIOL 150 Biological Principles (with laboratory)	4 cr
BIOL 151 Diversity and Patterns of Life (with laboratory)	4 cr
BIOL 301 General Ecology	3 cr
BIOL 310 Cell Biology	3 cr
BIOL 312 Genetics (with recitation)	4 cr

CELL BIOLOGY/PRE-MEDICINE EMPHASIS

The Cell Biology/Pre-Medicine Emphasis requires a minimum of 64 credits, including the 18-credit Biology Nucleus, 15 additional credits in Biology, and 31 credits of supporting courses.

Required Biology courses:

BIOL 313 Cell and Genetics Laboratory	2 cr
Three of the following:	
BIOL 342 Microbiology (with laboratory)	4 cr
BIOL 362 Evolutionary Biology: Theory and Application	3 cr
BIOL 373 Human Anatomy and Physiology II (with laboratory)	4 cr
BIOL 420 Molecular Biology (with laboratory)	4 cr
BIOL 454 Developmental Biology (with laboratory)	4 cr
BIOL 474 Comparative Animal Physiology (with laboratory)	4 cr
At least two credits of Capstone Experience courses:	
BIOL 495 Senior Seminar (may be repeated)	1 cr

BIOL 496 Senior Thesis	2-4 cr

Minimum supporting courses:

CHEM 111 General Chemistry I	3 cr
CHEM 112 General Chemistry Laboratory I	1 cr
CHEM 113 General Chemistry II	3 cr
CHEM 114 General Chemistry Laboratory II	1 cr
CHEM 331 Organic Chemistry I	3 cr
CHEM 332 Organic Chemistry II	3 cr
CHEM 334 Organic Chemistry Laboratory I	1 cr
CHEM 335 Organic Chemistry Laboratory II	1 cr
CHEM 471 Biochemistry I	4 cr
One of the following:	
MATH 151 Calculus I	4 cr
MATH 213 Probability and Statistics	3 cr
Either both:	
PHYS 170 Principles of Physics I	4 cr
PHYS 171 Principles of Physics II	4 cr
or both:	
PHYS 200 General Physics I (with laboratory)	4 cr
PHYS 201 General Physics II (with laboratory)	4 cr

ENVIRONMENTAL BIOLOGY AND ECOLOGY EMPHASIS

The Environmental Biology and Ecology Emphasis requires a minimum of 58 credits, including the 18-credit Biology Nucleus, 17 additional credits in Biology and 23 credits of supporting courses.

Required Biology Courses:

BIOL 302 Ecology Laboratory and Recitation	2 cr
Two of the following systems and applications courses:	
BIOL 362 Evolutionary Biology: Theory and Application	3 cr
BIOL 430 Wildlife Ecology and Management (with laboratory)	4 cr
BIOL 431 Wildlife Techniques Workshop	1 cr
BIOL 440 Conservation Biology	3 cr
BIOL 444 Colorado Ecoregions	3 cr
BIOL 476 Aquatic Ecology (with laboratory)	4 cr
BIOL 477 Plant Ecology (with laboratory)	4 cr
BIOL 481 Forest Ecology (with laboratory)	4 cr
Two of the following organismal courses:	
BIOL 320 Ornithology (with laboratory)	4 cr
BIOL 322 Mammalogy (with laboratory)	4 cr
BIOL 327 Field Entomology (with laboratory)	4 cr
BIOL 352 Botany (with laboratory)	4 cr
BIOL 353 Rocky Mountain Flora	3 cr
At least two credits of Capstone Experience courses:	
BIOL 495 Senior Seminar (may be repeated)	1 cr
BIOL 496 Senior Thesis	2-4 cr

Minimum supporting courses:

CHEM 111 General Chemistry I	3 cr
CHEM 112 General Chemistry Laboratory I	1 cr
CHEM 113 General Chemistry II	3 cr
CHEM 114 General Chemistry Laboratory II	1 cr
CHEM 231 Introduction to Organic Chemistry and Biochemistry	3 cr
CHEM 234 Introductory Organic and Biochemistry Laboratory	1 cr
GEOL 101 Physical Geology	3 cr
GEOL 105 Physical Geology Laboratory	1 cr
MATH 213 Probability and Statistics	3 cr
PHYS 140 Introductory Physics (with laboratory)	4 cr

Wildlife Biology Concentration: Environmental Biology and Ecology students may concentrate in wildlife biology. This concentration is intended for students seeking certification as a professional wildlife biologist from the Wildlife Society. Additional courses in humanities, social sciences, communications, and public policy and administration are also required. Appropriate courses should be selected in consultation with an advisor.

GENERAL BIOLOGY EMPHASIS

The General Biology Emphasis requires a minimum of 51 credits including the 18- credit Biology Nucleus, 14 credits of 300- and 400-level Biology electives, and 19 credits of supporting courses:

CHEM 111 General Chemistry I	3 cr
CHEM 112 General Chemistry Laboratory I	1 cr
CHEM 113 General Chemistry II	3 cr
CHEM 114 General Chemistry Laboratory II	1 cr
CHEM 231 Intro to Organic Chemistry and Biochemistry	3 cr
CHEM 234 Intro to Organic Chemistry and Biochemistry Laboratory	1 cr
PHYS 140 Introductory Physics (with laboratory)	4 cr
One of the following:	
MATH 151 Calculus I	3 cr
MATH 213 Probability and Statistics	3 cr

The following restrictions apply: Biology electives must include at least two credits of either BIOL 302 Ecology Laboratory and Recitation or BIOL 313 Cell and Genetics Laboratory; at least two credits of Capstone courses (BIOL 495 Senior Seminar, or BIOL 496 Senior Thesis); 300 and 400-level Biology electives must be selected in consultation with an advisor; CHEM 471 Biochemistry I, may be used to satisfy up to four credits; Biology faculty approval is required to apply more than three credits of BIOL 392 Independent Study or SCI 499 Internship in Science.

PRE-ALLIED HEALTH EMPHASIS

The Pre-Allied Health Emphasis requires a minimum of 54 credits including the 18- credit Biology Nucleus, 17 additional biology credits, and 19 credits of supporting courses. Appropriate microbiology, chemistry and physics courses should be selected in consultation with an advisor.

Required Biology courses:

BIOL 300 Basic Nutrition	3 cr
BIOL 372 Human Anatomy & Physiology I (with laboratory)	4 cr
BIOL 373 Human Anatomy & Physiology II (with laboratory)	4 cr
One of the following:	
BIOL 201 Introduction to Microbiology (with laboratory)	4 cr
BIOL 342 Microbiology (with laboratory)	4 cr
At least two credits of Capstone Experience Courses:	
BIOL 495 Senior Seminar (may be repeated)	1 cr
BIOL 496 Senior Thesis	2-4 cr

Minimum supporting courses:

CHEM 111 General Chemistry I	3 cr
CHEM 112 General Chemistry Laboratory I	1 cr
CHEM 113 General Chemistry II	3 cr
CHEM 114 General Chemistry Laboratory II	1 cr
CHEM 231 Introduction to Organic Chemistry and Biochemistry	3 cr
CHEM 234 Introductory Organic and Biochemistry Laboratory	1 cr
MATH 213 Probability and Statistics	3 cr
PHYS 140 Introductory Physics (with laboratory)	4 cr

SECONDARY LICENSURE EMPHASIS

The Secondary Licensure Emphasis requires a minimum of 59 credits including the 18- credit Biology Nucleus, eight additional credits in Biology, and 33 credits in supporting courses. Students must fulfill the requirements for the Secondary Licensure Option (described under Education). Students interested in pursuing this comprehensive pro- gram should consult with the Teacher Education Program advisor in addition to the advisor in their major as soon as possible. EDUC 409 Secondary Student Teaching fulfills the Capstone Requirement for students completing this emphasis. Required Biology courses:

BIOL 342 Microbiology (with laboratory)	4 cr
Either:	
ESS 201 Essentials of Human Anatomy and Physiology (with laboratory)	4 cr
or both of the following:	
BIOL 372 Human Anatomy and Physiology I (with laboratory)	4 cr
BIOL 373 Human Anatomy and Physiology II (with laboratory)	4 cr

Minimum supporting courses:

CHEM 111 General Chemistry I	3 cr
CHEM 112 General Chemistry Laboratory I	1 cr
CHEM 113 General Chemistry II	3 cr
CHEM 114 General Chemistry Laboratory II	1 cr
CHEM 231 Introduction to Organic Chemistry and Biochemistry	3 cr
CHEM 234 Introductory Organic Chemistry and Biochemistry Laboratory	1 cr

GEOL 101 Physical Geology	3 cr
GEOL 105 Physical Geology Laboratory	1 cr
GEOL 201 Historical Geology (with laboratory)	4 cr
MATH 213 Probability and Statistics	3 cr
PHYS 110 Solar System Astronomy	3 cr
PHYS 120 Meteorology	3 cr
PHYS 140 Introductory Physics (with laboratory)	4 cr

Biology Minor

A minimum of 18 credits is required, including:

BIOL 150 Biological Principles (with laboratory)	4 cr
BIOL 151 Diversity and Patterns of Life (with laboratory)	4 cr
Biology electives	10 cr

Substitutions. The following substitutions may be used to satisfy biology degree requirements: CHEM 331 Organic Chemistry I (3 credits), CHEM 332 Organic Chemistry II (3 credits), CHEM 334 Organic Chemistry Lab I (1 credit), CHEM 335 Organic Chemistry Lab II (1 credit), may be substituted for CHEM 231 Introduction to Organic Chemistry and Biochemistry (3 credits), and CHEM 234 Introductory Organic and Biochemistry Lab (1 credit); PHYS 170 Principles of Physics I (4 credits), may be substituted for PHYS 140 Introductory Physics with lab (4 credits); PHYS 200 General Physics I (4 credits), PHYS 201 General Physics II (4 credits), may be substituted for PHYS 170 Principles of Physics I (4 credits), PHYS 171 Principles of Physics II (4 credits).

Capstone Course Requirement. The following courses in the Biology Major fulfill the capstone course requirement: BIOL 495 Senior Seminar, BIOL 496 Senior Thesis, or EDUC 409 Secondary Student Teaching (Secondary Licensure Emphasis).

BIOLOGY COURSES

BIOL 120 Studies in Biology **3 credits**

An introduction to selected biological topics and the methods of science through an exploration of current topics such as evolution, bioethics and conservation biology. Students may only take this course once for credit. GT-SC2

BIOL 130 Environmental Biology **3 credits**

An introduction to basic biological principles as they apply to interactions between organisms and their environment. Consideration is given to biotic and abiotic interactions, energy flow, biogeochemical cycling, population growth, biodiversity, basic cell biology, genetics, and evolution with a special emphasis on human impacts on these biological systems. This course establishes a strong foundation in applied biology from a scientific perspective. GT-SC2

BIOL 135 Environmental Biology Laboratory **1 credit**

An experimental approach in both the field and laboratory to explore fundamental biological principles including biotic and abiotic interactions, energy flow, bio- geochemical cycling, population growth, biodiversity, basic cell biology, genetics and evolution. Prerequisite or corequisite: BIOL 130. GT-SC1

BIOL 150 Biological Principles (with laboratory) **4 credits**

An introduction to the central unifying concepts of biology including the biochemical foundations of life, cell structure and function, cell metabolism, genetics, and evolution. Laboratories introduce students to the process and methods of science through investigative experiences. This course is designed for the science major. Prerequisites: A year of high school biology; and a year of high school chemistry or CHEM 101 or CHEM 111. GT-SC1

BIOL 151 Diversity and Patterns of Life (with laboratory) **4 credits**

An overview of organismal diversity and ecology. Through a taxonomic survey, students are introduced to prokaryotic and eukaryotic diversity including microorganisms, plants, and animals. Organismic anatomy and physiology, as well as fundamentals of ecology, are also considered. Laboratories introduce students to the process and methods of science through investigative experiences. This course is designed for the science major. Prerequisites: A year of high school biology and a year of high school chemistry or CHEM 101 or CHEM 111.

BIOL 197 Special Topics **1-6 credits**

BIOL 200 Environmental and Public Health **3 credits**

An appraisal of man's surroundings which influence his health, including an introduction to the societal structure designed to cope with health problems. Of particular benefit to those who plan to major in the social sciences or enter the field of public health. GT-SC2

BIOL 201 Introduction to Microbiology (with laboratory) **4 credits**

A study of the basic aspects of microbiology for allied health students that includes an introduction to the identification, physiology, growth and control of microbes. Laboratory exercises will emphasize aseptic, pure culture, and identification techniques. This course can only be used to fulfill graduation requirement for students in the allied health biology emphasis.

BIOL 297 Special Topics **1-6 credits**

BIOL 300 Basic Nutrition **3 credits**

An introduction to the science of human nutrition. Consideration is given to the chemical nature and functions of the major groups of nutrients, the function of the digestive system, energy, metabolism and balance, weight control, and nutrition for fitness. Human nutrition during the life span is also addressed. Prerequisites: BIOL 130 or BIOL 150; and CHEM 101 or CHEM 111.

BIOL 301 General Ecology **3 credits**

An introduction to basic ecological principles and their relationships to natural systems. Human impact on the natural systems is

assessed. Prerequisite: BIOL 150 and BIOL
151. Prerequisite or corequisite: COM 202.

BIOL 302 Ecology Laboratory and Recitation **2 credits**
An experimental approach in both field and laboratory to explore fundamental ecological principles. Students gather and analyze data to address ecological hypotheses, learn practical ecological skills (performing field techniques, using statistical and graphical tools, and interpreting ecological software), and develop oral and written communication skills. Prerequisites: BIOL 150, BIOL 151, and CHEM 113. Prerequisite or corequisite: BIOL 301.

BIOL 310 Cell Biology **3 credits**
An introduction to cellular function and structure. Prerequisites: BIOL 150 and BIOL 151. Prerequisite or corequisite: CHEM 231 or CHEM 331; and COM 202.

BIOL 312 Genetics (with recitation) **4 credits**
A course in Mendelian inheritance, linkage, chromosomal aberrations, molecular genetics, gene regulation, genetic engineering, and population genetics. Prerequisites: BIOL 301, BIOL 310, CHEM 231, and CHEM 234; or CHEM 331.

BIOL 313 Cell and Genetics Laboratory **2 credits**
An introduction to experimentation and laboratory techniques used in cell biology, physiology, and genetics, including experimental design, data analysis, and presentation of research results. Prerequisite or corequisite: BIOL 312.

BIOL 320 Ornithology (with laboratory and recitation) **4 credits**
An introduction to the study of bird evolution, ecology, and conservation. This course has a strong field component providing frequent opportunities to observe birds in their native environments. Prerequisite: BIOL 301 or instructor permission.

BIOL 322 Mammalogy (with laboratory and recitation) **4 credits**
An introduction to the study of mammal taxonomy, evolution, ecology and conservation. Prerequisite: BIOL 301 or instructor permission.

BIOL 327 Field Entomology (with laboratory) **4 credits**
An introduction to the world of the most diverse and abundant form of animal life on Earth through an experiential, field, and laboratory class. The course emphasizes field study, collection and preservation, identification, ecology, and natural history. Prerequisite: BIOL 301 or instructor permission.

BIOL 342 Microbiology (with laboratory) **4 credits**
An introduction to microbial morphology, identification, physiology, genetics, and microbiology laboratory techniques. A brief consideration is given to fungi. Prerequisites: Biology Nucleus.

BIOL 352 Botany (with laboratory) **4 credits** Using field and laboratory experiences this course explores the diversity within the plant kingdom using a comparative approach to examine evolutionary trends and relationships. Students are introduced to the structure and function of plants through an investigation of plant cells, tissues, organs, and basic physiological processes. Economic importance, human uses, and significance of plants to society are emphasized. Prerequisites: BIOL 150, BIOL 151, and ENG 102; or instructor permission.

BIOL 353 Rocky Mountain Flora **3 credits**
A field and laboratory course focusing on identification of flowering plants common to the Western Slope of the Colorado Rocky Mountains. This course covers methods of plant collection and preservation, field identification, natural history, and ecology as well as local plants of particular human interest, including those that are medically important, edible, and are poisonous. Prerequisites: BIOL 150 and BIOL 151; or instructor permission.

BIOL 362 Evolutionary Biology –Theory and Application **3 credits**
This course provides a comprehensive overview of evolutionary processes and mechanisms within an applied framework. Evolutionary perspectives in human health and medicine, environmental and conservation biology, agriculture and natural resource management, and biotechnology are covered. Topics include organismic adaptions to changing environments and long-term responses to environmental perturbation, and insights into many issues of growing social importance such as climate change, land use change, and emerging diseases. Prerequisites: BIOL 312; or ENVS 350, ENVS 370, ENVS 390, and either BIOL 151 or both BIOL 130 and BIOL 135; or instructor permission.

BIOL 372 Human Anatomy and Physiology I (with laboratory) **4 credits**
An introduction to regulatory mechanisms which maintain normal body function. Specific topics include cytology, histology, integumentary system, skeletal system, muscular system, and nervous system. The course is designed for allied health and exercise and sport science students. Prerequisites: BIOL 150; CHEM 231 or CHEM 111.

BIOL 373 Human Anatomy and Physiology II (with laboratory) **4 credits**
A continuation of BIOL 372 Human Anatomy and Physiology I. Specific topics include immunology, cardiovascular system, respiratory system, digestive system, excretory system, reproductive system, and endocrine system. Prerequisite: BIOL 372.

BIOL 392 Independent Study in Biology **1-4 credits**
A study in a specific area of biology under the direction of a faculty member. May be taken for a maximum of four credits. Graded Satisfactory/Unsatisfactory only.

BIOL 397 Special Topics **1-6 credits**

BIOL 398 Biology Teaching Practicum **1 credit**
Under faculty supervision, students participate in the development of laboratory and field experience exercises, as well as in their instruction and execution. Specifically designed for students serving as teaching assistants in Biology. May be taken for a maximum of 3 credits. Graded Satisfactory/Unsatisfactory only. Prerequisite: BIOL 150, BIOL 151, and instructor permission.

BIOL 420 Molecular Biology (with laboratory) **4 credits**
A study of the molecular mechanisms by which cellular processes are controlled in prokaryotic and eukaryotic cells. Topics include the biochemistry of macromolecular processes, the structure of genes and chromosomes, the genetic and molecular techniques used

to study gene expression, and the transcriptional and translational control of gene expression. The laboratory includes recombinant DNA techniques to manipulate the genome of a model organism. Prerequisites: BIOL 312 and CHEM 471.

BIOL 430 Wildlife Ecology and Management (with laboratory) **4 credits**

Principles of ecology are applied to population and habitat management towards wildlife conservation. Tools used by wildlife biologists to restore endangered species, harvest sustainable populations, reduce overpopulated species, and to monitor and study populations are emphasized. Habitat management approaches are discussed, along with human dimensions in wildlife conservation. A field component allows students to investigate wildlife populations and habitat issues in the Gunnison Basin. Prerequisite: BIOL 301 or instructor permission. Co-requisite: BIOL 431.

BIOL 431 Wildlife Techniques Workshop **1 credit**

A one week intensive field course focuses on wildlife conservation issues and wildlife management techniques such as trapping and marking wildlife, radio telemetry, population monitoring, GPS and GIS, and wildlife conflict resolution. The course includes a trip outside the basin; a field trip course fee is required. Prerequisite: BIOL 301 or instructor permission. Co-requisite: BIOL 430.

BIOL 435 Animal Behavior **3 credits**

An introduction to the study of animal behavior. This course emphasizes the importance of ecology and evolution in understanding animal behavior. Prerequisites: Biology Nucleus; or instructor permission.

BIOL 440 Conservation Biology **3 credits**

This course addresses the reduction in biological diversity of the planet and suggested solutions to prevent further reduction. Integrating themes are drawn from scientific disciplines such as population genetics, ecology, evolutionary biology, botany, zoology, molecular biology, biochemistry, and wildlife management. Prerequisites: BIOL 312; or ENVS 350, ENVS 370, ENVS 390, and either BIOL 151 or both BIOL 130 and BIOL 135; or instructor permission.

BIOL 444 Colorado Ecoregions **3 credits**

A survey of the three main ecoregions of Colorado including the Great Plains, the Southern Rocky Mountains, and the Colorado Plateau. Students travel throughout Colorado and explore the ecology and natural history of the ecosystems by hiking, back- packing, and river rafting. Content includes an evolutionary perspective on ecosystem features and the adaptations of species characterizing each system, as well as applied issues in natural resources management. Prerequisite: BIOL 301 or instructor permission.

BIOL 454 Developmental Biology (with laboratory) **4 credits**

An examination of the embryology of vertebrates, stressing mammalian embryonic development and comparisons with amphibians, reptiles, and birds. Prerequisite: BIOL 312.

BIOL 467 Fisheries Biology **3 credits**

An introduction to the science underlying fisheries and their management. Topics will include the morphology, evolution, ecology, behavior and conservation of fishes, including experimental design, data analysis and communication of results focusing primarily on freshwater fisheries and common fishes of Colorado. Marine fisheries will be covered briefly. Credit: 3 hours. Prerequisites: BIOL 301 or instructor permission.

BIOL 474 Comparative Animal Physiology (with laboratory) **4 credits**

An analysis of function in invertebrates and vertebrates, utilizing an environmental approach and emphasizing evolutionary trends in physiological systems. Prerequisites: Biology Nucleus, SCI 202, and PHYS 140.

BIOL 476 Aquatic Ecology (with laboratory) **4 credits**

A study of physical, chemical, and biological parameters of lakes and streams in the functioning of freshwater eco-systems. Prerequisite: BIOL 301 or GEOL 320; or instructor permission.

BIOL 477 Plant Ecology (with laboratory) **4 credits**

An introduction to plant populations and communities, including their role within terrestrial ecosystems. Prerequisite: BIOL 301 or instructor permission.

BIOL 481 Forest Ecology (with laboratory) **4 credits**

Ecology of forest species, communities, landscapes, and ecosystems, with a focus on the Gunnison Basin. Topics include tree physiology, species interactions, fire and disturbance, succession, forest types, climate, forest management and restoration. Labs and field trips will provide hands-on experience and practical skills in tree identification, forest mensuration, vegetation sampling, statistics and GIS. Students will develop and conduct independent/group research projects. Prerequisites: BIOL 301, MATH 213.

BIOL 495 Senior Seminar **1 credit**

An examination of biological subdisciplines through an investigation of the primary literature. The professional practices, procedures, and standards of the subdiscipline are discussed. This course may be repeated for credit and must be taken twice to fulfill the capstone course requirement. Graded Satisfactory/ Unsatisfactory only. Prerequisites: Biology Nucleus and MATH 213.

BIOL 496 Senior Thesis **2-4 credits**

An advanced research experience resulting in a Senior Thesis, supervised by a thesis committee of three faculty members including at least one biologist. A proposal of the project must be approved by the thesis committee prior to project initiation. In addition to completing the written thesis, students must present the results of their work in a departmental seminar. This course satisfies the capstone course requirement. Graded Satisfactory/Unsatisfactory only. Prerequisites: Biology Nucleus, and MATH 213.

BIOL 497 Special Topics **1-6 credits**

BUSINESS ADMINISTRATION (BUAD)

The Business Administration Program is designed to produce graduates who possess skills and abilities needed to succeed in the business world of the 21st century. An emphasis is placed on critical thinking skills, communication skills, liberal arts breadth, and the fundamental business concepts essential for successful careers in business. Each of the degree options is organized to develop a thorough understanding of the fundamental concepts of business. In addition to conceptual knowledge, each student develops the ability to apply specific principles in a specialty of the student's choosing. These principles are taught through a program that has three essential elements.

The Base Curriculum consists of a group of courses mainly outside of the Business area that covers the basic competencies needed to succeed in the upper-division Business requirements. These courses have been selected to ensure basic knowledge in the areas of communication, reasoning, and critical thinking required for upper-division study. The second element is the Business Administration Nucleus, comprised of a core of Business courses focusing on principles in the areas of communication, marketing, management, and law. These courses form the fundamental business concepts required in all emphasis areas and represent the bulk of the requirements for the Standard Program in Business Administration.

The third element consists of a group of courses in the area in which the student wishes to acquire additional technical skills. In the Standard Program, the courses are in an area out-side of Business Administration where the student is required to attain at least a minor. In the other emphasis areas offered by the department (management, marketing, entrepreneurship, Latin American business, professional land and resource management, and resort management), the student has additional requirements that develop skills necessary to succeed in the chosen area.

The Management Emphasis provides opportunities to develop the necessary expertise to enter a training program for managerial-level employees in any size business. These courses place emphasis on learning both essential management principles and their application in the highly competitive world of business.

The Marketing Emphasis is designed to prepare students for entry-level positions in strategic marketing, sales, marketing research, and promotion. Students are encouraged to relate their studies in related disciplines, such as Communications and Economics, to the study of marketing.

The Entrepreneurship Emphasis is structured to develop graduates with the skills and competencies to create and successfully manage a small-business enterprise. The program of study is intentionally broad-based to minimize the threats and problems commonly associated with start-up businesses. These courses address both theoretical underpinnings and practical applications of those areas of business of significant importance to entrepreneurs.

The Latin American Business Emphasis prepares students for entry-level positions in international organizations that specialize in Latin America. The program is highly interdisciplinary with a solid business core. In addition to business fundamentals, the student will develop an understanding of the predominant language and culture of Latin America and its history, together with the broad concepts of international economics.

The Professional Land and Resource Management Emphasis is designed to prepare students for entry-level positions as land negotiators. Students learn land and resource management principles through knowledge and perspectives of business administration, economics, geology, and environmental studies. The program is designed to prepare students to work in the business side of energy and mineral exploration.

The Resort Management Emphasis prepares students for entry-level management positions in the hospitality industry. With a solid foundation in business, a student is well prepared to succeed in specific courses in resort management and equipped with employment-ready skills upon graduation. Students are required to complete 400 hours of work experience in the industry prior to graduation to provide practical experience in the field.

Graduate study in business (MS or MBA) is possible regardless of undergraduate major. However, students lacking sufficient quantitative and analytical skills may find it difficult at best. These skills can be acquired by completing the Base Curriculum previously described and by adding a higher level math class than required for the undergraduate degree.

To graduate, all business majors must have a "C-" or better in all courses required in the major.

FACULTY

Professors Michaela C. Driver, Kevin A. Nelson, and Michael Vieregge;
Assistant Professors Jeffrey Dykes, Christopher W. Greene, and Joel Watson;
Lecturer Menon Billingsley, Doug MacGregor, Jim McDonald, Paul Fitzgerald, Luke Danielson, and Greg Salsbury.

DESCRIPTION OF THE PROGRAMS

All Business Administration majors must complete the Base Curriculum, which requires a minimum of 18 credits. Students majoring in Business Administration should complete this base curriculum before enrolling in 300- or 400-level BUAD courses. Discuss specific exceptions with your advisor before enrolling in 300- or 400-level BUAD courses.

Base Curriculum

ACC 201 Introduction to Financial Accounting	3 cr
ACC 202 Introduction to Managerial Accounting	3 cr
ECON 202 Microeconomics	3 cr
One of the following mathematics courses:	
MATH 140 College Algebra	3 cr
MATH 141 Precalculus	3 cr
MATH 151 Calculus I	4 cr
One of the following:	
BUAD 220 Computer Applications in Business	3 cr

CS 120 Information Management and Analysis	3 cr
One of the following:	
MATH 213 Probability and Statistics	3 cr
ECON 216 Statistics for Business and Economics	3 cr

The 15-credit Business Administration Nucleus forms the core for each of the emphasis areas and also comprises the bulk of the Standard Program. It is important that the student achieve a high level of understanding of the basic fundamental concepts represented by these courses to be successful in the completion of the required upper- level course work and in their business career. If BUAD 350 Human Resource Management is used to satisfy the requirements of the Business Administration Nucleus, then it cannot be used to satisfy the elective requirement within the major.

Business Administration Nucleus

BUAD 210 Legal Environment of Business	3 cr
BUAD 270 Principles of Marketing	3 cr
BUAD 309 Business Communication	3 cr
BUAD 360 Managerial Finance	3 cr
One of the following:	
BUAD 333 Organizational Behavior	3 cr
BUAD 350 Human Resource Management	3 cr

Business Administration Major: Standard Program

The Standard Program requires a minimum of 45 credits including the 18-credit Base Curriculum, the 15-credit Business Administration Nucleus, BUAD 491 Strategic Management, and nine credits of Business Administration electives. At least six credits of the nine credits must be upper-division Business Administration electives, and no more than three credits may be from: BUAD 100 Business in Society, BUAD 150 Introduction to Hospitality, or BUAD 499 Internship in Business Administration. Electives should be chosen in consultation with an advisor. BUAD 397 or BUAD 497 special topics courses are allowed to count toward the nine-credit requirement only with departmental approval.

Business Administration and Environmental Studies Coordinated Double Major: If a student elects to complete a Business Administration Major: Standard Program and the coordinated Environmental Studies Major: Standard Program, the student must complete the nine credits of upper-division Business Administration electives by taking ECON 370 Natural Resource Economics, BUAD 363 Business and the Environment, and BUAD 410 Water and Environmental Law.

Business Administration Major: Comprehensive Programs

MANAGEMENT EMPHASIS

A minimum of 57 credits is required, including the 18-credit Base Curriculum, the 15- credit Business Administration Nucleus (students must take BUAD 333 in the Nucleus), and the following courses:

BUAD 311 Essential Excel Skills for the Workplace	1 cr
BUAD 312 Advanced Excel Applications	2 cr
BUAD 350 Human Resource Management	3 cr
BUAD 375 Innovation, Creativity, and Entrepreneurship: Toolkit	3 cr
BUAD 491 Strategic Management	3 cr
ECON 201 Macroeconomics	3 cr
Three of the following electives:	
BUAD 100 Business in Society	3 cr
BUAD 150 Introduction to Hospitality	3 cr
BUAD 300 Business Ethics	3 cr
BUAD 315 Business Law	3 cr
BUAD 325 Management Information Systems	3 cr
BUAD 335 Marketing Communications	3 cr
BUAD 337 Hospitality Law and Risk Management	3 cr
BUAD 340 Global Business	3 cr
BUAD 345 Consumer Behavior	3 cr
BUAD 499 Internship in Business Administration	3 cr
ECON 303 International Economics and Globalization	3 cr

No more than three credits from BUAD 100 Business in Society, BUAD 150 Introduction to Hospitality, or BUAD 499 Internship in Business Administration may be used to satisfy the elective requirement.

MARKETING EMPHASIS

A minimum of 57 credits is required, including the 18-credit Base Curriculum, the 15- credit Business Administration Nucleus, and the following courses:

BUAD 335 Marketing Communications	3 cr
BUAD 340 Global Business	3 cr
BUAD 345 Consumer Behavior	3 cr
BUAD 425 Marketing Research	3 cr
BUAD 491 Strategic Management	3 cr

Three of the following electives:

BUAD 100 Business in Society	3 cr
BUAD 150 Introduction to Hospitality	3 cr
BUAD 300 Business Ethics	3 cr
BUAD 311 Essential Excel Skills for the Workplace	1 cr
BUAD 312 Advanced Excel Applications	2 cr
BUAD 315 Business Law	3 cr
BUAD 325 Management Information Systems	3 cr
BUAD 350 Human Resource Management	3 cr
BUAD 499 Internship in Business Administration	3 cr
CS 160 Introduction to Web Design	3 cr
COM 372 Issues Management	3 cr
ECON 201 Macroeconomics	3 cr

No more than three credits from BUAD 100 Business in Society, BUAD 150 Introduction to Hospitality, or BUAD 499 Internship in Business Administration may be used to satisfy the elective requirement.

ENTREPRENEURSHIP EMPHASIS

Admission to the program: All students who wish to major in the Entrepreneurship emphasis in Business Administration must be formally admitted to the program. For admission, a student must complete and submit an application for admission.

A minimum of 60 credits is required, including the 18-credit Base Curriculum, the 15-credit Business Administration Nucleus, and the following:

ACC 350 Income Tax	3 cr
BUAD 275 Innovation, Creativity, and Entrepreneurship: Mindset	3 cr
BUAD 315 Business Law	3 cr
BUAD 375 Innovation, Creativity, and Entrepreneurship: Toolkit	3 cr
BUAD 494 Innovation, Creativity, and Entrepreneurship: Launch	3 cr
One of the following:	
BUAD 335 Marketing Communications	3 cr
BUAD 345 Consumer Behavior	3 cr
Three of the following electives:	
BUAD 100 Business in Society	3 cr
BUAD 150 Introduction to Hospitality	3 cr
BUAD 300 Business Ethics	3 cr
BUAD 311 Essential Excel Skills for the Workplace	1 cr
BUAD 312 Advanced Excel Applications	2 cr
BUAD 340 Global Business	3 cr
BUAD 350 Human Resource Management	3 cr
BUAD 425 Marketing Research	3 cr
BUAD 491 Strategic Management	3 cr
BUAD 499 Internship in Business Administration	3 cr
ECON 201 Macroeconomics	3 cr
ECON 302 Intermediate Microeconomics	3 cr

No more than three credits from BUAD 100 Business in Society, BUAD 150 Introduction to Hospitality, or BUAD 499 Internship in Business Administration and no more than one economics course, ECON 201 Macroeconomics or ECON 302 Intermediate Microeconomics, may be used to satisfy the elective requirement.

LATIN AMERICAN BUSINESS EMPHASIS

A minimum of 60 credits is required including the 18-credit Base Curriculum, the 15- credit Business Administration Nucleus, and the following courses:

BUAD 340 Global Business	3 cr
BUAD 491 Strategic Management	3 cr
ECON 201 Macroeconomics	3 cr
ECON 303 International Economics and Globalization	3 cr
HIST 260 Latin American History (or another appropriate History course)	3 cr
Three credits of the following:	
BUAD 311 Essential Excel Skills for the Workplace	1 cr
BUAD 312 Advanced Excel Applications	2 cr
BUAD 335 Marketing Communications	3 cr
BUAD 345 Consumer Behavior	3 cr
BUAD 350 Human Resource Management	3 cr
Three of the following, based on proficiency:	
SPAN 101 Elementary Spanish I	3 cr
SPAN 102 Elementary Spanish II	3 cr

SPAN 254 Intermediate Spanish I	3 cr
SPAN 255 Intermediate Spanish II	3 cr
SPAN 341 Latin American Civilization and Culture	3 cr
SPAN 342 Mexican Civilization and Culture	3 cr

PROFESSIONAL LAND AND RESOURCE MANAGEMENT EMPHASIS

Admission to the program: All students wishing to major in the Professional Land and Resource Management Emphasis (PLRM) emphasis in Business Administration must be formally admitted to the program. Students who have already completed a BA/BS in Business or Accounting will be considered to have completed the Base Curriculum, Business Administration Nucleus, and BUAD 491.

A minimum of 72 credits is required, including the 18-credit Base Curriculum, the 15- credit Business Administration Nucleus, and the following courses:

BUAD 202 PLRM Professional Development I	1 cr
BUAD 302 PLRM Professional Development II	1 cr
BUAD 305 Applied Energy Seminar	3 cr
BUAD 320 Petroleum Land Management	3 cr
BUAD 330 Mining Land Management	3 cr
BUAD 410 Water and Environmental Law	3 cr
BUAD 420 Oil and Gas Law and Contracts	3 cr
BUAD 491 Strategic Management	3 cr
BUAD 499 Internship	3 cr
ECON 370 Natural Resource Economics	3 cr
ENVS 350 U.S. and Western Environmental Politics	3 cr
GEOG 340 Introduction to Geographic Information Systems	3 cr
GEOL 101 Physical Geology	3 cr
GEOL 105 Physical Geology Laboratory	1 cr
GEOL 240 Introduction to Petroleum and Mining Geology	3 cr

A grade of "C" or above must be attained in all PLRM emphasis area courses. Students may take both BUAD 202 and BUAD 302 depending on when they enter Western and PLRM. Take these in consultation with your PLRM advisor.

RESORT MANAGEMENT EMPHASIS

A minimum of 60 credits is required, including the 18-credit Base Curriculum, the 15- credit Business Administration Nucleus, and the following 27 credits:

BUAD 150 Introduction to Hospitality	3 cr
BUAD 331 Food & Beverage Management	3 cr
BUAD 332 Rental & Retail Management	3 cr
BUAD 334 Lodging Operations	3 cr
BUAD 337 Hospitality Law and Risk Management	3 cr
BUAD 363 Business and the Environment	3 cr
BUAD 482 Hospitality Operations Management	3 cr
BUAD 491 Strategic Management	3 cr
One of the following:	
BUAD 345 Consumer Behavior	3 cr
BUAD 350 Human Resource Management	3 cr
BUAD 499 Internship in Business Administration	3 cr
ROE 398 Program Planning	3 cr

Business Administration Minor

A minimum of 18 credits is required, including one upper-division Business Administration elective and the following:

ACC 201 Introduction to Financial Accounting	3 cr
BUAD 210 Legal Environment of Business	3 cr
BUAD 270 Principles of Marketing	3 cr
BUAD 309 Business Communication	3 cr
One of the following:	
BUAD 100 Business in Society	3 cr
BUAD 150 Introduction to Hospitality	3 cr

Capstone Course Requirement. The following courses in the Business Administration Major fulfill the capstone course requirement: BUAD 491 Strategic Management (Standard Major or Management, Marketing, Latin American Emphases) or BUAD 494 (Entrepreneurial Analysis and Consulting (Entrepreneurship Emphasis).

BUSINESS ADMINISTRATION COURSES

BUAD 100 Business in Society **3 credits**
A study of the role of business in modern society. Topics include the private enterprise system, consumerism, management functions, major functional areas of large business, vital areas of small-business operation, and the environment of business.

BUAD 101 Business of Life **3 credits**
This course helps students begin building the foundations of four critical life skills: economic decision making, managing personal finances, personal branding and creating change. Students learn the basics of objective decision making, managing budgets and filing income taxes, creating and projecting a personal image, and using creativity and innovation within organizations and personal lives.

BUAD 150 Introduction to Hospitality **3 credits**
An introduction to hospitality management, including historical developmental pat- terns, current business trends, and future international expectations. Current job market, working environments, personal risks, and rewards are explored.

BUAD 197 Special Topics **1-6 credits**

BUAD 202 PLRM Professional Development **1 credit**
This course designed specifically for petroleum land management students. It is intended to provide students with hands on, real world professional awareness.

BUAD 206 Personal Finance **3 credits**
Designed to help students plan the handling of their finances in everyday business transactions. Topics include budgeting, credit, savings, insurance, income tax, investments, and estate planning.

BUAD 210 Legal Environment of Business **3 credits**
Provides students an ability to sense the occasions when a lawyer should be consulted for guidance in avoiding legal mistakes. A study is made of the ordinary legal aspects of common business transactions, including the topics of social forces, contracts, personal property, and agency.

BUAD 220 Computer Applications in Business **3 credits**
Designed to teach students to apply a variety of interdisciplinary computer applications in their business professions. Topics include integrating word processing, spreadsheets, databases, communications, and graphics on personal computers. A minimal skill in keyboarding is required.

BUAD 270 Principles of Marketing **3 credits**
An introduction to the fundamental concepts of marketing, including consumer demand and behavior, segmentation, advertising, marketing research, product development, distribution, pricing, the internet as a marketing agent, and global marketing issues. The student is exposed to the most basic tools, factors, and marketing principles administered by management in establishing policy, planning, and complex problem solving. Prerequisites: ENG 102 with a minimum grade of "C-" and completion of at least 24 credits; or instructor permission.

BUAD 275 Innovation, Creativity and Entrepreneurship: Mindset (ICE: Mindset) **3 credits**
The ICE mindset comprises the underlying beliefs and assumptions that drive the behavior enabling people to create positive change. This course takes the approach that anyone (not just those who want to start businesses) can benefit from understanding and applying an innovative, creative, and entrepreneurial mindset to any situation that demands change in their life. Students are immersed in learning about the fundamental aspects of an ICE mindset and the unlimited opportunities it can provide.

BUAD 297 Special Topics **1-6 credits**

BUAD 300 Business Ethics **3 credits**
A study of how ethics apply to business organizations today. Special emphasis is placed on developing moral reasoning. The course provides multiple perspectives on actual cases and ethical dilemmas faced by organizations with an emphasis on allowing students to think through ethical problems. Topics studied include moral philosophies, moral agency and development, ethical underpinnings of free markets and Economic a systems, and ethical concerns with the environment, future generations, and other stakeholders such as employees and consumers. Prerequisites: completion of Base Curriculum; BUAD 309 or COM 202; or instructor permission.

BUAD 301 Topics in Business Administration **1-6 credits**
Provides an opportunity for students to examine current issues, topics, problems, and trends within the field.

BUAD 302 PLRM Professional Development II **1 credit**
This course is designed specifically for petroleum land management students. It is intended to provide students with hands on, real world professional awareness. Prerequisite: Junior or senior standing.

BUAD 305 Applied Energy Seminar **3 credits**
Introduction to the energy industry, including petroleum, minerals, wind, solar, and alternative fuels. Includes the history of the energy industry and provides basics in exploration, production, transportation and refining. Electricity generation and transmission is explored and global energy concepts are discussed. Prerequisite: admission into the PLRM program or instructor permission.

BUAD 309 Business Communication **3 credits**
A study of the fundamentals, principles, and practices of effective written communication, including concepts of appearance, language, and psychology of tone and persuasiveness as applied to the business letter, memorandum, and report. Presentation skills are also discussed. Prerequisites: ENG 102 with a minimum grade of "C-"; sophomore standing.

BUAD 311 Essential Excel Skills for the Workplace **1 credit**
This course prepares the student for Microsoft Excel Office Specialist certification. This covers all of the topics tested by the certifying examination including managing worksheets and workbooks, applying formulas and functions, analyzing and organizing data, visual presentation of data, and sharing worksheet data with others. Prerequisites: university-level mathematics requirement with a minimum grade of "C-" or instructor permission.

BUAD 312 Advanced Excel Applications **2 credits**
This course emphasizes the use of computer spreadsheets to organize, analyze and present quantitative information to aid managerial

decision-making. The course exercises include examples from several disciplines including business, energy and environmental impact analysis, natural sciences, and social sciences. Specific topics include business planning and budgeting, capital budgeting and net present value analysis, time value of money, cost/benefit analysis, goal seeking, scenario planning, and pivot tables. Prerequisites: BUAD 311, Excel Office Specialist certification, or instructor permission.

BUAD 315 Business Law **3 credits**

Study includes: sales, commercial paper, secured transactions, corporations, partnerships, estates, trusts, and agency. Prerequisite: BUAD 210.

BUAD 320 Petroleum Land Management **3 credits**

Introduction to the field of land management in the petroleum industry. Covers the necessary knowledge and skills of the petroleum land professional, both in the U.S. and internationally. Topics include land survey systems, mineral ownership and severance, as well as oil and gas leases. Examines other oil and gas exploration and development phases. State and federal leasing is covered. Prerequisites admission into the PLRM program, or instructor permission.

BUAD 325 Management Information Systems **3 credits**

A study of how managers can and should be involved with systems planning, development, and implementation; what information systems resources are available to managers for decision support; and how information and technology can be used to support business strategy. Also, this course takes a managerial approach to information systems concepts and applications in business, while exposing the student to various types of software in the business sector. Prerequisite: BUAD 220 or CS 120.

BUAD 330 Mining Land Management **3 credits**

An introduction to the field of land management in the mining industry both in the U.S. and internationally. Includes fundamentals of mining geology and technical operations as well as fundamentals of the Mining Act of 1872 and its amendments and interpretation. Emphasis is on the role of the mining land negotiator including lands available for mining, surface inspections, private leasing or purchasing, public lands leasing, negotiation and land maintenance. The concept of permitting is also introduced. Prerequisites: admission into the PLRM program; BUAD 305; BUAD 320; or instructor permission.

BUAD 331 Food and Beverage Management **3 credits**

Prepares students for management of sales, food cost controls, beverage cost controls, labor, personnel, sanitation, and market analysis as they relate to the resort industry. Prerequisites: completion of Base Curriculum; BUAD 150; or instructor permission.

BUAD 332 Rental and Retail Management **3 credits**

An introduction to operating rental and retail-profit centers as part of a corporation involved in the resort industry. Topics covered include managing personnel, equipment, training, traffic flow, buying, forecasting, and accounting. Prerequisites: completion of Base Curriculum; BUAD 150; or instructor permission.

BUAD 333 Organizational Behavior **3 credits**

Provides students an understanding of human behavior in organizations today. Students will become familiar with the basic dimensions of organizational behavior covering topics such as leadership, motivation, management of people, and group dynamics. The course stresses an experimental approach as well as the personal nature of the material and how this relates to the complexities of behavior in and of organizations. Prerequisite: BUAD 309 or COM 202; or instructor permission.

BUAD 334 Lodging Operations **3 credits**

A focus on organizational structure and front office positions. Topics covered include reservation, registration and rooming process; management, financial, and policy control procedures; and organization, staffing, and functions of housekeeping departments. Prerequisite: completion of Base Curriculum; BUAD 150; or instructor permission.

BUAD 335 Marketing Communications **3 credits**

Advertising, sales promotions, media utilization, public relations, and personal selling are highlighted in this course. Legal regulations and ethical considerations in mass media advertising and promotions are also covered. Finally, the student is exposed to the principles of planning and budgeting for such media events. Prerequisites: MATH 140, MATH 141, or MATH 151 with a minimum grade of "C-"; ACC 201 with a minimum grade of "C"; BUAD 270; or instructor permission.

BUAD 337 Hospitality Law and Risk Management **3 credits**

Provides an awareness of the rights and responsibilities that the law grants to or imposes upon a hotelkeeper and illustrates the possible consequences of failure to satisfy legal obligations. Also included is risk management as a means of mitigating exposure to lawsuits and fines. Prerequisites: BUAD 150; BUAD 210; or instructor permission.

BUAD 340 Global Business **3 credits**

An advanced course with application of management and marketing principles to the inter-national marketplace. Cultural, political, and geographic differences are analyzed in order to develop market strategies for global markets. Prerequisite: BUAD 309 or COM 202; or instructor permission.

BUAD 345 Consumer Behavior **3 credits**

Utilizing theories from the behavioral sciences, this course provides an in-depth examination of the individual customer learning and decision-making processes, segmentation, as well as culture, subculture, and social class relationships with marketing. Students develop an understanding of consumers' shopping behavior, utilization of different marketing channels, perception of products, and reactions to advertising and other selling methods. Prerequisites: completion of Base Curriculum; BUAD 270; or instructor permission.

BUAD 350 Human Resource Management **3 credits**

Provides students with an understanding of the functions, content and challenges of Human Resource Management (HRM) in organizations today. Insights will be developed on basic dimensions of HRM such as recruitment, selection, performance management, rewards and retention, as well as particular challenges concerning strategic HRM and global environments. Emphasis is placed on how the complexities of HRM relate to students' past and future experiences as members of organizations. Prerequisite: BUAD 309 or COM 202; or instructor permission.

BUAD 360 Managerial Finance **3 credits**

An introductory course to the field of managerial finance, covering such topics as financial analysis, time value of money, risk/return analysis, capital budgeting, working capital management, cost of capital, and optimal capital structure. Prerequisite: completion of Base Curriculum; or instructor permission.

BUAD 363 Business and the Environment **3 credits**

A focus on the impact on the environment of human presence and absence. There is a consideration of various 'green practices' that result in both positive environmental impacts and cost savings to industry, and examination of governmental initiatives regarding various business practices and their expected impacts on the environment, on businesses' bottom lines, and on consumers. Course material emphasizes videos, readings, and guest lectures. Prerequisite: completion of Base Curriculum; or instructor permission.

BUAD 375 Innovation, Creativity, and Entrepreneurship: Toolkit (ICE: Toolkit) **3 credits**

This course helps students identify and frame business and other societal problems that are characterized by complexity, uncertainty, volatility, and ambiguity. Students learn to think problems through by understanding the situation and framing problems in new ways that might alter how they generate and evaluate solutions. Prerequisite: ACC 201; BUAD 275; or instructor permission.

BUAD 397 Special Topics **1-6 credits**

Prerequisite: completion of Base Curriculum; or instructor permission.

BUAD 410 Water and Environmental Law **3 credits**

A comprehensive case law study of water and environmental law, addressing the historical development of the riparian, prior appropriation, Federal and Indian water rights doctrines, and the emergence of Federal and State environmental law and policy, specifically addressing how water law and environmental law interface with and impact each other. This course will develop a knowledge base fundamental to the preparation of a student in the PLRM emphasis. Prerequisite: completion of Base Curriculum; or instructor permission. BUAD 210 recommended.

BUAD 420 Oil and Gas Law and Contracts **3 credits**

Includes the nature and protection of oil and gas rights, conveying oil and gas rights, oil and gas leasing, as well as tax and other business matters. Case law based study of jurisprudence affecting the oil and gas industry. Emphasis is on oil and gas titles, leases, contracts, and mineral ownership. State regulation is also emphasized and international case studies are discussed. Prerequisites: admission into the PLRM program; BUAD 305; BUAD 320; or instructor permission. BUAD 330 recommended as a corequisite.

BUAD 425 Marketing Research **3 credits**

The focus of this course is the collection, analysis, and interpretation of marketing data for reporting research information necessary to make informed marketing decisions. Students develop skills in defining research problems, designing surveys, experiments, and observational studies, managing data collection, performing data analysis, and communicating results. Prerequisites: completion of Base Curriculum; BUAD 270; or instructor permission. BUAD 335 and BUAD 345 recommended.

BUAD 461 Investments **3 credits**

A study of the many investments available for individual portfolios. Emphasis is placed on the risks inherent in investments and the methods and techniques of analysis used in selecting securities for investments. Prerequisite: completion of Base Curriculum; BUAD 360; or instructor permission.

BUAD 482 Hospitality Operations Management **3 credits**

An integration of management functions learned in previous classes into a workable approach to profitable resort operations. Students are encouraged to take this course during their last semester; graduating seniors are given priority in enrollment. Prerequisite: completion of Base Curriculum; BUAD 331; BUAD 332; BUAD 334; BUAD 337; BUAD 360; or instructor permission.

BUAD 485 Quantitative Decision Making **3 credits**

A course in managerial decision making that emphasizes the use of computer spreadsheets to organize, analyze, and present quantitative information to aid managerial decision-making. The course includes quantitative topics from a wide variety of business functions, including production, human resources, accounting, finance, marketing, and information systems. Prerequisites: completion of Base Curriculum; BUAD 360; or instructor permission.

BUAD 491 Strategic Management **3 credits**

The formal analysis of an organization's macro and industry environment; its mission and goals; and strategy formulation, implementation, and control. This is a capstone course which integrates the student's knowledge from the areas of accounting, finance, marketing, and management. Students are encouraged to take this course during their last semester; graduating seniors are given priority in enrollment. Prerequisites: completion of Base Curriculum; BUAD 309; BUAD 333 or 350; BUAD 360; and senior standing.

BUAD 492 Independent Study **1-6 credits**

A singular investigation into a unique problem to be determined jointly by the researcher and the advisor. Prerequisite: completion of Base Curriculum; or instructor permission.

BUAD 494 Innovation, Creativity, and Entrepreneurship: Launch **3 credits**

This course provides real world, hands on learning on what it's like to actually start an organization. Students talk to customers, partners, competitors, as they encounter the chaos and uncertainty of how a startup actually works. Prerequisite: Base curriculum; BUAD 275; BUAD 375; or instructor permission.

BUAD 497 Special Topics **1-6 credits**

Prerequisite: completion of Base Curriculum; or instructor permission.

BUAD 499 Internship in Business Administration **1-6 credits**

A course designed specifically for junior- and senior-level students. Internships provide guided, counseled, and progressive experience under a dual-tutelage program of a businessperson and an academician. An academically monitored activity to assure quality experience. Graded Satisfactory/Unsatisfactory only. Prerequisite: completion of Base Curriculum; or instructor permission.

CHEMISTRY (CHEM)

Chemistry is the study of the principles that govern matter and the chemical transformations of matter. This fundamental discipline plays a pivotal role in all of the sciences. In fact, life itself is essentially a complicated system of interrelated chemical processes. In the study of Chemistry, the student is exposed to atomic and molecular structure, properties of matter, chemical reactions, and spectroscopy.

A student who successfully completes the Chemistry Major gains basic theoretical knowledge and practical experimental skills in areas of inorganic, organic, analytical, physical, and biochemistry. Courses in the supporting areas provide a basic foundation in calculus, physics, and subjects necessary to understanding modern chemical concepts. Coordinated laboratory experiences reinforce concepts presented in lecture classes. Students also benefit from "hands-on" use of modern chemical instrumentation and from student research, a requirement of every student majoring in Chemistry.

Knowledge of chemistry is necessary for all health and allied health professional programs, geochemistry, environmental science, and molecular biology. Students seeking entrance into professional and graduate programs in these areas are well-prepared as Chemistry majors. Employment opportunities (academic and research laboratories, governmental agencies, hazardous materials management, sales, environmental testing, and remediation) remain good for students possessing undergraduate degrees in Chemistry. Opportunities expand exponentially for those students who continue their training for a masters or doctoral degree. Chemistry graduates from Western have been successful in their careers because of the theoretical and practical training received in their areas of emphasis.

The Chemistry Major at Western consists of a comprehensive program offering three areas of emphasis selected according to the interests and career goals of the student. These emphases are: general chemistry, biochemistry, and secondary licensure.

The Secondary Licensure Emphasis in Chemistry qualifies students for the State of Colorado License in Science Education. Other Chemistry emphases may also be used for licensure but may require additional classes. In addition, the student must fulfill the requirements of the Secondary Licensure Program (see description under Education).

FACULTY

Professors Dale L. Orth and Anne W. Ryter;
Associate Professor Jason E. Mullins;
Senior Lecturer Jarral W. Ryter; Lecturer Michelle Watt.

DESCRIPTION OF THE PROGRAMS

All Chemistry Majors require the 23-credit Chemistry Nucleus.

Chemistry Nucleus

CHEM 111 General Chemistry I	3 cr
CHEM 112 General Chemistry Laboratory I	1 cr
CHEM 113 General Chemistry II	3 cr
CHEM 114 General Chemistry Laboratory II	1 cr
CHEM 306 Analytical Chemistry (with laboratory)	4 cr
CHEM 331 Organic Chemistry I	3 cr
CHEM 332 Organic Chemistry II	3 cr
CHEM 334 Organic Chemistry Laboratory I	1 cr
CHEM 335 Organic Chemistry Laboratory II	1 cr
CHEM 451 Physical Chemistry I	3 cr

Chemistry Major: Comprehensive Programs

GENERAL CHEMISTRY EMPHASIS

A minimum of 60 credits is required including the 23-credit Chemistry Nucleus and the following:

CHEM 401 Instrumental Analysis	2 cr
CHEM 402 Instrumental Laboratory	2 cr
CHEM 452 Physical Chemistry II	3 cr
CHEM 454 Physical Chemistry Laboratory	2 cr
CHEM 461 Advanced Inorganic Chemistry	3 cr
CHEM 494 Research Problems in Chemistry	2-4 cr

Required supporting courses:

MATH 151 Calculus I	4 cr
MATH 251 Calculus II	4 cr
MATH 252 Calculus III	4 cr
PHYS 200 General Physics I (with laboratory)	4 cr
PHYS 201 General Physics II (with laboratory)	4 cr
SCI 202 Scientific Writing	3 cr

BIOCHEMISTRY EMPHASIS

A minimum of 67 credits is required including the 23-credit Chemistry Nucleus and the following supporting courses:

BIOL 150 Biological Principles (with laboratory)	4 cr
BIOL 151 Diversity and Patterns of Life (with laboratory)	4 cr

BIOL 310 Cell Biology	3 cr
BIOL 312 Genetics (with recitation)	4 cr
CHEM 471 Biochemistry I	4 cr
CHEM 472 Biochemistry II	4 cr
CHEM 494 Research Problems in Chemistry	2-4 cr
MATH 151 Calculus I	4 cr
MATH 251 Calculus II	4 cr
PHYS 200 General Physics I (with laboratory)	4 cr
PHYS 201 General Physics II (with laboratory)	4 cr
SCI 202 Scientific Writing	3 cr

Note: BIOL 420 Molecular Biology I, may substitute for CHEM 472 Biochemistry II, with permission of your advisor.

SECONDARY LICENSURE EMPHASIS

Students interested in pursuing this comprehensive program should consult with the Teacher Education Program advisor in addition to the advisor in their major as soon as possible. A minimum of 67 credits is required including the 23-credit Chemistry Nucleus, the requirements for the Secondary Licensure Program (described under Education) and the following:

BIOL 150 Biological Principles (with laboratory)	4 cr
BIOL 151 Patterns and Diversity of Life (with laboratory)	4 cr
BIOL 301 General Ecology	3 cr
GEOL 101 Physical Geology	3 cr
GEOL 105 Physical Geology Laboratory	1 cr
GEOL 201 Historical Geology (with laboratory)	4 cr
MATH 151 Calculus I	4 cr
MATH 251 Calculus II	4 cr
PHYS 110 Solar System Astronomy	3 cr
PHYS 120 Meteorology	3 cr
PHYS 200 General Physics I (with laboratory)	4 cr
PHYS 201 General Physics II (with laboratory)	4 cr
SCI 202 Scientific Writing	3 cr

Chemistry Minor

The Chemistry Minor requires a minimum of 19 credits including the following:

CHEM 111 General Chemistry I	3 cr
CHEM 112 General Chemistry Laboratory I	1 cr
CHEM 113 General Chemistry II	3 cr
CHEM 114 General Chemistry Laboratory II	1 cr

And either Plan A, B, or C (below)

Plan A:

CHEM 331 Organic Chemistry I	3 cr
CHEM 332 Organic Chemistry II	3 cr
CHEM 334 Organic Chemistry Laboratory I	1 cr
CHEM 335 Organic Chemistry Laboratory II	1 cr
Chemistry elective (300-level or above)	3 cr

Plan B:

CHEM 451 Physical Chemistry I	3 cr
CHEM 452 Physical Chemistry II	3 cr
CHEM 454 Physical Chemistry Laboratory	2 cr
Chemistry elective (300-level or above)	3 cr

Plan C:

CHEM 306 Analytical Chemistry (with laboratory)	4 cr
CHEM 401 Instrumental Analysis	2 cr
CHEM 402 Instrumental Laboratory	2 cr
Chemistry elective (300-level or above)	3 cr

Capstone Course Requirement. The following courses fulfill the capstone course requirement for the Chemistry Major: CHEM 494 Research Problems in Chemistry, or EDUC 409 Secondary Student Teaching (Secondary Licensure Emphasis).

CHEMISTRY COURSES

CHEM 100 Contemporary Chemistry **3 credits**

An introductory course which addresses the basic facts and principles of chemistry, as well as the history of chemistry, practical aspects of chemistry, and relevance of chemistry. Topics covered in the course are dependent on the instructor and contemporary events. This course is designed for non-science majors without a background in chemistry or mathematics and may not be counted toward the Chemistry Major or Minor. GT-SC2

CHEM 101 Introduction to Inorganic Chemistry **3 credits**
A survey of inorganic chemistry, with an emphasis on chemical principles, atomic theory, periodic law, chemical equilibrium, equations, solutions, and descriptive chemistry of the elements. This course is designed for non-majors without a background in chemistry or mathematics and may not be counted toward the Chemistry Major or Minor. GT- SC2

CHEM 111 General Chemistry I **3 credits**
An introductory course designed for science majors focusing on principles and applications of chemistry. Topics covered are stoichiometry, bonding models, intermolecular forces, and periodic trends. Prerequisite or corequisite: MATH 140 or Accuplacer university-level mathematics test score of 85 or above, ACT math score of 24 or above, or instructor permission. GT-SC2

CHEM 112 General Chemistry Laboratory I **1 credit**
An introduction to basic laboratory techniques of inorganic chemistry correlating with CHEM 111. Experiments emphasize techniques, instrumentation, and solution chemistry. Laboratory notebook keeping and the safe handling and disposal of laboratory chemicals is also stressed. Corequisite: CHEM 111. GT-SC1

CHEM 113 General Chemistry II **3 credits**
A continuation of CHEM 111. Topics covered are thermodynamics, kinetics, equilibrium, electrochemistry, and nuclear chemistry. Prerequisite: CHEM 111.

CHEM 114 General Chemistry Laboratory II **1 credit**
A continuation of CHEM 112. An introduction to basic laboratory techniques of inorganic chemistry correlating with CHEM 113. Experiments emphasize techniques, instrumentation, and solution chemistry. Laboratory notebook keeping and the safe handling and disposal of laboratory chemicals are also stressed. Prerequisite: CHEM
112. Corequisite: CHEM 113.

CHEM 197 Special Topics **1-6 credits**

CHEM 231 Introduction to Organic Chemistry and Biochemistry **3 credits**
A descriptive survey course which introduces the essential topics and applications of organic chemistry and biochemistry. The course is designed for non-majors who need the second semester of a one-year chemistry core that includes general, organic, and biochemistry. This course may not be counted for credit toward the Chemistry Major or Minor. Prerequisite: CHEM 101 or CHEM 113.

CHEM 234 Introductory Organic and Biochemistry Laboratory **1 credit**
An introductory laboratory to accompany CHEM 231. Experiments focus on reactions of organic functional groups, organic synthesis, and the chemistry of biological molecules. This course may not be counted for credit toward the Chemistry Major or Minor. Prerequisite or corequisite: CHEM 231.

CHEM 297 Special Topics **1-6 credits**

CHEM 306 Analytical Chemistry (with laboratory) **4 credits**
A lecture/laboratory course involving principles, techniques and calculations involved with quantitative analysis of substances. Includes solution chemistry, gravimetric, volumetric, redox, and pH determinations. Prerequisites: CHEM 113 and CHEM 114.

CHEM 331 Organic Chemistry I **3 credits**
A study of saturated and unsaturated hydrocarbons. Topics include their naming, electronic structure, bonding, radioactivity, stereochemistry, and reaction mechanisms. Prerequisite: CHEM 113.

CHEM 332 Organic Chemistry II **3 credits**
A continuation of CHEM 331. This course discusses spectroscopic analysis, physical and chemical properties of organic functional groups. Emphasis includes synthesis, mechanisms, and reactions of aromatic compounds, carbonyl containing compounds, and amines. Prerequisite: CHEM 331.

CHEM 334 Organic Chemistry Laboratory I **1 credit**
An accompanying laboratory course for CHEM 331, serving as an introduction to basic macro-and micro-scale organic techniques used to separate, isolate, and characterize organic compounds. Methods utilized include distillation, extraction, chromatography, Infrared (IR) spectroscopy. Prerequisite: CHEM 114. Corequisite: CHEM 331.

CHEM 335 Organic Chemistry Laboratory II **1 credit**
A continuation of CHEM 334, with an expansion in scope that allows incorporation of more complex synthetic problems. The lab will employ the use of thin layer chromatography (TLC) to follow reaction progress along with NMR spectroscopy to determine reaction outcomes. Prerequisite: CHEM 334. Corequisite: CHEM 332.

CHEM 397 Special Topics **1-6 credits**

CHEM 401 Instrumental Analysis **2 credits**
An examination of the theory and techniques of instrumental methods of quantitative analysis, including spectrophotometric methods, electrochemical methods, and chromatography. Offered in alternate years, 2014-2015. Prerequisite: CHEM 306.

CHEM 402 Instrumental Laboratory **2 credits**
An introduction to instrumental techniques, principles, calculations, and applications for qualitative, quantitative, and structural analysis. Offered in alternate years, 2014-2015. Prerequisite or corequisite: CHEM 401.

CHEM 451 Physical Chemistry I **3 credits**
A detailed study of thermodynamics, phase equilibria, kinetic theory and chemical kinetics. Offered in alternate years, 2013-2014. Prerequisites: CHEM 113, MATH 251, and PHYS 201.

CHEM 452 Physical Chemistry II **3 credits**
A continuation of CHEM 451, which examines quantum chemistry, atomic, and molecular structure and spectra, photochemistry, and statistical mechanics. Offered in alternate years, 2013-2014. Prerequisites: CHEM 451.

CHEM 454 Physical Chemistry Laboratory **2 credits**
An experimental-techniques course in physical chemistry (including computer-assisted instruction), with emphasis on thermo-

dynamics, chemical kinetics, quantum chemistry, statistical mechanics, and spectroscopy. Offered in alternate years, 2013-2014. Corequisite: CHEM 452 or PHYS 452.

CHEM 461 Advanced Inorganic Chemistry **3 credits**

Inorganic chemistry based on principles of bonding, structure, and reaction mechanisms. Chemistry of representative and transition elements and their compounds are covered. Offered in alternate years, 2014-2015. Prerequisite: CHEM 113, SCI 202, and MATH 251

CHEM 471 Biochemistry I **4 credits**

A study of structural biochemistry and metabolism. The course begins with an overview of the aqueous environment and its effects on solutes, including biomolecules. Other subject matters include the chemistry of proteins, carbohydrates, nucleic acids, and lipids; the mechanisms and kinetics of enzymes; and the stoichiometry and chemistry underlying the core metabolic processes of photosynthesis and cellular respiration. Prerequisite: BIOL 150, CHEM 332, and SCI 202.

CHEM 472 Biochemistry II (with laboratory) **4 credits**

A continuation of CHEM 471. A study of the molecular mechanisms by which cellular processes are controlled in prokaryotic and eukaryotic cells. Topics include the biochemistry of macromolecular processes, the structure of genes and chromosomes, the genetic and molecular techniques used to study gene expression, and the transcriptional and translational control of gene expression. The laboratory includes recombinant DNA techniques to manipulate the genome of a model organism. Prerequisites: BIOL 312 and CHEM 471.

CHEM 494 Research Problems in Chemistry **1-4 credits**

An advanced, supervised laboratory or literature research experience involving methods of chemical research in an area of analytical, physical, organic, or biochemistry. A research paper and oral presentation of research results is required. Prerequisite: SCI 202.

CHEM 497 Special Topics **1-6 credits**

COMMUNICATION ARTS (COM)

All acts of communication and self-expression are performative. The media through which humanity communicates and expresses itself is constantly evolving. Effectively engaging that media becomes a key skill in remaining versatile, marketable, and relevant within the larger cultural, social, and economic landscape. An individual with a comprehensive background in Strategic Communication, Film Studies, or Theatre and Performance can more easily interpret, analyze, and participate in the collaborative arenas of organizational and interpersonal communication, emergent media, and theatrical performance; remaining a step ahead of trends instead of struggling to keep up with them. The Communication Arts major provides the fundamental analytical and practical skills necessary to facilitate life-long learning, allowing students to adapt to changes in their fields as their careers evolve. To help support this versatility, students majoring in Communication Arts may select a standard emphasis, or one of the three comprehensive emphases. A 12-credit Communication and Theatre nucleus provides students a liberal arts foundation supplemented by the more specific courses within each emphasis.

The Strategic Communication Emphasis provides the study of complex organizations and their use of applied communication in connecting with their audiences. Students in Strategic Communication explore interpersonal and media-based communication, and our courses often require creative work tied to real-world situations. Graduates in the Strategic Communication Emphasis have moved on to careers in public relations and advertising, government relations, issues management and events management.

The Film Studies Emphasis focuses on the study of theory, aesthetics, and history through practical, hands-on creative work in the areas of scriptwriting, visual and aural storytelling, and production management. This provides our students with a keen understanding of the role of current and emerging media in society. Our objective is for students to exit our program well prepared for careers, which may not even exist yet, in various settings related to communication. Our graduates in the Film Studies Emphasis have achieved careers in broadcasting, the motion picture industry, and major corporate media outlets as well as success in graduate programs in film at the highest international level.

The Theatre and Performance Studies Emphasis provides students with an in-depth, multi-disciplinary, and hands-on approach to the role of theatre and live performance. Theatre mirrors the nature of life in all its rich variety. To work effectively within the theatre arts requires a broad knowledge upon which to draw. To that end, the Theatre and Performance Studies emphasis believes in giving students a full range of instruction and experience in the theatre arts—practice, history, and theory—along with the full benefits of a liberal arts education. In addition, the Performance Studies curriculum intersects a broad study of performance with literature, narrative, culture, and a dialogue for social change. By thinking critically about cultural performance, students are given the opportunity to explore, challenge and sometimes re-define traditional concepts of what performance is. Graduates in the Theatre and Performance Studies Emphasis have gone on to successful careers in the professional performance industry, graduate school, education, legal and social work, and other related fields.

The standard Communication Emphasis allows for the greatest flexibility and efficiency for transfer students, double majors, and those students seeking the broadest possible experience across all of the Communication Arts emphases, while still provided a balance between theory and practice.

Admission to the Program: All degree-seeking students who wish to major in Communication Arts must be formally admitted to the program. For admission, a student must:

1. have demonstrated a minimum competency by completing COM 202 Academic Writing and Inquiry, COM 205 Communication Arts I, each with a grade of "C" or above;
2. have completed a letter of application, admission form and portfolio (guidelines provided in COM 284, Sophomore Seminar);
3. have an overall grade-point average of 2.500 or above (at the time of the application). All majors must have an overall grade-point average of 2.500 or above in order to graduate.

FACULTY

Professors Paul A. Edwards, Terence S. Schliesman, and Karin Waidey;
Associate Professor Jack Lucido; Assistant Professor Anthony Miccoli;
Senior Lecturer Courtney P. Fullmer; Emeritus Professor Michael R. Brooks.

DESCRIPTION OF THE PROGRAMS

The 12-credit Communication Arts Nucleus is required for all Communication Arts Majors.

Communication Arts Nucleus

COM 205 Communication Arts I	3 cr
COM 284 Sophomore Seminar	1 cr
COM 305 Communication Arts II	3 cr
COM 405 Communication Arts III	3 cr
COM 484 Communication Arts Seminar	2 cr

Communication Arts Major: Standard Program

COMMUNICATION EMPHASIS

A minimum of 36 credits is required including the 12-credit Communication Arts Nucleus, 12 credits of upper-division Communication Arts electives and the following:

COM 121 Introduction to Theatre	3 cr
COM 241 Media Writing	3 cr
COM 264 Introduction to Production and Theory	3 cr
COM 274 Public Relations Communication	3 cr

Communication Arts Major: Comprehensive Program

FILM STUDIES EMPHASIS

A minimum of 51 credits is required including the 12-credit Communication Arts Nucleus and the following:

COM 119 Introduction to Film	3 cr
COM 241 Media Writing	3 cr
COM 261 Introduction to Audio Communication	3 cr
COM 264 Introduction to Production & Theory	3 cr
COM 274 Public Relations Communication	3 cr
COM 306 Scriptwriting	3 cr
COM 346 Multimedia Communication	3 cr
COM 352 Advanced Cinema Studies	3 cr
One of the following:	
COM 231 Technical Production I	3 cr
COM 235 Fundamentals of Acting	3 cr
Four of the following:	
COM 310 Introduction to Performance Studies	3 cr
COM 323 Media/Arts Management	3 cr
COM 324 Advanced Acting	3 cr
COM 330 Technical Production II	3 cr
COM 362 Advanced Audio Production	3 cr
COM 389 Media Production: Narrative	3 cr
COM 390 Media Production: Documentary	3 cr
COM 406 Advanced Screen Writing & Producing	3 cr
COM 423 Presentational Aesthetics	3 cr
COM 490 Advanced Media Production	3 cr

STRATEGIC COMMUNICATION EMPHASIS

A minimum of 51 credits is required including the 12-credit Communication Arts Nucleus and the following:

COM 151 Introduction to Mass Media	3 cr
COM 241 Media Writing	3 cr
COM 264 Introduction to Production and Theory	3 cr
COM 274 Public Relations Communication	3 cr
COM 323 Media/Arts Management	3 cr
COM 346 Multimedia Communication	3 cr
COM 351 Media Theory and Research	3 cr
COM 371 Small Group and Conflict Management	3 cr
COM 372 Issues Management	3 cr
COM 474 Campaign Planning in Advertising and Public Information	3 cr
COM 499 COM Internship	3 cr
BUAD 270 Principles of Marketing	3 cr
One of the following:	
BUAD 333 Organizational Behavior	3 cr
BUAD 335 Marketing Communications	3 cr
BUAD 345 Consumer Behavior	3 cr
PSY 258 Introduction to Personality	3 cr
SOC 380 Social Inequalities	3 cr

THEATRE AND PERFOMANCE STUDIES EMPHASIS

A minimum of 54 credits is required including the 12-credit Communication Arts Nucleus, six credits of upper-division Communication Arts electives, and the following:

COM 121 Introduction to Theatre	3 cr
COM 216 Dramatic Literature and Script Analysis	3 cr
COM 231 Technical Production I	3 cr
COM 235 Fundamentals of Acting	3 cr
COM 306 Scriptwriting	3 cr
COM 310 Introduction to Performance Studies	3 cr
COM 317 Studies in Theatre and Performance (Special Topics taken twice)	6 cr
COM 323 Media/Arts Management	3 cr
COM 423 Presentational Aesthetics	3 cr

Two of the following:

COM 324 Advanced Acting	3 cr
COM 327 Performers for Social Change	3 cr
COM 330 Technical Production II	3 cr
COM 431 Integrated Design for Media and Performance	3 cr

Communication Arts Minor

The Communication Arts Minor consists of a minimum of 18 credits:

COM 205 Communication Arts I	3 cr
COM 305 Communication Arts II	3 cr
Communication Arts electives (three credits must be upper division)	9 cr
One of the following:	
COM 119 Introduction to Film	3 cr
COM 121 Introduction to Theatre	3 cr
COM 151 Introduction to Mass Media	3 cr

*COM 202 Academic Writing and Inquiry may not be used as an elective in the completion of the Communication Arts Minor.

COMMUNICATION ARTS COURSES

COM 119 Introduction to Film **3 credits**
Students are introduced to the aesthetics of narrative and documentary motion pictures through the study of the basic elements of cinema. Topics may include story structure, cinematography, editing, sound, and lighting.

COM 121 Introduction to Theatre **3 credits**
This course will include a general survey of Western theatre from Classical Greece to contemporary America. Students will learn the diverse practice of the art of theatre by studying theatre history, dramatic literature, and the practical components of acting, directing, design and production. GT-AH1

COM 151 Introduction to Mass Media **3 credits**
An examination of media-related industries (broadcasting, journalism, advertising, public relations and online communications), and the issues related to those industries that affect contemporary public discourse. GT-AH1

COM 197 Special Topics **1-6 credits**

COM 202 Academic Writing and Inquiry **3 credits**
Students expand on the process and techniques begun in Academic Writing. Primary focus is on analytical written communication and on advocacy oral communication. Also included throughout the course is the reading of relevant academic professional writing, which promotes student awareness of the role of written and oral communication in academic and professional life. Prerequisite: ENG 102 with a minimum grade of "C-."

COM 205 Communication Arts I **3 credits**
This course is a study of the theory and associated terminology of visual communication including the application of concepts to film, theatre, and convergent media. Topics include aesthetics, design elements, mimesis, performance, semiotics and introduction to the primary techniques of the various communication arts. Prerequisite: ENG 102 with a minimum grade of "C-."

COM 216 Dramatic Literature and Script Analysis **3 credits**
This course will introduce students to the diverse genre of dramatic literature in Western and Eastern theatre. We will study the origins of tragedy, comedy, melodrama, the rise of Realism and Anti-Realism, as well as the sub-genres within those general categories. We will also study Eastern traditions of text such as Kabuki, Noh, and Bunraku. Students will learn how to read a play on a deeper level for content, themes historical and socio-political influences, as well as the emerging and changing aesthetics of each genre. Prerequisite: ENG 102.

COM 231 Technical Production I **3 credits**
A study of how things are done behind the scenes in theatre and film and why they are done that way, including the basic customs and traditions of production work and the philosophy, aesthetics, and process of production. Intensive hands-on development of skills in the construction of sets, costumes, lights, sound, and props; the operation of rolling units, lights, flies, and sound; and production assistant duties.

COM 235 Fundamentals of Acting **3 credits**
An introduction to the principles, processes, and techniques of acting. The study is designed to balance theory and performance; to explore in detail the psychological, perceptual, and conceptual linkages to the strategies, techniques, and skills of the actor; and to develop a significant sense of self-discipline on the part of the actor. Topics include warm-up and awareness skills, basic body and voice integration techniques, the theories of Stanislavski, character analysis, and performance process.

COM 241 Media Writing **3 credits**
An analysis and practice of the major forms of media writing, including print, broadcast and web-based publication, with an introduction to the ways that production varies the writing of each. Prerequisite: ENG 102 with a minimum grade of "C-."

COM 261 Introduction to Audio Communication **3 credits**
This course introduces the basic concepts, functions and technology of audio production as they relate to the elements of narrative and storytelling. Prerequisite COM 119, COM 121, or COM 151; or instructor permission.

COM 264 Introduction to Production and Theory **3 credits**
An introduction to the theory and practice of media production including critical and aesthetic theories. Topics may include

scriptwriting, producing, directing, cinematography, sound recording, editing, and standards of operation for production facilities and equipment. Prerequisites: COM 205, COM 261, and sophomore standing; or instructor permission.

COM 274 Public Relations Communication **3 credits**

A study of the use of communication to establish credibility, trust, and confidence between and among communities, employees, public agencies, civic organizations and business institutions.

COM 284 Sophomore Portfolio **1 credits**

A course in which students familiarize themselves with the requirements for the Communication Arts program and related capstone project, formulate specific goals, and prepare strategies through which those goals can be achieved. Students will develop an awareness of field-specific expectations required of them in professional or graduate-level work, and develop a plan for creating a portfolio that reflects that awareness. A part of the course consists of formally applying for admission to the Communication Arts program. Prerequisite or corequisite: COM 205 or instructor permission.

COM 297 Special Topics **1-6 credits**

COM 298 Practicum **1-4 credits**

Entry-level supervised experiences in theatre, organizational communication and journalism/mass media. Prerequisite: instructor permission.

COM 305 Communication Arts II **3 credits**

An exploration of the philosophical and theoretical foundations of human communication, concentrating specifically on textual analysis and interpretation. Using a wide range of media, students will investigate how the particular method of communication informs, alters, and shapes the messages being consumed, and how those messages both constitute and affect self-expressive acts. Prerequisites: COM 205 and admission to the Communication Arts Program; or instructor permission.

COM 306 Scriptwriting **3 credits**

An introduction to the fundamental tools and skills required to craft a script for performance on stage or in film/video. Students are expected to produce playscripts and screenplays of varying lengths; they are also expected to read and respond to one another's writing. Some history of playwriting and study of prevailing models of scriptwriting are also included. Prerequisite: COM 216, COM 241, or ENG 205, with a minimum grade of "C."

COM 310 Introduction to Performance Studies **3 credits**

An interdisciplinary course exploring the human desire to perform in both aesthetic and everyday settings. It explores the links between the arts and literature, anthropology, communication, sociology, and philosophy. Critical reading, written analysis, and performance of literary texts are essential elements of the course.

COM 317 Studies in Theatre and Performance **3 credits**

An introduction to performance studies research and artistic practice through readings, discussion and creative work. Prerequisites: junior standing and instructor permission. Repeatable for a maximum of six credits among different topic areas.

COM 323 Media/Arts Management **3 credits**

An introduction to the basic principles and structure of management as it applies to Communication Arts. Particular focus is given to management of small and mid-size non-profit media and arts organizations, and to the interrelationship between those two areas. Prerequisite: junior standing or permission of the instructor.

COM 324 Advanced Acting **3 credits**

An advanced-level course that focuses on specific areas of actor training, including methods of voice and movement training; the requirements and techniques of different styles of acting including classical, Elizabethan, Restoration/18th Century, Commedia, and Advanced Contemporary acting styles; and advanced textual analysis required of actors by specific theatrical works. Repeatable for a maximum of six credits among different topic areas. Prerequisite: COM 235

COM 327 Performers for Social Change **3 credits**

An in-depth look at the role of performance, predominantly theatre, for social change and community activism. Students learn about the historical movements combining performance and social change, study the theories behind the practice influenced by Paulo Freire and Augusto Boal, and have hands-on opportunities to train their own performance and writing skills in this manner. Prerequisite: instructor permission.

COM 330 Technical Production II **3 credits**

An intermediate-level study of lighting and sound production for theatre and film. Instruction is provided in the proper rigging of light and sound equipment, use of control consoles and software, optics, basic electrical theory, the nature of light, and acoustics. The design and aesthetic use of light and sound are also explored. Prerequisite: COM 231 or instructor permission.

COM 331 Scenography in Film and Theatre **3 credits**

A study of designing visually for the stage and screen, with an emphasis on a unified look and a single intense effect. A strong emphasis on script analysis as a basis for design. Additional information on visual research for theatre and film including location scouting and contextual research into the background of the story. Hands-on development of skills in generating graphic communication of design ideas is included. Prerequisite: COM 231 or instructor permission.

COM 346 Multimedia Communication **3 credits**

An exploration of the theory and application of multimedia communication principles through projects that use common interactive multimedia, animation, non-linear editing, web authoring, and desktop-publishing programs. Prerequisites: COM 205, or instructor permission.

COM 351 Media Theory and Research **3 credits**

An examination of media from a theoretical, organizational perspective. Topics covered include departmental functions and duties, programming, formats, regulations and finances. Also, in the context of media theory, empirical data is explored. Prerequisite: COM 241 and COM 274, or instructor permission.

COM 352 Advanced Cinema Studies **3 credits**

An in-depth study of the aesthetics and theory of cinema through the examination and critical analysis of the technical and creative elements of selected iconic Hollywood and international motion pictures. Prerequisite: Junior standing.

COM 362 Advanced Audio Production **3 credits**

An in-depth study of audio design and production for film, radio, television and live theatre. Prerequisite COM 261.

COM 371 Small Group and Conflict Management **3 credits**

An exploration of various concepts and types of conflict and the role of argumentation in managing and/or resolving conflict. The study examines the theory and practice of communication within small groups, as well as problem solving and decision making as common contexts in which argument occurs and conflict arises, and a continuum from formal to informal modes of conflict management/resolution is discussed and practiced by the students. Examples of specific areas covered include formal debate, negotiation, and arbitration. Prerequisite: COM 202.

COM 372 Issues Management **3 credits**

An exploration of the communication practices and strategies used by organizations to react to current events, publicity, and society. Emphasis is placed upon persuasion, media relations, and information campaigns. Prerequisite: Junior standing.

COM 389 Media Production: Narrative **3 credits**

An introduction to the theory and practice of the field-based production of narrative films. Topics emphasized may include fictional story, cinematography, lighting, sound, editing, and production management. Prerequisite: COM 264 with a minimum grade of "C."

COM 390 Media Production: Documentary **3 credits**

An introduction to the theory and practice of producing nonfiction works, including conventional documentary forms and autobiographical or experimental works. Topics may include actual story, cinematography, lighting, sound, editing, and production management. Prerequisite: COM 264 with a minimum grade of "C."

COM 392 Independent Study in Communication Arts **1-6 credits**

A detailed study in a specific area of communication arts, emphasizing individualized approaches toward development of creativity and scholarship. Prerequisites: junior or senior status and 10 credits in Communication Arts.

COM 397 Special Topics **1-6 credits**

COM 398 Practicum **1-4 credits**

Supervised applications and experiences in communication arts. Students assist, analyze, manage, and participate in various aspects of practical situations or job training. Prerequisites: instructor permission and completion of one of the following: COM 241, COM 261, or COM 298.

COM 405 Communication Arts III **3 credits**

A multi-disciplinary and multi-media course offering significant historical, theoretical, and practical content by which to explore and discuss how meaning is conveyed in communication. Special emphasis is given to the nature of oral communication in oral societies and to the nature and function of myth, symbol, sign, and inferential reasoning. Prerequisites: COM 305 or instructor permission.

COM 406 Advanced Screenwriting and Producing **3 credits**

Students are immersed in advanced screenwriting projects and pitching for independent feature film, television drama and situation comedy. Producing content may include such topics as contract law, releases, copyright, fair use, ethics, location and talent management, production management, and other administrative subject matter pertaining to film and television production. Prerequisite: COM 306 with a minimum grade of "C".

COM 423 Presentational Aesthetics **3 credits**

An examination of the theatrical performance convention from the perspective of the adaptor, director, and performer. This course offers invigorating challenges for the director, dramaturg, actor, and designer who will work collaboratively to explore presentational mode, theatrical convention, and conscious artifice in the performance of dramatic literature, poetry, nonfiction, and prose fiction. Prerequisites: COM 231, COM 235, COM 310 and minimum junior standing; or instructor permission.

COM 474 Campaign Planning in Advertising and Public Information **3 credits**

An analysis of the many facets of information campaign planning. It explores concepts like persuasion and audience behavior, researching attitudes and effectiveness, campaign objectives and strategies, media choices, and relevant social and ethical issues. In addition, students are expected to build their own information campaigns. Prerequisite: COM 274.

COM 484 Communication Arts Seminar **2 credits**

A capstone course in which students complete their individual Communication Arts portfolios, based upon their cumulative work through the COM program and guided by their specific career or graduate school goals. The seminar provides an opportunity for students to work individually, in small groups, and with the instructor to evaluate the overall effectiveness of their finished portfolios, and revise accordingly, utilizing the critical techniques, cultural awareness, and technical skills students have developed throughout the COM program. Prerequisite: COM 305

COM 490 Advanced Media Production **3 credits**

Students are immersed in advanced project work. Topics may include cinematography, lighting, grip, electrical, special effects, visual effects, sound effects recording, sound design, and animation. Prerequisite: COM 389 or COM 390 with a minimum grade of "C."

COM 497 Special Topics **1-6 credits**

COM 499 Internship in Communication Arts **1-12 credits**

Prerequisite: instructor permission.

COMPUTER SCIENCE (CS)

The Computer Science major is designed to provide students with the knowledge and skills for a career in software development or further study in graduate school. Our graduates have jobs in software development, IT support, web development and software security.

Computer Science students can pursue the 36 credit Standard major or the 49 credit Comprehensive major. Both majors share a core of course work in programming fundamentals, database management, visual application development, web development, and software engineering. The Standard major requires a minor, allowing the student additional study in an area of interest. The Comprehensive major does not require a minor but does require additional CS course work in advanced topics and has a more rigorous math requirement.

Currently the main teaching and development language is Java. Course work also covers other general purpose languages like Python as well as web development languages and technologies such as XHTML, CSS, JavaScript, PHP, and Ruby. Many courses use SQL, the language of database manipulation. Modern software engineering techniques are practiced throughout. Course work is focused on real-world problem solving with emphasis on event driven GUIs, client-server relationships, and database driven applications. Internships with software companies are a popular option.

FACULTY

Professors Andrew G. Keck, John C. Peterson, and Daniel L. Schuster.

DESCRIPTION OF THE PROGRAMS

All Computer Science Majors require the 33-credit Computer Science Core.

CS Core

CS 150 Computers in Society	3 cr
CS 190 Computer Science I	3 cr
CS 191 Computer Science II	3 cr
CS 195 Database Management Systems	3 cr
CS 250 Web Applications Development I	3 cr
CS 280 Data Structures	3 cr
CS 310 Visual Programming	3 cr
CS 320 Programming Languages	3 cr
CS 350 Web Applications Development II	3 cr
CS 410 Systems Analysis and Design	3 cr
One of the following:	
CS 480 Computer Information Science Application Project	3 cr
CS 499 Internship in Computer Science	3 cr

Computer Science Major: Standard Program

A minimum of 36 credits is required, including the 33-credit Computer Science Core and one of the following:

MATH 140 College Algebra	3 cr
MATH 141 Precalculus	3 cr
MATH 151 Calculus	3 cr

Computer Science Major: Comprehensive Program

A minimum of 49 credits is required, including the 33-credit Computer Science Core and the following:

CS 235 Computer Networks	3 cr
CS 412 Software Engineering	3 cr
One of the following:	
CS 303 Machine Learning	3 cr
CS 311 Embedded Systems	3 cr
And	
MATH 151 Calculus I	4 cr
One of the following:	
MATH 200 Discrete Mathematics	3 cr
MATH 213 Probability and Statistics	3 cr
MATH 260 Applied Linear Algebra	3 cr

Computer Science Minor

A minimum of 18 credits is required, including six credits of Computer Science electives, at least three of which must be upper-division, and the following:

CS 190 Computer Science I	3 cr

CS 191 Computer Science II	3 cr
CS 250 Web Applications Development I	3 cr
One of the following:	
CS 280 Data Structures	3 cr
CS 310 Visual Programming	3 cr
CS 350 Web Application Development II	3 cr

CS 120, CS 140, and CS 160 may not be used to satisfy the elective requirement. Up to three upper-division credits in the student's major discipline may be used to meet the elective requirement with approval of the Computer Science coordinator.

Capstone Course Requirement. The following courses fulfill the capstone course requirement in the Computer Science Major: CS 499 Internship in Computer Science, or CS 480 Application Project.

COMPUTER SCIENCE COURSES

CS 120 Information Management and Analysis **3 credits**
An in-depth study of the essentials of word-processing, spreadsheets, and information management, using modern computers and software. Substantial student competence in these areas is required for further study at the University. Applications are presented from various fields.

CS 140 Game Programming for Beginners **3 credits**
For the complete beginner, an introduction to computer programming through an exploration of programs like basic arcade games. Consideration given to language syntax, I/O, data, selection and repetition, large data structures and subroutines, as well as problem solving and debugging. This course employs industry-standard software like Python.

CS 150 Computers in Society **3 credits**
An introduction to the use of computing devices and their impact on society. Topics include: how computers work, the history of computing, philosophical issues in computing, the economics of software development, intellectual property issues, privacy and security, applications of computing, legal issues, the digital divide, the role of computing in government, and computer-assisted collaboration.

CS 160 Introduction to Web Design **3 credits**
An introduction to the basics of the XHTML web page specification language, cascading style sheets (CSS) and the Plone Content Management System (CMS). Students learn to create attractive, professional web pages and websites using XHTML and CSS, including embedded graphics and multimedia. The student also learns to use a CMS for easier webpage implementation, including add-ons such as forums and shopping carts. This course is designed for students without a background in programming and may not be used to satisfy the requirements of the Computer Science Major or Minor.

CS 190 Computer Science I **3 credits**
An introduction to software development. Students develop text, graphical user interface (GUI) and applet web graphical applications using object oriented techniques in Java. Emphasis is placed on good software engineering practices for problem analysis, program design, documentation, testing and debugging.

CS 191 Computer Science II **3 credits**
A continuation of CS 190 taught in the Java programming language. Students develop stand alone GUI and console applications and applets of increasing sophistication. Topics include: arrays, objects and classes, encapsulation and inheritance, file management, dynamic data structures, searching, sorting, recursion, stacks and queues, with emphasis on abstraction and implementation and an introduction to algorithm analysis. Prerequisite: CS 190 with a minimum grade of "C-."

CS 195 Database Management Systems **3 credits**
An introduction to the practice and principles of relational database design, implementation and manipulation. Topics include: Structured Query Language (SQL), relational models, Entity-Relationship modeling, security, multi-user databases, transactions, Object Relational Mapping and database administration. Students will design and implement relational database applications of increasing complexity. Prerequisite: CS 190 with a minimum grade of "C-"; prerequisite or corequisite: CS 191.

CS 197 Special Topics **1-6 credits**

CS 235 Computer Networks **3 credits**
An investigation of the transmission of data and information between computer systems. Topics include simple data communications, protocols, error control, local-area networks, wide-area networks such as the Internet packet-switching networks, and various networking models. Various data communication hardware and software are also examined. Prerequisites: CS 191 with a minimum grade of "C-"; MATH 140 or above excluding MATH 209 and MATH 210 or Accuplacer university-level mathematics score of 75 or above.

CS 250 Web Applications Development I **3 credits**
A course studying modern web site design, focusing on embedded languages, the use of audio and visual plug-ins, web application servers, and the tools that aid development on a professional scale. Basic use of Structured Query Language is studied. Cross platform development, applications to e-commerce, Internet and Intranet are considered. At least one major project is required. Offered in alternate years, 2010-2011. Prerequisites: CS 191 with a minimum grade of "C-"; MATH 140 or above excluding MATH 209 and MATH 210 or Accuplacer university-level mathematics score of 75 or above.

CS 280 Data Structures **3 credits**
A survey of advanced data structures and algorithms. Topics include: linear lists, linked lists, arrays, tree, multi-linked lists, hashing, searching, sorting, recursion and analysis of the algorithms that use these structures. Taught in Java. Prerequisites: CS 191 with a

minimum grade of "C-"; MATH 140 or above excluding MATH 209 and MATH 210 or Accuplacer university-level mathematics score of 75 or above.

CS 297 Special Topics **1-6 credits**

CS 303 Machine Learning **3 credits**

A study of computer systems that learn from experience. Classroom exercises include the building of systems that learn and adapt using real-world applications. Topics covered include decision trees, concept learning, neural networks, reinforcement learning, linear and non-linear models, clustering, validation, and feature selection. Prerequisites: CS 190 and MATH 213.

CS 310 Visual Programming **3 credits**

A focus on common environment and design tools used in the development and implementation of graphic user interfaces. Emphasis is placed on the automation of tasks and the customization of systems by programming constructs. Applications are developed for both a local environment and a broad-based use of the Internet. The implementation language is C++ or Visual Basic. May be repeated with a different implementation language. Prerequisite: CS 191 with a minimum grade of "C-."

CS 311 Embedded Systems **3 credits**

A project-based introduction to embedded systems. Students build and program systems that include microcontrollers and sensors, actuators, networking, motors, and cameras. Various applications involve robotics, remote sensing, sound processing, and kinetic sculpture. Prerequisites: CS 190 and junior standing.

CS 320 Programming Languages **3 credits**

An investigation of the theory, usage, and implementation of programming languages. Emphasis is on the theoretical basis for programming languages and practical examples of their use. Basic language paradigms are developed: imperative, functional, object-oriented, and logic. Other topics include type systems and language translation. Languages studied include C, C++, Java, Lisp, Haskell, Prolog, and Python. Prerequisite: CS 280 with a minimum grade of "C-."

CS 330 Operating Systems with UNIX System Administration **3 credits**

A study of the major components of operating systems, such as job and resource management in both multiprogramming and multiprocessing systems. Additionally, an introduction to the UNIX operating system includes UNIX commands, the role of the system administrator, the file system, controlling processes, programming in the shell, the network file system, and security. Prerequisite: CS 300 with a minimum grade of "C-."

CS 350 Web Applications Development II **3 credits**

A study of client-server applications designed around the World Wide Web. Students design and implement applications which provide access to centralized resources such as databases and mail servers from web browsers. Students utilize Perl, CGI, and SQL to construct applications such as an online shopping site, an enterprise document server, or a shared Intranet database. Security of data during transmission and storage is emphasized. Prerequisite: CS 250 with a minimum grade of "C-."

CS 375 Numerical Methods **3 credits**

Designed to provide students with the skills needed to solve mathematical problems using a computer. Topics include: computer arithmetic, roots of a single equation, non-linear simultaneous equations, matrices, determinants, linear simultaneous equations, numerical integration, differential equations, interpolation, curve fitting, and other topics as time permits. Prerequisites: CS 275 or CS 280 with a minimum grade of "C-"; and MATH 151.

CS 391 Computer Science Seminar **1 credit**

An advanced topic in computing, selected by the instructor from areas of computer science not usually included in the regular curriculum, conducted in a lecture, seminar or individualized format. Student involvement through presentations is emphasized. May be taken under different topics for a total of three credits. Prerequisite: CS 191 with a minimum grade of "C-."

CS 397 Special Topics **1-6 credits**

CS 410 Systems Analysis and Design **3 credits**

The fundamental concepts of systems analysis and design are studied in the context of computerized information systems. Topics include high-level system construction tools, system design methodology, data representation languages such as XML, server-based system design, web services, system security, and system description languages such as UML. Also addressed is the human element in system design: working with users and domain experts to develop system requirements, and understanding the challenges of large scale system projects. Each student completes a number of systems design projects during the term. Prerequisite: CS 310 with a minimum grade of "C-."

CS 412 Software Engineering **3 credits**

An introduction to the fundamental principles of software engineering. Formal soft- ware development techniques and high-level software tools are emphasized. Students are taught a programming method based on the recognition and description of useful abstractions. Topics include encapsulation and reuse, design patterns, object-based design, software testing and quality, formal methods for software design, and project management. Students are expected to complete a significant project that employs techniques from the topics studied. Prerequisite: CS 410 with a minimum grade of "C-."

CS 430 Computer Graphics **3 credits**

A presentation of the design and use of computer-graphics systems (hardware and soft- ware) and construction of two- and three-dimensional graphics. Applications of computer graphics in business, industry, education, and communications are emphasized. Prerequisite: CS 280 with a minimum grade of "C-."

CS 450 Mobile Device Programming: X **3 credits**

An introduction to software development for mobile devices such as smart phones and tablet computers. Specific platforms include, among others, iOS (Apple), and Android. The course covers interface elements and device capabilities such as photo, video and sound, accelerometer, GPS, and web services. Students are expected to complete a significant project that employs techniques specific to mobile platforms. May be repeated with a different implementation platform. Prerequisite: CS 280 with a minimum grade

of "C-."

CS 480 Computer Science Application Project **3 credits**

Students develop a comprehensive application project in the area of their specialization. Possible projects include software development, CAI program development, systems analysis consultation with area businesses, or development of a computer hardware/ software training program. A public presentation of the project is made before the CS faculty and students. Prerequisite: 24 credits of CS course work, including 12 upper- division credits.

CS 490 Workshop in Computer Science **1-6 credits**

A series of organized meetings dealing with a topic of current interest. Offered periodically in a variety of computer-related subjects. Only three credits of this title can be applied toward a Computer Science Minor.

CS 492 Independent Study in Computer Science **1-3 credits**

A singular investigation into a unique problem agreed upon by the student and the advisor. Independent Studies (CS 192, CS 292, CS 392, and CS 492) may be repeated for a total of up to 12 credits.

CS 497 Special Topics **1-6 credits**

CS 499 Internship in Computer Science **3-12 credits**

Students participate in a supervised field experience with a cooperating firm in the computer science field. The sponsoring faculty member provides evaluations during periodic visitations. A formal paper is required of the student. Specific department requirements must be met to participate in this course. Prerequisite: 18 credits of Computer Science course work, including nine upper-division credits.

ECONOMICS (ECON)

The general goals of the Economics Program are to prepare graduates to:

- use their knowledge of economics to better understand the world around them, enabling them to make more informed decisions in their personal as well as their professional lives;
- develop skills such as critical analysis, statistical analysis, and reasoning and competency in written and oral communication; and
- apply their knowledge of economics in private enterprise or business firms, the the public sector (i.e., policy making), or graduate study in economics or a related field.

Students majoring in Economics may choose the Standard Program or the Comprehensive Program Secondary Licensure Emphasis.

To graduate, all economics majors must have a grade point average of 2.500 or above in all courses for the major.

FACULTY

Professors Sally R.E. Hays, Scott A. Lazerus, and David J. Plante.

DESCRIPTION OF THE PROGRAMS

All Economics Majors require completion of the 24-credit Economics Nucleus and completion of MATH 140 College Algebra, MATH 141 Precalculus, or MATH 151 Calculus I with a minimum grade of "C-."

Economics Nucleus

ECON 201 Macroeconomics	3 cr
ECON 202 Microeconomics	3 cr
ECON 301 Intermediate Macroeconomics	3 cr
ECON 302 Intermediate Microeconomics	3 cr
ECON 303 International Economics and Globalization	3 cr
ECON 316 Econometrics	3 cr
ECON 498 Income Distribution, Poverty, and Wealth	3 cr
One of the following:	
ECON 216 Statistics for Business and Economics	3 cr
MATH 213 Probability and Statistics	3 cr

Economics Major: Standard Program

A minimum of 33 credits is required, including the 24-credit Nucleus and nine credits of upper-division Economics electives.

Economics Major: Comprehensive Program

SECONDARY LICENSURE EMPHASIS

This Emphasis qualifies students for the State of Colorado License in Social Science Education. A minimum of 72 credits is required including the 24-credit Economics Nucleus, and the following 48 credits. In addition, students must fulfill the requirements of the Secondary Licensure Option described under Education:

ECON 476 American Economic Development	3 cr
GEOG 110 World Regional Geography	3 cr
GEOG 120 Human Geography	3 cr
GEOG 250 Geography of North America	3 cr
GEOL 101 Physical Geology	3 cr
HIST 101 World History to 1500	3 cr
HIST 102 World History Since 1500	3 cr
HIST 126 U.S. History to 1865	3 cr
HIST 127 U.S. History Since 1865	3 cr
HIST 327 Colorado History	3 cr
POLS 180 Introduction American Government	3 cr
POLS 182 Issues in State and Local Government	3 cr
POLS 255 Introduction to Comparative Government	3 cr
POLS 476 American Political Thought II	3 cr
One of the following:	
ECON 317 Economics and Public Policy (recommended)	3 cr
Economics upper-division elective	3 cr
One of the following:	
POLS 260 Introduction to World Politics	3 cr
POLS 360 American Foreign Policy	3 cr

Economics Minor

A minimum of 18 credits is required including the following:

ECON 201 Macroeconomics	3 cr

ECON 202 Microeconomics	3 cr
One of the following:	
ECON 301 Intermediate Macroeconomics	3 cr
ECON 302 Intermediate Microeconomics	3 cr
Nine credits from the following:	
ECON 216 Statistics for Business and Economics	3 cr
Economics upper-division electives	6-9 cr

Capstone Course Requirement. The following courses in the Economics Major fulfill the Capstone Course Requirement: ECON 498 Income Distribution, Poverty and Wealth. Students completing the Secondary Licensure Emphasis may use student teaching to fulfill this requirement.

ECONOMICS COURSES

ECON 197 Special Topics **1-6 credits**

ECON 201 Macroeconomics **3 credits**

An introduction to the methods, models, and approaches used by economists to analyze and interpret events and policies related to the overall operation of the economy. The course endeavors to make sense of unemployment, inflation, recessions, debt and deficits, economic growth, the expanding role of the Federal Reserve, and policies to provide stability to the economy. Additional attention is given to the making of economic policy in an era of globalization. Finally, students are exposed to multiple schools of thought regarding macroeconomic reasoning. Prerequisite: ACT math score of 19 or above; SAT math score of 460 or above; pass MATH 099; or Accuplacer Elementary Algebra test score of 85 or higher, or university-level math requirement with a minimum grade of "C-." Prerequisite or corequisite: ENG 102. GT-SS1

ECON 202 Microeconomics **3 credits**

The theory of microeconomics makes use of the tools of marginal cost-benefit analysis to provide a framework for the economic analysis of decision-making. The focus is on the choices of individual firms and consumers, and the resultant outcomes in individual markets. The social implications of the functioning of competitive markets are examined, as well as the causes of market failure and the potential roles of government in correcting them. Prerequisite: ACT math score of 19 or above; SAT math score of 460 or above; pass MATH 099; or Accuplacer Elementary Algebra test score of 85 or higher, or university-level math requirement with a minimum grade of "C-."

ECON 215 Environmental Economics **3 credits**

A presentation of the analytical tools and approaches used by economists to examine and assess environmental issues, conflicts, and policies. Students are asked to use market analysis, externality analysis, cost-benefit analysis, instrument choice models, and market and non-market valuation techniques to investigate issues such as air and water quality, global warming, toxic substances, wilderness designation, and sustainable development plans. Prerequisites: MATH 105, MATH 131, MATH 140, MATH 141, or MATH 151 with a minimum grade of "C-."

ECON 216 Statistics for Business and Economics **3 credits**

An introduction to descriptive statistics and statistical inference, with application in business, including hypothesis testing, confidence intervals, and simple regression analysis. Prerequisite: MATH 140, MATH 141, or MATH 151 with a minimum grade of "C-."

ECON 297 Special Topics **1-6 credits**

ECON 301 Intermediate Macroeconomics **3 credits**

An analysis of competing theories about the overall functioning of economies including both growth and stabilization policies. Alternative models are examined at the levels of assumptions, mechanics, dynamics, and policy implications. Theories are examined within their historical context and the sets of problems faced by the theorists. Students are asked to engage, analyze, interpret and provide a course of action for real-world cases. Prerequisites: ECON 201; ECON 202; and MATH 140, MATH 141, or MATH 151 with a minimum grade of "C-."

ECON 302 Intermediate Microeconomics **3 credits**

Intermediate Microeconomics extends the analysis of individual economic behavior and the functioning of markets learned in ECON 202 by incorporating the more sophisticated microeconomic models used in more advanced economic analysis. Topics include the theories of the consumer and the firm, the functioning of market, and the impact of market structure on price formation. Prerequisites: ECON 202; MATH 140, MATH 141, or MATH 151 with a minimum grade of "C-"; ECON 201 recommended.

ECON 303 International Economics and Globalization **3 credits**

An exploration of economic, political, and social effects of globalization. This is examined from the perspectives of trade, development, finance, and the environment. The first half of the course focuses on the impacts of international trade. This includes preferential trading relations, protectionism, global trade agreements, competitiveness, and possible conflicts between trade and social objectives. The second half of the course focuses on international monetary relations and regimes. This includes understanding the balance of payments, exchange rate determination, currency crises, and international debt. Prerequisites: ECON 201; MATH 140, MATH 141, or MATH 151 with a minimum grade of "C-"; ECON 202 recommended.

ECON 315 Labor Economics **3 credits**

The central questions in the field of labor economics are how wages are determined, and why a market economy provides such a vast range of possible rewards to human labor. To answer them, this course examines the role of market forces (the supply of and demand for labor) as well as that of social, political, and economic institutions. Prerequisites: ECON 202; MATH 140, MATH 141, or MATH 151 with a minimum grade of "C-"; ECON 201 recommended.

ECON 316 Econometrics **3 credits**

The application of advanced statistical methods and modeling to an empirical understanding of economic issues. Combines elements of statistical reasoning with economic theory and provides an excellent opportunity to combine concepts learned in previous economics courses. Topics covered include multiple regression analysis, model specification, dummy variables, multicollinearity, heteroscedasticity,autocorrelation, limited dependent variables, simultaneity, time series, forecasting, and methodological issues. Prerequisites: ECON 201; ECON 202; and ECON 216 or MATH 213.

ECON 317 Economics and Public Policy **3 credits**

An examination of the field of public economics, the branch of economics concerned with the reasons for market failure (monopoly, public goods, externalities, information asymmetry) and the potential for government policies to correct them. The application of the tools of economic analysis to understanding the causes of and potential solutions to social problems of current interest are emphasized. Prerequisites: ECON 202; MATH 140, MATH 141, or MATH 151 with a minimum grade of "C-"; ECON 201 recommended.

ECON 319 Industrial Organization **3 credits**

A study of the branch of economics that analyzes the performance of industries in their role as producers of goods and services. Provides tools for analyzing and evaluating interactions between market structure (the number and size of firms in an industry), firm conduct, and industry performance. The role of government, through antitrust and other regulation, in improving the efficiency of industries and thus the economic system as a whole, is also considered. In addition, the theoretical tools of industrial analysis are used to perform case studies of actual industries. Prerequisites: ECON 202; MATH 140, MATH 141, or MATH 151 with a minimum grade of "C-."

ECON 350 History of Economic Thought **3 credits**

An examination of the development of economic thought and economic methodology from the pre-capitalist era to the present, with emphasis on placing the development of economic theory into its historical and political context. Major topics include the early classical school (Smith, Ricardo, Marx), the rise of modern neoclassical economics, and critical responses to mainstream theory. Prerequisites: ECON 201; ECON 202; MATH 140, MATH 141, or MATH 151 with a minimum grade of "C-."

ECON 361 Money, Banking, and Financial Markets **3 credits**

A survey of the core topics relating to the monetary sector of the economy. This includes an examination of the role and nature of money, financial institutions and markets, banking structure and regulation, determinants of interest rates, central bank policy, exchange rates, and the international monetary system. Attention is also given to particular monetary episodes such as the Great Depression, the Latin American debt crisis, the collapse of the Mexican Peso, and the Asian monetary collapse. Prerequisites: ECON 201; MATH140, MATH 141, or MATH 151 with a minimum grade of "C-."

ECON 370 Natural Resource Economics **3 credits**

A study of the efficient and equitable use of society's scarce natural resources. This course discusses the application of economic theory to natural resource problems, such as externalities and resource extraction. Particular attention will be placed on Western United States issues, including water, energy, mineral extraction, forestry and public land use. Prerequisites: ECON 202 or ECON 215; MATH 140, MATH 141, or MATH 151 with a minimum grade of "C-."

ECON 397 Special Topics **1-6 credits**

ECON 476 American Economic Development **3 credits**

An inquiry into sources and character of American economic development. A survey is provided of several key moments in American political economy such as the market revolution, reconstruction, populism, progressivism, the Great Depression, the New Deal, and globalization. Students are asked to engage the ideas, social movements, and institutions that have shaped the modern American economy. Prerequisite: instructor permission.

ECON 492 Independent Study **1-4 credits**

ECON 497 Special Topics **1-6 credits**

ECON 498 Income Distribution, Poverty and Wealth **3 credits**

A seminar-style examination of the causes and consequences of historical trends in income and wealth distribution in the United States, concentrating especially on the trend toward increasing inequality that began in the 1970s. Topics include: empirical analysis of distributional data; causal analysis based on both microeconomic and macro-economic analysis; the roles of institutional change, social attitudes, and government policy; and both positive and normative evaluations of the economic and social consequences. This course fulfills the Economics Capstone Requirement.

ECON 499 Internship in Economics **1-6 credits**

The Economics Internship gives Economics majors who have completed 18 credits of economics the opportunity to apply their analytical skills in the service of businesses, government, and the community. Prerequisites: 18 credits of Economics courses including ECON 201; ECON 202; ECON 216 or MATH 213; and instructor permission.

EDUCATION (EDUC)

The Education Department at Western State Colorado University is accredited by the Colorado Department of Education and the Colorado Commission on Higher Education. The Education Department currently maintains a 100 percent pass rate for licensing assessments for Colorado educators, as reported to Title II for those who complete the program. The faculty of the Education Department is committed to creating a community of teachers who are competent in their subject matter, pedagogical content knowledge, pedagogical knowledge, and teaching skills. Students develop a professional knowledge base and research and reflect upon the implications of educational best practices that extend well beyond traditional educational goals of individual achievement. It is necessary for pre-service teachers to understand and accept the responsibility for creating a community that recognizes and appreciates diversity, and for which individual members possess the content knowledge, skills, and abilities needed to think critically, solve problems, and make responsible decisions.

FACULTY

Associate Professor Gaye Jenkins; Senior Lecturer Brooke M. Hanks;
Lecturers Caroline Forrest, Jeffery Hulbert, Gillian Lie, and Cori Woytek

DESCRIPTION OF THE PROGRAMS

Elementary Education Major with emphasis in Culturally and Linguistically Diverse Education: Comprehensive Major

The Elementary Education Major prepares students to be effective K-6 educators and is aligned with the Colorado P-12 Academic Standards, the Educator Licensure Act of 1991, and the Colorado Educator Effectiveness Rubric. The depth and breadth of the Elementary Education Major curriculum is designed to prepare students to successfully teach in a Colorado standards-based classroom and offers preparation for entry into other education and job training opportunities.

In addition to a Colorado Initial Elementary Education License, students completing the Elementary Education Major will be eligible to earn an added endorsement in Culturally and Linguistically Diverse (CLD) Education. All CLD endorsement standard requirements are met in the Education coursework.

The Elementary Education Major requires students to complete all requirements of the Licensure Program, including 36 credits of Education (EDUC) coursework. The major requires students to successfully complete 87 credits of interdisciplinary content coursework, which includes the University's General Education requirements (nine credits of essential skills and 26 credits of Liberal Arts coursework).

Comprehensive Program

Elementary Education Content Core

ART 105 Introduction to Art	3 cr
COM 202 Academic Writing and Inquiry	3 cr
ECON 201 Macroeconomics	3 cr
ENG 102 Academic Writing	3 cr
ENG 205 Introduction to Creative Writing	3 cr
ENG 220 Grammar and the English Language	3 cr
ESS 353 Coordinated School Health and Activity Programs	2 cr
GEOG 120 Introduction to Human Geography	3 cr
GEOG 250 Geography of North America	3 cr
HIST 126 US History to 1865	3 cr
HIST 260 History of Latin America	3 cr
HIST 327 Colorado History	3 cr
MATH 140 College Algebra	3 cr
MATH 209 Mathematics for Elementary Teachers I	3 cr
MATH 210 Mathematics for Elementary Teachers I	3 cr
MATH 311 Mathematical Knowledge for Teaching Elementary School	3 cr
MUSIC 100 Fundamentals of Music	3 cr
POLS 117 Introduction to Political Ideas	3 cr
POLS 180 Introduction to American Politics	3 cr
POLS 282 Issues in State and Local Government	3 cr
SCI 110 Habitable Planet (with Laboratories)	4 cr
SCI 111 Nature of Science	1 cr
SCI 120 Living Planet (with Laboratories)	4 cr
SCI 210 Dynamic Planet (with Laboratories)	4 cr

Elementary Education Supporting Courses

One of the following:

COM 235 Fundamentals of Acting	3 cr
COM 274 Public Relations Communication	3 cr
COM 371 Small Group and Conflict Management	3 cr

One of the following:

SPAN 101 Elementary Spanish I	3 cr
SPAN 102 Elementary Spanish II	3 cr

One of the following:

PSY 270 Developmental Psychology	3 cr
ESS 275 Motor Development and Learning	3 cr

Two of the following. One course must be at the 300 level or above:

ECON 202 Microeconomics	3 cr
ENG 250 Critical Approaches to Literature	3 cr
ENG 370 Myth and Culture	3 cr
GEOG 301 Geography of Latin America	3 cr
POLS 360 American Foreign Policy	3 cr
ROE 235 Foundations of Teaching Environmental Education	3 cr
ROE 391 Experiential Education Theory and Pedagogy	3 cr
SOC 101 Introduction to Sociology	3 cr

Elementary Licensure

Students seeking Elementary Licensure (grades K-6) must complete the interdisciplinary requirements of the Elementary Education Major, all other University requirements, and the Elementary Licensure requirements set forth by the Colorado Department of Education. Students pursuing Elementary Licensure must meet all requirements for admission to the Education Program.

Students must complete all coursework required within the academic major prior to beginning the clinical residency and complementary Education coursework, or have documented content and education advisor permission.

The clinical residency experience begins each fall and students may be placed in more than one K-6 classroom for one full year. Students have both in-state and out-of-state placement options. The year-long clinical residency begins on campus with EDUC 404: Creating Positive Learning Environments. After attending the on-campus introduction to the course, students will follow the K-6 school year calendar for the school in which they are placed, not the Western academic calendar (i.e. beginning on the day the mentor teacher reports for duty, take K-6 school holidays, participate in K-6 school professional development and in-service opportunities, end the final day teachers are required to report, etc.). This schedule extends from August to early June, depending upon the individual K-6 school calendar.

Master mentor teachers are selected carefully to ensure that Western students completing their clinical residencies have strong professional role models. The potential mentor teacher will self-assess his or her knowledge of the education standards and standard elements. Students accepting these placements are expected to successfully complete the year-long clinical residency, in order to be recommended for Initial Licensure. Students who do not successfully complete the year-long residency will be withdrawn from the Education Program and must appeal to the Selection and Retention Committee for readmission. The other education courses in the program are offered online throughout the year. The residence for Elementary Licensure must be completed in a K-6 classroom and students are expected to work cooperatively 24 hours per week with qualified mentor teachers. During this year-long clinical residency, the student is applying and extending the pedagogical knowledge that he or she is learning in the Education courses. To be recommended for an Initial Elementary License, the student resident must perform at "3, Proficiency" level in all relevant standard elements in the elementary (K-6) classroom. Student residents must demonstrate the ability to apply the standard/standard element in an elementary classroom setting, assess K-6 student learning, and evaluate their own teaching performance. The level expected of well prepared, first year teachers is "3, Proficiency."

The Elementary Licensure Program requires 36 credits of Education coursework:

EDUC 000 Education Gateway Course	0 cr
EDUC 102 Issues and Trends in American Education	3 cr
EDUC 316 Introduction to Language Acquisition for Linguistically Diverse Students	3 cr
EDUC 340 Brain-based learning Motivation and Achievement	3 cr
EDUC 400 Foundations of Literacy: Phonology and Linguistics	3 cr
EDUC 401 Assessment for Prevention and Intervention	3 cr
EDUC 402 Reading Comprehension, Vocabulary, and Fluency	3 cr
EDUC 404 Creating Positive Learning Environments	3 cr
EDUC 405 Data-driven Instructional Practices	3 cr
EDUC 413 Mathematical Investigations	3 cr
EDUC 417 Teaching and Assessing Writing with the Linguistically Diverse Student in Mind	3 cr
EDUC 459 Elementary Culturally and Linguistically Diverse Student Teaching (*taken twice*)	3 cr

Secondary and K-12 Licensure

A student seeking licensure as a Secondary teacher (grades 7-12) or K-12 teacher must complete an appropriate academic major, all other University requirements, and the appropriate Secondary or K-12 Licensure requirements. The Secondary academic major may be: Biology, Chemistry, Economics, English, Geology, History, or Politics and Government. The K-12 Academic Major may be: Art, Exercise and Sports Science, Music, or Spanish. Students pursuing the Secondary or K-12 Licensure option must meet all of the requirements for admission to the Education Program. Students must complete all coursework required within the academic major prior to beginning the year of Education coursework and complementary internship, or have content advisor and Education advisor permission. For students taking content courses during the year of education coursework and complementary clinical residency, the Education advisor is responsible for meeting with content area faculty members to ensure that all requirements and expectations are met during this year.

The clinical residency experience begins each fall and students may be placed in more than one Secondary or K-12 classroom for

one full year. Students have both in-state and out-of-state placement options. The year-long clinical residency begins on campus with EDUC 403: Instruction and Assessment in the Content Area. After attending the on-campus introduction to the course, students will follow the Secondary or K-12 school year calendar for the school in which they are placed, not the Western academic calendar (i.e. beginning on the day the mentor teacher reports for duty, take Secondary or K-12 school holidays, participate in Secondary or K-12 school professional development and in-service opportunities, end the final day teachers are required to report, etc.). This schedule extends from August to early June, depending upon the individual Secondary or K-12 school calendar.

Master mentor teachers are selected carefully to ensure that Western students completing their clinical residencies have strong professional role models. The potential mentor teacher will self-assess his or her knowledge of the education standards and standard elements. Students accepting these placements are expected to successfully complete the year-long clinical residency, in order to be recommended for Initial Licensure. Students who do not successfully complete the year-long residency will be withdrawn from the Education Program and must appeal to the Selection and Retention Committee for readmission. The other education courses in the program are offered online throughout the year. The residence for Secondary or K-12 Licensure must be completed in a Secondary or K-12 classroom and students are expected to work cooperatively 24 hours per week with qualified mentor teachers. During this year-long clinical residency, the student is applying and extending the pedagogical knowledge that he or she is learning in the Education courses. To be recommended for an Initial Secondary or K-12 License, the student resident must perform at "3, Proficiency" level in all relevant standard elements in the Secondary or K-12 classroom. Student residents must demonstrate the ability to apply the standard/standard element in an elementary classroom setting, assess Secondary or K-12 student learning, and evaluate their own teaching performance. The level expected of well prepared, first year teachers is "3, Proficiency."

The Secondary (with the exception of students seeking Secondary English Licensure) and K-12 Licensure Program requires 30 credits of Education coursework:

EDUC 000 Education Gateway Course	0 cr
EDUC 340 Brain-based learning Motivation and Achievement	3 cr
EDUC 403 Instruction and Assessment in the Content Area	3 cr
EDUC 404 Creating Positive Learning Environments	3 cr
EDUC 405 Data-driven Instructional Practices	3 cr
EDUC 406 Content Area Literacy	3 cr
EDUC 407 Maximizing Learning Through 21st Century Skills	3 cr
EDUC 420 Application of Classroom Strategies to Engage All Learners	3 cr
EDUC 424 Differentiation: Applying Learner-Centered Instruction	3 cr
Appropriate Student Teaching Course:	
EDUC 409 Secondary Student Teaching (*taken twice)*	3 cr
EDUC 410 K-12 Student Teaching (*taken twice*)	3 cr

The Secondary English Licensure Program requires 30 credits of Education coursework:

EDUC 000 Education Gateway Course	0 cr
EDUC 340 Brain-based Learning Motivation and Achievement	3 cr
EDUC 401 Assessment for Prevention and Intervention	3 cr
EDUC 402 Reading Comprehension, Vocabulary, and Fluency	3 cr
EDUC 403 Instruction and Assessment in the Content Area	3 cr
EDUC 404 Creating Positive Learning Environments	3 cr
EDUC 405 Data-driven Instructional Practices	3 cr
EDUC 407 Maximizing Learning Through 21st Century Skills	3 cr
EDUC 408 Teaching Writing with the Brain in Mind	3 cr
EDUC 409 Secondary Student Teaching (*taken twice*)	3 cr

Student Disposition and Performance Assessment. During the semester in which students are enrolled in EDUC 000 Education Gateway Course, EDUC 340 Brain-based Learning Motivation and Achievement, and the clinical residency (Student Teaching), students are evaluated by the Education faculty and K-12 teacher mentor(s) in terms of their potential for becoming effective educators. This process of evaluating professional teaching dispositions is used for screening Teacher Education students for support needs and/or continuation in the Education Department.

Recommendation for Initial Licensure. Students must meet the following requirements during the last semester of their clinical residency year:

1. successfully complete all responsibilities of a clinical resident;
2. perform at a minimum "3, Proficiency" on each relevant standard element as evaluated by mentor teachers, clinical residency supervisors, and/or course instructors;
3. apply for licensure from the Colorado Department of Education within five years immediately following program completion.

Education Department Selection and Retention Process.

Throughout the time a student spends in the Education Department, he or she is evaluated and assessed by the Selection and Retention Committee from the Education Department and content faculty in respect to performance, disposition, motivation, and demonstrated potential as a teacher. The Selection and Retention process has three purposes: 1) to act as a screening and counseling review, 2) to resolve a problematic situation, and 3) to provide an opportunity for faculty and students to develop a professional growth plan.

Evidence of unsatisfactory performance, disposition, motivation, or demonstrated potential results in withdrawal from the Program. A student who does not pass each Education course with at least a "C-" has one semester (or until the next time the semester course is offered) to remove the "D" or "F" with a grade of "C-" or above; or be withdrawn from the Program. Before admission to the Education Department, students must complete all prerequisite Education courses required for Licensure with a "C-" or above, and have an overall GPA of 2.75 or above. Anyone who fails two or more courses in the Education Department is withdrawn from the Program.

In considering transfer credit for required education courses, the Selection and Retention Committee considers the transfer of courses that were taken no more than 10 years prior to admission to the Program, based upon current state licensure requirements. Copies of official transcripts, course descriptions, and/or syllabi must be submitted to the Education Department for a determination transfer credit.

Selection and Retention Procedures. Students who appeal Program policies and procedures must abide by the Selection and Retention procedures process. This process involves submitting materials to the Selection and Retention Committee for review. These materials include:

1. a letter describing admission requirements that have been met, a statement of the problem, and a plan for correcting the problem;
2. a copy of the students transcript(s) and current course schedule;
3. additional materials supporting the student's appeal; and
4. additional materials requested by the Selection and Retention Committee.

EDUCATION COURSES

EDUC 000 Education Gateway Course **0 credits**

Students explore the professional opportunities and practices of the teaching discipline. Designed to provide participants a variety of designated experiences with K-12 students so they are able to make informed decisions about becoming teachers. Students facilitate field experiences with school-age students both at the elementary and secondary levels. Students attend two one-hour long seminars and participate in 10 hours of subsequent field experiences. This course is required for admission to the Teacher Education Department. Graded Satisfactory/Unsatisfactory only.

EDUC 102 Issues and Trends in American Education **3 credits**

An introduction to the philosophical and historical foundations of American public education, as well as current conceptions of and issues facing the teaching profession. Students reflect upon their own experiences in K-12 schools, explore current trends in teaching and learning, and investigate socio-political and economic issues facing 21st Century American education.

EDUC 197 Special Topics in Education **1-6 credits**

EDUC 297 Special Topics in Education **1-6 credits**

EDUC 316 Introduction to Language Acquisition for Linguistically Diverse Students **3 credits**

An introduction to theory and understanding of first and second language acquisition for teaching K-12 students from linguistically diverse cultures and backgrounds. Students develop an awareness of the historical, legal, social and educational background surrounding linguistically diverse education. The primary focus is on research based oral language assessment and development to provide meaningful instruction. Methods include those appropriate for the beginning English language learner, as well as those at other levels on the language acquisition continuum. Prerequisite: Admission to the Teacher Education Department.

EDUC 340 Brain-based Learning Motivation and Achievement **3 credits**

A foundation course in key aspects of schooling such as legal, assessment, diverse student needs, current brain research, and literacy. A practical application of cognitive processes and brain research is used. Course includes an integrated variety of approaches to teaching and learning—including cooperative learning, differentiated instruction, research-based strategies, skills for success in writing, technology integration, structuring schools and learning to ensure accountability for results. Prerequisite: passing scores on Basic Skills Competency Exam in Mathematics, Reading, and Writing; completion of EDUC 000, including ten hours of field experiences; no more than two semesters prior to internship.

EDUC 392 Independent Study **1-3 credits**

A course for qualified, upper-level students with specialized interests in a particular area of advanced study in Teacher Education.

EDUC 397 Special Topics in Education **1-6 credits**

EDUC 400 Foundations for Literacy: Phonology and Linguistics **3 credits**

A study and application of scientifically-based methods of teaching and reinforcing fundamental reading skills. Cognitive processes of literacy, including phonology, morphology, orthography and etymology. Focus placed on English language structure as it affects decoding and encoding. Additionally, methods for diverse groups of students, including students with disabilities, students from culturally and linguistically diverse populations, and high-achieving students are covered. Prerequisite: admission to the Education Department.

EDUC 401 Assessment for Prevention and Intervention **3 credits**

This is an in-depth application of assessment techniques and instruments in coordination with state standards, No Child Left Behind and Individuals with Disability Education Act, 2004. Includes standardized testing and knowledge of literacy including five essential components of reading: phonemic awareness, phonics, vocabulary, fluency, and comprehension. Analysis of data to design and monitor instruction and intervention for universal, targeted, and intensive needs of diverse groups of students, including students with disabilities, students from culturally and linguistically diverse populations, and high-achieving students. Prerequisite: admission to the Education Department.

EDUC 402 Reading Comprehension, Vocabulary, and Fluency **3 credits**

A study and application of scientifically based methods of teaching and reinforcing reading comprehension, vocabulary fluency, oral

and written language skills. Cognitive processes of literacy, including phonology, morphology, orthography, etymology, semantics, syntax, discourse, pragmatics and English language structure as it affects meaning. Additionally, methods for diverse groups of students, including students with disabilities, students from culturally and linguistically diverse populations, and high- achieving students are covered. Prerequisite: admission to the Teacher Education Program.

EDUC 403 Instruction and Assessment in the Content Area **3 credits**

An introduction to the concepts, methods, techniques, and assessment practices used to effectively teach secondary and K-12 students. Emphasis is placed on structures for lesson and unit planning, implementation of the Colorado State Standards, literacy and math integration, research based instructional strategies, content specific technologies, and management techniques. Prerequisite: admission to the Education Department.

EDUC 404 Creating Positive Learning Environments **3 credits**

A foundation course to prepare students to create appropriate learning environments both inside and outside the classroom. Students learn effective lesson planning, class- room management, medical protocol and sound legal disciplinary practices that are characterized by acceptable student behavior and efficient use of time. The students learn to perpetuate the democratic system by understanding the relationships among the various governmental entities that create laws, rules, regulations and policies. Students apply educational practices to ensure safe and orderly schools. Prerequisite: admission to the Education Department.

EDUC 405 Data-driven Instructional Practices **3 credits**

An in-depth application of standards-based instruction and assessment practices. Students design curriculum maps and plan standards-based lessons and units for diverse student populations. Students are taught to integrate literacy, math, and technology into their standards-based instructional plans, to use assessment data to drive standards-based curriculum that measure student knowledge, understanding, and skills, and to reflect on and evaluate their own performance. Prerequisite: admission to the Education Department.

EDUC 406 Content Area Literacy **3 credits**

An application of current research on brain-based learning, reading and writing and its integration in the content area. Students implement the essential components of reading: phonemic awareness, phonics, vocabulary, fluency, comprehension, motivation, and engagement within the content area. In addition, there is a focus on content area study and test taking skills. Prerequisite: admission to the Education Department.

EDUC 407 Maximizing Learning Through 21st Century Skills **3 credits**

An inquiry into the 21st century environment schools need to cultivate in order to maximize learning. This course prepares teachers to create technology-rich learning environment that enhance student growth and achievement. Prerequisite: admission to the Education Department.

EDUC 408 Teaching Writing with the Brain in Mind **3 credits**

An application of cognitive processes associated with various kinds of learning. Within the context of writing assessment and instruction, students learn to employ a wide range of teaching techniques to match the intellectual, emotional and social level of each class-room student. Students apply expert content knowledge to enrich and extend student learning and apply individual educational plans. Prerequisite: admission to the Education Department.

EDUC 409 Secondary Student Teaching **3 credits**

Student teaching in a 7-12 school setting on the average of 24 hours per week, over the course of the academic year, in collaboration with mentor teachers. This course must be repeated twice for credit. Prerequisite: admission to the Education Department.

EDUC 410 K-12 Student Teaching **3 credits**

Student teaching in a K-12 school setting on the average of 24 hours per week, over the course of the academic year, in collaboration with mentor teachers. This course must be repeated twice for credit. Prerequisite: admission to the Education Department.

EDUC 413 Mathematical Investigations **3 credits**

An application of the research-based practices for instruction in math. Focus is placed on the foundations for assessing and teaching math by addressing basic skills, critical thinking skills, conceptual understanding, real life applications, and diverse learner needs. Students implement and review specific assessment practices, teaching structures, intervention strategies, and technology applications within a standards- based framework of instruction. Prerequisite: admission to the Education Department.

EDUC 417 Teaching and Assessing Writing with the Linguistically Diverse Student in Mind **3 credits**

An application of cognitive processes associated with various kinds of learning. Within the context of writing assessment and instruction, students learn to employ a wide range of teaching techniques to match the cultural, academic, social and language-proficiency level of each classroom student. Students apply expert content knowledge and knowledge of cognitive academic language proficiency to enrich and extend student learning. Prerequisite: admission to the Teacher Education Program. Prerequisite: Admission to the Education Department.

EDUC 420 Application of Classroom Strategies to Engage All Learners **3 credits**

Study and apply effective research-based strategies for high levels of attention and engagement for all learners. Prerequisite: admission to the Education Department.

EDUC 424 Differentiation: Applying Learner-Centered Instruction **3 credits**

This course provides participants with an understanding of the components of differentiated instruction (content, process, and product). Participants explore skills and resources needed to effectively manage a differentiated classroom and extend their learning into the application of strategies, assessments, and management systems within the context of teaching academic content. Prerequisite: Admission to the Education Department.

EDUC 459 Elementary Culturally and Linguistically Diverse Student Teaching **3 credits**

Student teaching in an elementary school setting, with special attention given to work with linguistically diverse students. The student teaching experience averages 24 hours per week over the course of the academic year and is supervised by a mentor teacher. May

repeat twice for credit. Prerequisite: admission to licensure program.

EDUC 492 Independent Study **1-3 credits**

A course for qualified, upper-level students with specialized interests in a particular area of advanced study in Teacher Education.

EDUC 493 Research Problems **1-4 credits**

EDUC 497 Special Topics in Education **1-6 credits**

ENGLISH (ENG)

The English program at Western State Colorado University provides its majors an opportunity to study language, literature, writing, and secondary teaching. Upon graduation, English majors can:

- employ multiple perspectives in producing and analyzing texts;
- employ a critical, historical, and cultural sense of the traditions of English, American, and world literatures;
- generate and develop an effective writing project in at least one genre. Those in the Comprehensive Program with the writing emphasis can also:
- generate and develop effective writing projects in a variety of genres for a variety of writing occasions;
- locate appropriate venues for their writing and submit compatible work for publication.

Those in the Comprehensive Program with secondary education licensure can also be licensed to teach literature and writing in secondary schools in Colorado.

FACULTY

Professors T. Christine Jespersen, Alina M. Luna, and Mark D. Todd;
Senior Lecturers Michiko Jo Arai and Courtney P. Fullmer;
Lecturer Shelley E. Read.

DESCRIPTION OF THE PROGRAMS

English majors and minors must complete the required course ENG 250 Critical Approaches to Literature with a minimum grade of "C" before registering for upper-division courses in English.

English Major: Standard Program

A minimum of 39 credits is required, including a three-credit, upper-division literature elective, and the following:

ENG 205 Introduction to Creative Writing	3 cr
ENG 250 Critical Approaches to Literature	3 cr
ENG 358 Global Literatures	3 cr
ENG 371 Literary Theory and Criticism	3 cr
ENG 394 Junior Seminar	3 cr
ENG 494 Senior Seminar	3 cr
One of the following:	
ENG 230 Environmental Literature	3 cr
ENG 232 Borderlands: Race, Class, and Gender	3 cr
ENG 237 Women and Literature	3 cr
ENG 238 Literary Culture of the American West	3 cr
One of the following:	
ENG 300 Creative Writing: Fiction	3 cr
ENG 301 Creative Writing: Poetry	3 cr
ENG 303 Environmental Writing	3 cr
ENG 305 Creative Writing: Non-fiction	3 cr
Two of the following:	
ENG 372 British Literature: Medieval and Renaissance Texts	3 cr
ENG 373 British Literature: Milton Through the Romantics	3 cr
ENG 374 British Literature: The Victorians to the Present Day	3 cr
ENG 463 Major British Authors	3 cr
Two of the following:	
ENG 384 American Literature—Early to Civil War	3 cr
ENG 385 American Literature—Civil War to Present	3 cr
ENG 464 Major American Authors	3 cr

English Major: Comprehensive Program

CREATIVE WRITING EMPHASIS

A minimum of 54 credits is required, including three credits of an upper-division literature elective, and the following:

COM 241 Media Writing	3 cr
ENG 205 Introduction to Creative Writing	3 cr
ENG 220 Grammar	3 cr
ENG 250 Critical Approaches to Literature	3 cr
ENG 358 Global Literatures	3 cr

ENG 371 Literary Theory and Criticism	3 cr
ENG 394 Junior Seminar	3 cr
ENG 405 Advanced Writing	3 cr
ENG 445 Literary Magazine Submission and Production	3 cr
ENG 494 Senior Seminar	3 cr
Three of the following, at least two of which must have an ENG prefix:	
COM 306 Scriptwriting	3 cr
COM 310 Intro to Performance Studies	3 cr
ENG 300 Creative Writing: Fiction	3 cr
ENG 301 Creative Writing: Poetry	3 cr
ENG 303 Environmental Writing	3 cr
ENG 305 Creative Writing: Non-fiction	3 cr
Two of the following:	
ENG 372 British Literature: Medieval and Renaissance Texts	3 cr
ENG 373 British Literature: Milton Through the Romantics	3 cr
ENG 374 British Literature: The Victorians to the Present Day	3 cr
ENG 463 Major British Authors	3 cr
Two of the following:	
ENG 384 American Literature—Early to Civil War	3 cr
ENG 385 American Literature—Civil War to Present	3 cr
ENG 464 Major American Authors	3 cr

SECONDARY LICENSURE EMPHASIS

The Secondary Licensure Emphasis requires 51 credits, including three credits of upper-division English electives. English 352 Children's Literature may not be used as an elective in English. In addition, students must fulfill the requirements of the Secondary Licensure Option (see description under Education). The following courses are required:

COM 216 Dramatic Literature and Script Analysis	3 cr
COM 241 Media Writing	3 cr
ENG 205 Introduction to Creative Writing	3 cr
ENG 220 Grammar and the English Language	3 cr
ENG 250 Critical Approaches to Literature	3 cr
ENG 358 Global Literatures	3 cr
ENG 370 Myth and Culture	3 cr
ENG 371 Literary Theory and Criticism	3 cr
ENG 384 American Literature—Early to Civil War	3 cr
ENG 385 American Literature—Civil War to Present	3 cr
ENG 394 Junior Seminar	3 cr
One of the following:	
COM 306 Scriptwriting	3 cr
ENG 300 Creative Writing: Fiction	3 cr
ENG 301 Creative Writing: Poetry	3 cr
ENG 303 Environmental Writing	3 cr
ENG 305 Creative Writing: Non-fiction	3 cr
T*wo of the following:*	
ENG 230 Environmental Literature	3 cr
ENG 237 Women and Literature	3 cr
ENG 238 Literary Culture of the American West	3 cr
ENG 248 Film Arts: Film as Literature/Literature as Film	3 cr
ENG 331 Literature and Ethnicity	3 cr
ENG 337 Women Writers	3 cr
Two of the following:	
ENG 372 British Literature: Medieval and Renaissance Texts	3 cr
ENG 373 British Literature: Milton through the Romantics	3 cr
ENG 374 British Literature: The Victorians to the Present Day	3 cr

English Minor

A minimum of 18 credits is required for a Minor in English including:

ENG 205 Introduction to Creative Writing	3 cr
ENG 250 Critical Approaches to Literature	3 cr
English electives at the 150 level or above (excluding ENG 499)	12 cr

Capstone Course Requirement. The following course in the English Major fulfills the capstone course requirement: ENG 494 Senior Seminar. Students completing the Secondary Licensure Emphasis may use student teaching to fulfill this requirement. English majors must pass three credits of course work in ENG 494 with a minimum grade of "C."

English Assessment Program. All English majors and minors are required to participate in and successfully pass skills/knowledge assessment testing in English. Assessment tests are conducted thus: 1) as a component of the required course ENG 250 Critical Approaches to Literature; 2) as a designated semester project in the Junior Seminar, or a designated project in ENG 405 Advanced Writing (writing emphasis); and 3) a final graduation requirement incorporated into ENG 494 Senior Seminar.

ENGLISH COURSES

ENG 099 Basic Writing **3 credits**

Provides students with practice in generating and developing writing about academic topics and preparation for ENG 102 Academic Writing. For students who do not meet the University Level Entry Standards set by the Colorado Commission on Higher Education. Offered through Extended Studies for an additional fee. Credit does not count toward graduation. Graded Satisfactory/Unsatisfactory only.

ENG 100 Supplemental Academic Writing **1 credit**

Provides co-requisite, supplemental instruction for students enrolled in ENG 102. Students will practice employing rhetorical knowledge; using writing processes; developing critical reading and writing strategies; and using effective written communication to demonstrate comprehension of content knowledge. Prerequisites: an assessment equivalent to ACT English score between 15-17; a SAT Writing score between 380-430; or an Accuplacer Reading score between 53-79 and Accuplacer Sentence Skills score between 66-87; or a Compass Writing Skills score of 49-73; and a high school GPA of 2.75 or higher. Co-requisite ENG 102. Note: this course is intended for those qualified students wanting to complete the Supplemental Academic Instruction (SAI) program in English.

ENG 102 Academic Writing **3 credits**

Provides students the opportunity to practice strategies for developing writing projects on unfamiliar topics in unfamiliar formats to become more effective and efficient writers. Writers learn to practice strategies for making writing more comprehensible for readers and to use a wide range of writing processes for getting started, developing, organizing, and polishing writing projects. Prerequisites (one of the following): ENG 099; ACT English score of 18 or higher to demonstrate writing proficiency and ACT Reading score of 17 or higher to demonstrate reading proficiency; SAT Critical Reading score of 440 or higher to demonstrate writing proficiency and SAT Critical Reading score of 430 or above to demonstrate reading proficiency; Accuplacer Sentence Skills test score of 95 or higher and Accuplacer Reading Comprehension test score of 80 or higher; or combination of ACT, SAT, and Accuplacer scores to fulfill both reading and writing proficiencies; or co-requisite ENG 100 (SAI). GT-CO1

ENG 150 Introduction to Literature **3 credits**

An introduction to literature with focus on a specific theme, form, or topic. Prerequisites (one of the following): ENG 099; ACT English score of 18 or higher to demonstrate writing proficiency and ACT reading score of 17 or higher to demonstrate reading proficiency; SAT Critical Reading score of 440 or higher to demonstrate writing proficiency and SAT Critical Reading score of 430 or above to demonstrate reading proficiency; Accuplacer Sentence Skills test score of 95 or higher and Accuplacer Reading Comprehension test score of 80 or higher; or combination of ACT, SAT and Accuplacer scores to fulfill both reading and writing proficiencies; open only to first and second-year students who have completed fewer than 60 credits.

ENG 197 Special Topics **1-6 credits**

A study of a particular topic of interest to students of English to be announced each time the course is offered.

ENG 205 Introduction to Creative Writing **3 credits**

An introduction to the basic techniques of writing fiction and poetry. Models of each are studied, and students write and share pieces in both of these literary forms. Prerequisite: ENG 102 with a minimum grade of "C-."

ENG 220 Grammar and the English Language **3 credits**

A study of English grammar focusing on standard English. Students are also introduced to the history of the English language. Prerequisite: ENG 102 with a minimum grade of "C-."

ENG 230 Environmental Literature: Studies in: **3 credits**

A study of environmental literature. Students analyze the formal and thematic characteristics of the literature. To inform critical interpretations, students read relevant cultural and environmental theory. The theme or topic is announced each semester. Prerequisite: ENG 102 with a minimum grade of "C-." GT-AH2

ENG 232 Borderlands: Race, Class, and Gender **3 credits**

A focus on multicultural literature representing literal and metaphoric borders and crossings. Students examine how culture and ideology inform representations of the interconnections among race, class, and gender. Examples include literatures of migration, mixed identities, and racial and gender crossings. Prerequisite: ENG 102 with a minimum grade of "C-."

ENG 237 Women and Literature **3 credits**

Critical study of selected topics, themes, or issues about women as they are interpreted in popular and classic literary works. Specific titles to be announced each time the course is offered. Prerequisite: ENG 102 with a minimum grade of "C-."

ENG 238 Literary Culture of the American West **3 credits**

A study of traditional and nontraditional forms of Western literature, including the multicultural diversity of the region. Prerequisite: ENG 102 with a minimum grade of C-.

ENG 240 Writing Center Workshop **2 credits**
Students investigate methods of the writing process and study personal communications of tutoring. Strategies include studying the learning styles of all students. Prerequisite: instructor permission.

ENG 248 Film Arts: Film as Literature/Literature as Film **3 credits**
A focus on the development of film and its cultural impact, with special emphasis on the relationship between film as a visual medium and literature as a verbal medium. After examining a selection of short stories and novels and the film adaptations based upon them, students are given the opportunity to write some film criticism of their own. Prerequisite: ENG 102 with a minimum grade of "C-."

ENG 250 Critical Approaches to Literature **3 credits**
Students study a variety of genres as a basis of learning to write literary analysis. Focus is on an understanding of the varied perspectives from which a text can be approached, and how readers construct meaning based not only upon the text itself, but also the context in which it is studied. The critical approach as well as theme or topic may vary. Prerequisite: ENG 102 with a minimum grade of "C-."

ENG 254 Popular Genre Fiction **3 credits**
A focus on works that adhere to a specific popular genre announced on a rotating basis and selected from such sub-genres as science fiction, fantasy, mysteries, romance, westerns, or horror. Readings explore the relationship of genre topics to the craft of storytelling. Course may be repeated for credit when taken with a different emphasis. Prerequisite: ENG 102 with a minimum grade of "C-."

ENG 255 Ancient World Literature **3 credits**
A study of ancient texts and their relation to their own time, and to ours. Since an understanding of these writings is important for reading English literature, the focus of the course is on Western texts central to that tradition. However, students may also read selected works from non-Western cultures in order to give them a taste of the diversity of the ancient world. Works studied may include selections from the Bible (Hebrew Scriptures and New Testament), Homer's writings, poetry and theatre of Classical Greece, Chinese poetry from the Book of Songs, a selection from the Mahabharata, and Roman poetry, particularly Virgil and Ovid. Prerequisite: ENG 102 with a minimum grade of "C-." GT-AH2

ENG 270 Folklore **3 credits**
A study of one or more areas of folklore with a focus on American folklore. Possible areas include folksong, folk tales and legends, customs and festivals, dance and drama, proverbs, traditions, beliefs, recipes, and games. Prerequisite: ENG 102 with a minimum grade of "C-."

ENG 297 Special Topics **1-6 credits**
A study of a particular topic of interest to students of English to be announced each time the course is offered.

ENG 300 Creative Writing: Fiction **3 credits**
Models are studied, and students read and respond to one another's writing. This course may incorporate narrative theory. Prerequisite: ENG 205 with a minimum grade of "C."

ENG 301 Creative Writing: Poetry **3 credits**
Instruction is given on the techniques and terminology of poetry writing. Models are studied, and students read and respond to one another's writing. Prerequisite: ENG 205 with a minimum grade of "C."

ENG 303 Environmental Writing **3 credits**
A workshop approach to help writers develop a portfolio of essays suitable for publication in outdoor, environmental, and other appropriate magazines. To enhance their essays, writers read and analyze theoretical and published environmental texts. Prerequisite: ENG 205 with a minimum grade of "C."

ENG 305 Creative Writing: Non-fiction **3 credits**
Models are studied, and students read and respond to one another's writing. Prerequisite: ENG 205 with a minimum grade of "C."

ENG 331 Literature and Ethnicity: Studies in: **3 credits**
A focus on United States literatures reflective of specific identities and cultures. Students examine format and thematic characteristics of a particular literature. To enhance critical understanding, students read and analyze relevant theoretical approaches to race, ethnicity, and culture. A specific focus is announced each time the course is taught. Examples include Native American, African American, and Borderlands literature. Course may be repeated once for credit with a different title, but may be counted only once toward the major. Prerequisite: ENG 250 with a minimum grade of "C."

ENG 334 Poetry: Studies in: **3 credits**
An in-depth study of poetry as a genre through selections of British, American, and world literature. Prerequisite: ENG 250 with a minimum grade of "C."

ENG 335 Drama: Studies in: **3 credits**
An in-depth study of drama as a genre through selections of British, American, and world literature. Prerequisite: ENG 250 with a minimum grade of "C."

ENG 336 Prose: Studies in: **3 credits**
A focus on prose fiction, including such genres as short stories, novellas, and novels. Depending upon the instructor's specific emphasis, examples of any one or more of these genres may be selected for the term. Prerequisite: ENG 250 with a minimum grade of "C."

ENG 337 Women Writers **3 credits**
Analysis of the poetry, drama, or fiction of women writers. Emphasis is on 19th century, 20th century, or contemporary writers.

Prerequisite: ENG 250 with a minimum grade of "C."

ENG 352 Children's Literature **2 credits**

A survey of traditional and modern literature providing an opportunity to discuss topics such as reader-response theories, critical literacy, objective and subjective criticism, censorship, and the use—or misuse—of literature in primary and middle-level education.

ENG 358 Global Literatures: Studies in: **3 credits**

A study of literatures from around the globe that considers the artistry, culture, and diverse social conditions of various countries. A specific focus is announced each time the course is offered. Possible topics may include "Colonialism and Globalization," "The Sacred Texts," and "War and Revolution." Course may be repeated once for credit with a different title, but may be counted only once toward the major. Prerequisite: ENG 250 with a minimum grade of "C."

ENG 370 Myth and Culture **3 credits**

An introduction to the role of myth in literature and in our contemporary world. Examining myth from various perspectives, including the archetypal, the course focuses upon myth as a means for understanding aspects of our society's cultures. Offered in alternate years. Prerequisite: ENG 250 with a minimum grade of "C."

ENG 371 Literary Theory and Criticism **3 credits**

An introduction to some of the primary conversations structuring debates in literary theory and criticism. Students learn to identify central questions, assumptions, and conflicts in theoretical and critical texts. Students also gain an understanding of the ways that theory and criticism influence their immediate experiences in English courses. Prerequisites: ENG 250 with a minimum grade of "C" and at least one 300-level literature course, or instructor permission.

ENG 372 British Literature: Medieval and Renaissance Texts **3 credits**

A study of British Literature focusing on the major genres for the Anglo-Saxon, Middle English, and Renaissance periods, ending with the Metaphysical poets (800 A.D. to early 1600s). Prerequisite: ENG 250 with a minimum grade of "C."

ENG 373 British Literature: Milton through the Romantics **3 credits**

A study of British works of poetry, fiction, drama, and essay produced from 1660 to 1830. Prerequisite: ENG 250 with a minimum grade of "C."

ENG 374 British Literature: The Victorians to the Present Day **3 credits**

A study of British works of poetry, fiction, drama, and essay produced from 1830 to the present day. Prerequisite: ENG 250 with a minimum grade of "C."

ENG 384 American Literature–Early to Civil War **3 credits**

An exploration of authors and texts in American literature up to 1865. Prerequisite: ENG 250 with a minimum grade of "C."

ENG 385 American Literature–Civil War to Present **3 credits**

An exploration of authors and texts in American literature from 1865 to the present. Prerequisite: ENG 250 with a minimum grade of "C."

ENG 394 Junior Seminar: Studies in: **3 credits**

Students comprehensively engage a given topic and the critical conversations pertaining to it. The research component of the course allows students to participate in and extend scholarly dialogue. A specific focus is announced each time the course is offered. Prerequisites: ENG 250 with a minimum grade of "C" and ENG 371.

ENG 396 Writing Center Assistantship **1-3 credits**

Students apply knowledge obtained in ENG 240 in directed field experiences in Writing Center tutoring. Prerequisite: ENG 240.

ENG 397 Special Topics **1-6 credits**

A study of a particular topic of interest to students of English to be announced each time the course is offered. Course may be repeated once for credit with a different title, but may be counted only once toward the major. Prerequisite: ENG 250 with a minimum grade of "C."

ENG 405 Advanced Writing **3 credits**

An opportunity to deepen writing practiced at the junior level, with increased attention to voice and style. This course seeks to develop an awareness of the broader community of writers that includes those with not only similar but also differing writing goals. Prerequisites: ENG 250 with a minimum grade of "C" and at least two 300-level writing courses.

ENG 445 Literary Magazine Submission and Production **3 credits**

Focus alternates between literary magazine submissions and literary magazine production. Submission discussion includes aesthetics and techniques for revising and polishing work for submission. During the production focus students participate in the editorial production of a fiction anthology including acquisition and proofreading of manuscripts. Course may be repeated for up to six credits, only three credits of which may count as an elective in the major. Prerequisite: ENG 250 with a minimum grade of "C"; ENG 300, ENG 301, ENG 303, or ENG 305 with a minimum grade of "C"; or instructor permission.

ENG 463 Major British Authors: **3 credits**

An in-depth study of selected, significant authors that approaches works from similar or cross-historical periods of British literature. Course may be repeated once for credit when taken with a different emphasis. Prerequisites: ENG 250 with a minimum grade of "C" and minimum junior standing.

ENG 464 Major American Authors: **3 credits**

An in-depth study of selected, significant authors that approaches works from similar or cross-historical periods of American literature. Course may be repeated once for credit when taken with a different emphasis. Prerequisites: ENG 250 with a minimum grade of "C" and minimum junior standing.

ENG 475 Theories of Reading and Writing Discourse **3 credits**

A focus on composition and writing center theory and its practical applications. In addition to taking the course, students work with a faculty member in a lower-division English course or in the writing center in order to implement theoretical material in teaching

situations. The course may be repeated twice for credit. Only three credits may count toward a major or minor in English. Graded Satisfactory/Unsatisfactory only. Prerequisite: instructor permission.

ENG 492 Independent Study **1-6 credits**

An opportunity for individual study about topics in English, to be selected by the students, in cooperation with their advisors and with the permission of the regular faculty member supervising the study. A maximum of six credits may count toward a major in English. The course is repeatable until that maximum credit is met. Prerequisites: 12 credits of English; ENG 250 with a minimum grade of "C."

ENG 494 Senior Seminar: Studies in: **3 credits**

The Senior Seminar serves as the Standard Major's capstone experience and focuses on announced thematic topics that allow students to demonstrate competencies developed in the major. The theme or topic is announced for each spring. Prerequisite: ENG 394 and senior standing; or instructor permission.

ENG 497 Special Topics **1-6 credits**

A study of a particular topic of interest to students of English to be announced each time the course is offered. Course may be repeated once for credit with a different title, but may be counted only once toward the major. Prerequisite: ENG 250 with a minimum grade of "C."

ENG 499 Internship in English **1-6 credits**

Supervised practical experiences in English for advanced students. Prerequisite: junior or senior standing and instructor permission.

ENVIRONMENT AND SUSTAINABILITY (ENVS)

The Environment and Sustainability Program focuses on the interactions of humans and the natural environment. Specifically, the Program studies the structure and function of natural systems, examines how social, political, and economic activity impacts those systems, and experiments with resilient solutions to unsustainable human impacts.

Goals of the Environment and Sustainability Program include:

- Applying the knowledge and methods of natural sciences to understand and analyze environmental problems and solutions.
- Implementing social science findings and frameworks to develop local, national, and global sustainable solutions.
- Using the insights of environmental history, literature, and ethics to inform current decision making.
- Developing interdisciplinary critical thinking, communication, and problem-solving skills to foster community and ecological resilience.
- Fostering leadership in sustainability, effective environmental citizenship, and career and advanced study opportunities in environmental fields.

FACULTY

Professor John C. Hausdoerffer;
Associate Professor and Director of the Colorado Water Workshop Jeffrey Sellen.
Assistant Professor Jonathan D. Coop;

ENVIRONMENT AND SUSTAINABILITY COUNCIL

Jeffrey Sellen, ENVS Director; *Kevin D. Alexander,* Biology; *Jonathan D. Coop*, ENVS, Biology;
Matthew H. Ebbott, Recreation and Outdoor Education; *Christopher W. Greene*, Business Administration;
John C. Hausdoerffer, ENVS, Philosophy; *Jack F. Lucido*, Communication; *John Mason,* Physics;
M. Brooke Moran, Recreation and Outdoor Education; *Lynn L. Sikkink,* Anthropology; *Heather Thiessen-Reily*, History

DESCRIPTION OF THE PROGRAMS

Environment and Sustainability Major: Standard Program

A minimum of 39 credits is required.

ENVS 100 Introduction to Environment and Sustainability	3 cr
ENVS 200 Writing the Environment	3 cr
ENVS 301 Science of Sustainability and Resilience	3 cr
ENVS 350 U.S. and Western Environmental Politics	3 cr
ENVS 390 Environmental Monitoring	4 cr
ENVS 400 Applied Sustainability	3 cr
ENVS 410 Environmental Ethics	3 cr
One of the following:	
ENVS 360 Global Environmental Policy	3 cr
ENVS 370 Water Policy and Politics	3 cr
ENVS 375 Seminar in Water Topics	3 cr
Required supporting courses:	
BIOL 130 Environmental Biology	3 cr
BIOL 135 Environmental Biology Lab	1 cr
PHYS 125 Energy and the Environment	3 cr
ECON 215 Environmental Economics	3 cr
One of the following:	
HWTR 200 This Is the Headwaters	1 cr
HWTR 398 Headwaters Conference	1 cr
And one of the following:	
ECON 216 Statistics for Business and Economics	3 cr
MATH 213 Probability and Statistics	3 cr
SOC 211 Quantitative Research Methods	3 cr

Environment and Sustainability Major: Comprehensive Program

Students have two options for a comprehensive major: a 62-credit Water Emphasis or the 57-credit Individualized Contract.

WATER EMPHASIS

A minimum of 62 credits is required.

ENVS 100 Introduction to Environment and Sustainability	3 cr
PHYS 125 Energy and the Environment	3 cr
BIOL 130 Environmental Biology	3 cr
BIOL 135 Environmental Biology Lab	1 cr
GEOL 101 Physical Geology	3 cr

GEOL 105 Physical Geology Lab	1 cr
ENVS 200 Writing the Environment	3 cr
ECON 215 Environmental Economics	3 cr
ENVS 301 Science of Sustainability and Resilience	3 cr
GEOG 340 Introduction to Geographic Information Systems	3 cr
ENVS 350 U.S. & Western Environmental Politics	3 cr
ENVS 370 Water Policy and Politics	3 cr
ENVS 373 The Water Planet	3 cr
ENVS 375 Seminar in Water Topics	1-3 cr
ENVS 376 The Colorado Water Workshop	1 cr
ENVS 390 Environmental Monitoring	4 cr
ENVS 400 Applied Sustainability	3 cr
ENVS 410 Environmental Ethics	3 cr
One of the following:	
HWTR 200 This Is the Headwaters	1 cr
HWTR 398 Headwaters Conference	1 cr
One of the following:	
ECON 216 Statistics for Business and Economics	3 cr
MATH 213 Probability and Statistics	3 cr
SOC 211 Quantitative Research Methods	3 cr
Two of the following:	
ROE 293 Outdoor Pursuits Education—Water Based	3 cr
ECON 370 Natural Resource Economics	3 cr
ENVS 360 Global Environmental Policy	3 cr
BUAD 410 Water and Environmental Law	3 cr
BIOL 476 Aquatic Ecology (with Lab)	4 cr
One of the following:	
ENVS 420 Natural History of the Gunnison Basin	3 cr
ENVS 430 Watersheds of the World	3 cr
ENVS 499 Environmental Studies Internship	3-6 cr

Admission to Recreation and Outdoor Education courses for declared Water Emphasis students is based on instructor permission and available seats.

INDIVIDUALIZED CONTRACT EMPHASIS

This Emphasis allows students to design a curriculum in consultation with an Environment and Sustainability advisor and with the approval of the Environment and Sustainability Council. A minimum of 57 credits is required including the 39-credit Standard Major. Proposals for an Individualized Contract should be developed before the second semester of the junior year, and applicants must have a minimum of a 3.200 GPA in the major and a 3.000 overall GPA. Consult an Environment and Sustainability advisor for details.

Environment and Sustainability and Business Administration Coordinated Double Major:

If a student elects to complete an Environment and Sustainability Major: Standard Program and the coordinated Business Administration Major: Standard Program, the student must take ECON 202 Microeconomics instead of ECON 215 Environmental Economics; and ENVS 360 Global Environmental Policy must be elected. ECON 216 must be elected, with MATH 140 as its prerequisite.

Environment and Sustainability Minor

A minimum of 18 credits is required for a Minor in Environment and Sustainability including twelve credits of ENVS or HWTR electives, and the following:

ENVS 100 Intro to Environment and Sustainability	3 cr
ENVS 200 Writing the Environment	3 cr

Capstone Course Requirement. The following course in the Environment and Sustainability Major fulfills the capstone course requirement: Applied Sustainability.

ENVIRONMENT AND SUSTAINABILITY COURSES

ENVS 100 Introduction to Environment and Sustainability **3 credits**

An interdisciplinary, historical analysis of the development of environmental problems, movements, and philosophies. Students apply historical lessons to critically examine sustainable solutions locally and globally. GT-SS2

ENVS 197 Special Topics **1-6 credits**

ENVS 200 Writing the Environment **3 credits**

Students develop communication skills through presentations and writing on a variety of environmental issues appropriate to a wide variety of audiences. Through environmental essays, writing for nonprofit websites, grant proposals, and other forms of

environmental writing, students are introduced to a broad range of skills needed for effective communication. Focus throughout the course on the analysis of arguments and texts further develops students' analytical and communication skills. Prerequisite: ENVS 100; COM 202 is recommended.

ENVS 292 Independent Study **1-3 credits**

ENVS 297 Special Topics **1-6 credits**

ENVS 301 Science of Sustainability and Resilience **3 credits**

A holistic inquiry into how humans might live the next chapter of our history, guided by the ecological principles of sustainability and resilience. Environmental problems and their possible solutions are analyzed critically and quantitatively; field experiences on campus and in the community involve students directly in the application of these principles. Themes include sustainable agriculture, green building, renewable energy, and conservation and restoration. Prerequisites: BIOL 130, BIOL 135, PHYS 125

ENVS 350 U.S. and Western Environmental Politics **3 credits**

An historical and contemporary investigation of U.S. environmental policies with an applied focus on the impact of national policy on the ecosystems and cultures of the American West. Reciprocally, this course traces how public lands agencies, social movements, historical land uses, and diverse cultures in the West shape U.S. environmental policy. Students combine analysis and discussion of major U.S. policies, prominent theories and issues, and student-led environmental service projects to better understand environmental challenges. Prerequisites: ENVS 100, ENVS 200 or COM 202, ECON 370

ENVS 360 Global Environmental Policy **3 credits**

A critical examination of key perspectives, economic and political processes, policy actors, and institutions involved in global environmental issues. Students analyze ecological, cultural, and social dimensions of international environmental concerns and governance as they have emerged in response to increased recognition of global environmental threats, globalization, and international contributions to understanding of these issues. The focus of the course encourages students to engage and evaluate texts within the broad policy discourse on globalization, justice, and the environment. Prerequisites: ENVS 100; ENVS 200, ECON 201 or SCI 202; junior standing or instructor approval.

ENVS 370 Water Policy and Politics **3 credits**

Study of the history, politics and institutions related to water policy and administration with comparative reference to different regions of the United States and internationally. Attention is given to the industrial development of the East and the created water resources of the arid West as a way to understand changing social sentiments toward water and water policy. The course also examines water pollution laws and water management. Prerequisites: ENVS 100; ECON 201 or ENVS 200 or SCI 202; junior standing or instructor approval.

ENVS 373 The Water Planet **3 credits**

An advanced water science course specifically designed for students interested in water related environmental science and policy. Topics include the physical and chemical properties of natural fresh waters and the movement and reservoirs of fresh water within the water cycle. The course includes several hands-on exercises and field experiences where students investigate and analyze natural waters in the Gunnison Basin. Prerequisites: GEOL 101; GEOL 105, and one of the following: CHEM 101 or CHEM 111.

ENVS 375 Seminar in Water Topics **1-3 credits**

An occasional offering that may include water topics in politics and policy, ethics and philosophy, or science. Prerequisite: ENVS 200 and ENVS 301, or instructor permission.

ENVS 376 The Colorado Water Workshop **1 credit**

A three-day annual conference bringing students together with a variety of water users, managers, ranchers, environmentalists, regulators and others involved in water issues for presentations and discussion on matters ranging from specific municipal or water district projects to major basin-wide planning for the great rivers of the West to global issues of water use and protection. Topics vary from year to year. Prerequisite: ENVS 350 and ENVS 370, or instructor permission.

ENVS 390 Environmental Monitoring **4 credits**

A field-work based study of local (Gunnison Basin) environmental problems. Numerous monitoring techniques are implemented based on principles of biology, chemistry, and geology. The emphasis is on collaborative and integrative group projects dealing directly with real-world environmental problems. Prerequisites: ENVS 301 and one of the following: ECON 216, MATH 213 or SOC 211.

ENVS 392 Independent Study **1-6 credits**

ENVS 397 Special Topics **1-6 credits**

ENVS 400 Applied Sustainability **3 credits**

A field-based, collaborative, problem-solving experience that addresses a current issue in environmental sustainability. Implementing frameworks such as resilient and systems thinking, students collect information, analyze results, write a report, publicly present their findings, and begin to implement solutions informed by their analysis. Students learn basic skills for transforming their ENVS education into compelling environmental professional career possibilities. Prerequisites: ENVS 350 and ENVS 390.

ENVS 410 Environmental Ethics **3 credits**

A seminar on the complexities of environmental issues from a philosophical perspective. The course also offers a survey of the evolution of environmental moral philosophy as well as in-depth analysis of major thinkers in the field. Students confront ethical concerns from both historical and personal perspectives, with an emphasis on the ability to critically evaluate and apply these perspectives to their work in environmental fields. Prerequisite: ENVS 301 and 350; or PHIL 335.

ENVS 420 Natural History of the Gunnison Basin **3 credits**

An overview of place-based natural history, current ecological research, and current environmental issues facing the region. Prerequisites: ENVS 100 and instructor permission.

ENVS 430 Watersheds of the World **3 credits**

This field course is designed to provide students with an introduction to important science and policy issues in selected watersheds

throughout the world. Students receive an overview of place-based natural history, current ecological research, and current environmental issues and policy facing the region. Examples include the local and global effects of resource extraction, tourism, air and water pollution, land use changes, and global climate change. This is an expedition course (approximately 3 weeks) and is experiential in nature. Prerequisites: ENVS 100 and instructor permission.

ENVS 497 Special Topics **1-6 credits**

ENVS 499 Internship in Environmental Studies **1-6 credits**

An opportunity to apply skills and knowledge from course work to an employment setting. Prerequisite: approval from an Environment and Sustainability advisor and the Program Director.

ENVIRONMENTAL SCIENCE

Environmental science, by its broad scope, includes a diverse range of disciplines in the natural and physical sciences, and mathematics. The multidisciplinary Environmental Science minor is intended to complement many majors. The minor will encourage students to better understand environmental issues and concepts from a scientific perspective. This will broaden their perception of the natural world and society by allowing them to recognize and address the challenges of the future. The minor enhances both career and graduate school opportunities for students who complete it.

DESCRIPTION OF THE PROGRAM

Environmental Science Minor

A minimum of 23 credits is required including:

One of the following:	
MATH 213 Probability and Statistics	3 cr
MATH 151 Calculus 1	4 cr
At least 13 credits chosen from at least three disciplines (including two labs) from the following:	
BIOL 130 Environmental Biology	3 cr
BIOL 135 Environmental Biology Laboratory	1 cr
BIOL 150 Biological Principles with Laboratory	4 cr
BIOL 151 Diversity & Patterns of Life with Laboratory	4 cr
CHEM 111 General Chemistry I	3 cr
CHEM 112 General Chemistry I Laboratory	1 cr
CHEM 113 General Chemistry II	3 cr
CHEM 114 General Chemistry II Laboratory	1 cr
GEOL 101 Physical Geology	3 cr
GEOL 105 Physical Geology Laboratory	1 cr
PHYS 120 Meteorology	3 cr
PHYS 125 Energy and the Environment	3 cr
And at least six credits chosen from the following but cannot count toward another minor or another major:	
BIOL 301 General Ecology	3 cr
BIOL 302 General Ecology Laboratory and Recitation	2 cr
BIOL 440 Conservation Biology	3 cr
CHEM 231 Introduction to Organic Chemistry and Biochemistry	3 cr
CHEM 234 Introduction to Organic Chemistry and Biochemistry Laboratory	1 cr
CHEM 306 Analytical Chemistry with Laboratory	4 cr
ENVS 373 Water Planet	3 cr
ENVS 390 Environmental Monitoring	4 cr
GEOL 240 Intro to Petroleum Geology	3 cr
GEOL 320 Geomorphology with Laboratory	4 cr
And:	
SCI 400 Environmental Science Seminar	1 cr

EXERCISE AND SPORT SCIENCE (ESS)

The mission of the Exercise and Sport Science Program is to prepare students for careers focused on promoting healthy lifestyles and enhancing performance in exercise, sport, and physical activity settings. Students with a major or minor in Exercise and Sport Science can pursue entry-level careers in teaching, fitness, sport, and wellness in both private and public sectors. The Exercise and Sport Science Program also provides students with the background necessary to complete professional certifications and pursue a graduate degree in physical therapy and other allied health fields, exercise physiology, cardiac rehabilitation, or sport studies.

To graduate, all exercise and sport science majors must complete ESS 181 Foundations of Exercise and Sport Science and ESS 185 Lifetime Wellness with a minimum grade of "C":

FACULTY

Professor Kathleen M. Kinkema; Assistant Professors Christina A. Buchanan, Lance Dalleck, Peter Kadushin and Crystal Southall; Lecturer Ryan Weatherwax.

DESCRIPTION OF THE PROGRAMS

Exercise and Sport Science Nucleus:

ESS 181 Foundations of Exercise and Sport Science	3 cr
ESS 185 Lifetime Wellness	3 cr
ESS 320 Psychology of Sport and Physical Activity	3 cr
ESS 490 Sociology of Sport and Physical Activity	3 cr
ESS Capstone*: ESS 495, EDUC 410, or ESS 498	3 cr

*EDUC 410 is a capstone option for K-12 Physical Education majors seeking Colorado licensure; ESS 498 is a capstone option for the ESS Standard Emphasis and the Sport and Fitness Management Standard Emphasis.

Exercise and Sport Science Major: Standard Program

EXERCISE AND SPORT SCIENCE EMPHASIS

A minimum of 38 credits is required, including the 15-credit Exercise and Sport Science Nucleus, First Aid/CPR competency, and the following:

ESS 201 Essentials of Human Anatomy and Physiology (with laboratory)	3 cr
ESS 275 Motor Development and Learning	3 cr
ESS 330 Exercise Physiology	3 cr
ESS 331 Exercise Physiology Lab	1 cr
ESS 380 Biomechanics	3 cr
Three of the following:	
ESS 282 Principles of Sport and Fitness Management	3 cr
ESS 290 Curriculum Development and the Learning Environment	3 cr
ESS 340 Mental Training for Peak Performance	3 cr
ESS 346 Psychology of Coaching	3 cr
ESS 355 Psychology of Injury	3 cr
ESS 360 Sport Nutrition and Supplementation	3 cr
ESS 363 Adapted Physical Activity	3 cr
ESS 365 Topics in Physical Activity	3 cr
ESS 370 Essentials of Strength Training and Conditioning	3 cr
ESS 382 Management of Sport and Fitness Facilities	3 cr
ESS 385 Program Design for Physical Activity Settings	3 cr
ESS 392 Methods of Secondary Activities	3 cr
ESS 395 Methods of Elementary Activities	3 cr
ESS 396 Methods of Alternative Physical Education	3 cr
ESS 410 Assessment and Exercise Prescription	3 cr
ESS 430 Topics in Clinical Exercise Physiology	3 cr
ESS 450 Risk Management in Physical Activity Settings	3 cr

SPORT AND FITNESS MANAGEMENT EMPHASIS

A minimum of 46 credits is required, including the 15-credit Exercise and Sport Science Nucleus, First Aid/CPR competency, and the following:

ACC 201 Introduction to Financial Accounting	3 cr
ACC 202 Introduction to Managerial Accounting	3 cr
ECON 202 Microeconomics	3 cr
ESS 282 Principles of Sport and Fitness Management	3 cr
ESS 385 Program Design for Physical Activity Settings	3 cr
ESS 405 Practicum in Exercise and Sport Science	1 cr

ESS 450 Risk Management in Physical Activity Settings	3 cr
MATH 140 College Algebra	3 cr
ROE 333 Recreation and Sport Marketing	3 cr
One of the following:	
BUAD 220 Computer Applications in Business	3 cr
CS 120 Information Management and Analysis	3 cr
One of the following:	
ESS 382 Management of Sport and Fitness Facilities	3 cr
ROE 466 Facilities Management	3 cr

Exercise and Sport Science Major: Comprehensive Program

EXERCISE SCIENCE EMPHASIS

A minimum of 60 credits is required, including the 15-credit Exercise and Sport Science Nucleus, the 19-credit Exercise Science Core, First Aid/CPR competency, and the completion of either the clinical track or the health fitness track:

Exercise Science Core

ESS 275 Motor Development and Learning	3 cr
ESS 298 Fitness Instruction	3 cr
ESS 330 Exercise Physiology	3 cr
ESS 331 Exercise Physiology Lab	1 cr
ESS 380 Biomechanics	3 cr
ESS 410 Assessment and Exercise Prescription	3 cr
One of the following:	
BIOL 300 Basic Nutrition	3 cr
ESS 360 Sport Nutrition and Supplementation	3 cr

Clinical Track (33-34 credits)

BIOL 150 Biological Principles (with laboratory)	4 cr
BIOL 372 Human Anatomy and Physiology I (with laboratory)	4 cr
BIOL 373 Human Anatomy and Physiology II (with laboratory)	3 cr
CHEM 111 General Chemistry I	3 cr
CHEM 112 General Chemistry Laboratory	1 cr
CHEM 113 General Chemistry II	3 cr
CHEM 114 General Chemistry Laboratory II	1 cr
ESS 430 Topics in Clinical Exercise Physiology	3 cr
MATH 140 College Algebra	3 cr
PHYS 140 Introductory Physics (with laboratory)	4 cr
One of the following:	
PSY 345 Biological Psychology (with laboratory)	4 cr
PSY 369 Health Psychology	3 cr
PSY 368 Psychopathology	3 cr
PSY 475 Clinical Psychology	3 cr

Health Fitness Track (25 credits)

ESS 201 Essentials of Human Anatomy and Physiology (with laboratory)	4 cr
ESS 370 Essentials of Strength Training and Conditioning	3 cr
ESS 385 Program Design for Physical Activity Settings	3 cr
ESS 405 Practicum in Exercise and Sport Science	1 cr
ESS 450 Risk Management in Physical Activity Settings	3 cr
One of the following:	
ESS 382 Sport and Fitness Facility Management	3 cr
ROE 466 Facilities Management	3 cr
Three of the following:	
ESS 340 Mental Training for Peak Performance	3 cr
ESS 355 Psychology of Injury	3 cr
ESS 363 Adapted Physical Activity	3 cr
ESS 365 Topics in Physical Activity	3 cr

K-12 PHYSICAL EDUCATION EMPHASIS

A minimum of 52 credits is required, including the 15-credit Exercise and Sport Science Nucleus, First Aid/CPR competency, and the following:

ESS 201 Essentials of Human Anatomy and Physiology (with laboratory)	4 cr
ESS 275 Motor Development and Learning	3 cr

ESS 290 Curriculum Development and the Learning Environment	3 cr
ESS 330 Exercise Physiology	3 cr
ESS 331 Exercise Physiology Lab	1 cr
ESS 350 Instructional Assessment in Physical Education	2 cr
ESS 363 Adapted Physical Activity	3 cr
ESS 380 Biomechanics	3 cr
ESS 392 Methods of Secondary Activities	3 cr
ESS 395 Methods of Elementary Activities	3 cr
ESS 396 Methods of Alternative Physical Education	3 cr
ROE 189 Principles of Outdoor Recreation	3 cr
Three of the following:	
ESS 210 Skill Development and Analysis: Net/Wall Games	1 cr
ESS 211 Skill Development and Analysis: Invasion Games	1 cr
ESS 212 Skill Development Analysis: Target/Fielding Games	1 cr
ESS 213 Skill Development and Analysis: Dance	1 cr

Students seeking Colorado licensure must fulfill the requirements for K-12 Physical Education Licensure (see description under Education).

Exercise and Sport Science Minor

This Minor consists of 18 credits including:

One of the following:	
ESS 181 Foundations of Exercise and Sport Science	3 cr
ESS 185 Lifetime Wellness	3 cr
And:	
ESS electives at the 200-level or above (excluding ESS 276 and ESS 221-229)	9 cr
ESS upper-division electives	6 cr

Exercise and Sport Science Minor: Sport Psychology Concentration

This minor consists of 18 credits including:

ESS 320 Psychology of Sport and Physical Activity	3 cr
ESS 340 Mental Training for Peak Performance	3 cr
ESS 346 Psychology of Coaching	3 cr
ESS 355 Psychology of Injury	3 cr
One of the following:	
ESS 275 Motor Development and Learning	3 cr
ESS 490 Sociology of Sport and Physical Activity	3 cr
One of the following:	
PSY 368 Abnormal Psychology	3 cr
PSY 369 Health Psychology	3 cr

Capstone Course Requirement. The following course in the Exercise and Sport Science Major fulfills the capstone course requirement: ESS 495 Senior Seminar in Exercise and Sport Science. Students completing the K-12 Physical Education Emphasis may use EDUC 410 to fulfill this requirement. Students completing the ESS Standard Emphasis or the Sport and Fitness Management Standard Emphasis may use ESS 498 to fulfill this requirement.

EXERCISE AND SPORT SCIENCE COURSES

All Exercise and Sport Science service courses (numbered 100-172) are beginner level unless otherwise designated.

ESS 100 Intercollegiate Athletics: Basketball **1 credit**
Open to members of the intercollegiate athletic basketball team. May be taken one time for credit. Prerequisite: coach/instructor permission.

ESS 101 Intercollegiate Athletics: Cross Country **1 credit**
Open to members of the intercollegiate athletic cross country team. May be taken one time for credit. Prerequisite: coach/instructor permission.

ESS 102 Intercollegiate Athletics: Football **1 credit**
Open to members of the intercollegiate athletic football team. May be taken one time for credit. Prerequisite: coach/instructor permission.

ESS 103 Intercollegiate Athletics: Indoor Track **1 credit**
Open to members of the intercollegiate athletic indoor track team. May be taken one time for credit. Prerequisite: coach/instructor permission.

ESS 104 Intercollegiate Athletics: Outdoor Track **1 credit**
Open to members of the intercollegiate athletic outdoor track team. May be taken one time for credit. Prerequisite: coach/instructor permission.

ESS 105 Intercollegiate Athletics: Volleyball **1 credit**
Open to members of the intercollegiate athletic volleyball team. May be taken one time for credit. Prerequisite: coach/instructor permission.

ESS 106 Intercollegiate Athletics: Wrestling **1 credit**
Open to members of the intercollegiate athletic wrestling team. May be taken one time for credit. Prerequisite: coach/instructor permission.

ESS 107 Intercollegiate Athletics: Soccer **1 credit**
Open to members of the intercollegiate athletic soccer team. May be taken one time for credit. Prerequisite: coach/instructor permission.

ESS 108 Intercollegiate Athletics: Swimming **1 credit**
Open to members of the intercollegiate athletic swimming team. May be taken one time for credit. Prerequisite: coach/instructor permission.

ESS 112 Select Activities in Recreation, Exercise and Sport Science **1 credit**
A specific activity is offered as student interest, facilities, faculty, and equipment are available.

ESS 131 Physical Conditioning **1 credit**
Off-season conditioning activities for intercollegiate athletes. Students develop the knowledge of how to improve and maintain fitness relevant to their sport during the off-season. Prerequisite: Instructor Permission

ESS 132 Weight Training **1 credit**
The theory and practice of weight training. Information is presented concerning physiological and bio-mechanical adaptations accompanying resistive training, reasonable methods of improving athletic performance, and methods of resistance training that can lead to improved quality of life.

ESS 135 Mountain Bike Riding **1 credit**
Students develop general knowledge of and proficiency in the activity, equipment, safety procedures, and terminology of the fundamental skills of mountain bike riding.

ESS 160 Swimming (Beginning) **1 credit**
An introduction to swimming designed to equip the students with the basic water- safety skills and knowledge needed to be reasonably safe while in, on, or about the water.

ESS 161 Swimming (Intermediate) **1 credit**
Satisfactory completion of these skills leads to the Red Cross Intermediate and Swimmer's Certificate.

ESS 170 Lifeguard Training **2 credits**
Provides the individual with the knowledge and skills designed to save one's own life or the life of another in the event of an emergency, with certification by the American Red Cross.

ESS 172 Water Safety Instruction **3 credits**
Satisfactory completion of these skills leads to the Red Cross WSI Certificate.

ESS 181 Foundations of Exercise and Sport Science **3 credits**
An introduction to the field of exercise and sport science. An overview of philosophical, historical, and scientific foundations, current trends and issues, professional opportunities, and skills and competencies required for careers in a wide variety of physical activity settings.

ESS 185 Lifetime Wellness **3 credits**
Provides conceptual and experiential components designed as a basis for developing a healthier lifestyle.

ESS 197 Special Topics **1-6 credits**

ESS 201 Essentials of Human Anatomy and Physiology (with Lab) **4 credits**
An introduction to basic anatomy and physiology of all human systems. Lab and lecture are integrated.

ESS 210 Skill Development and Analysis: Net and Wall Games **1 credit**
Skill development and analysis in net and wall games, including tennis, volleyball, pickleball, handball, and badminton. Learning and application of content in a developmental model, history, scoring, rules, terminology, equipment, and safety considerations are included.

ESS 211 Skill Development and Analysis: Invasion Games **1 credit**
Skill development and analysis for invasion games, including soccer, lacrosse, team hand-ball, speedball, basketball, ultimate Frisbee, and flagball. Learning and application of content in a developmental model, history, scoring, rules, terminology, equipment, and safety considerations are included.

ESS 212 Skill Development and Analysis: Target and Fielding Games **1 credit**
Skill development and analysis for target and fielding games including bowling, archery, golf (traditional and disc), softball, and bocce. Learning and application of content in a developmental model, history, scoring, rules, terminology, equipment, and safety considerations are included.

ESS 213 Skill Development and Analysis: Dance **1 credit**
Skill development and analysis for a variety of dance forms including fitness, folk, country, social, and ballroom. Learning and application of content in a developmental model, history, scoring, rules, terminology, equipment, and safety considerations are included.

ESS 221 Methods of Coaching Football **2 credits**
The fundamental principles and play of football, including a basic defensive and offensive game plan, the fundamentals and techniques involved in coaching football, a basic outline of coaching the quarterback, the moral and ethical responsibilities of the coach to game participants, administration, etc., as well as coaching philosophy and interpretation of the rules.

ESS 223 Methods of Coaching Basketball **2 credits**
A study of individual fundamentals and techniques, as well as team offensive and defensive patterns and strategies involved in coaching basketball.

ESS 225 Methods of Coaching Wrestling **2 credits**
An introduction to all phases of wrestling. Fundamental movements and techniques, rule interpretations, and approved coaching ethics are covered.

ESS 227 Methods of Coaching Track and Field **2 credits**
The techniques and fundamentals of each track and field event. The course also includes the important phase of practical track meet management.

ESS 229 Methods of Coaching Volleyball **2 credits**
Lecture and discussion with research assignments and practicum work. An understanding of basic offenses (6-0 and 4-2), basic defensive coverage and rotations, service reception, and serving sets are presented.

ESS 275 Motor Development and Learning **3 credits**
An application of the knowledge of motor development and learning to physical activity across the lifespan. This class introduces the physiological, perceptual, and cognitive, as well as the affective changes that occur in motor development and learning across the lifespan. Prerequisite: ENG 102 with a minimum grade of "C-".

ESS 276 Emergency Response **3 credits**
Students are provided essential knowledge and skills needed to develop CPR and advanced first-aid capabilities. For students who might be required to provide first aid frequently and for special interest groups. Exercise and Sport Science majors have first option for this course.

ESS 282 Principles of Sport and Fitness Management **3 credits**
A focus on the administration of programs within the sport and fitness industries. Topics include administrative theories and concepts, personnel, communication and problem-solving, fiscal management, budgeting, ethical considerations, and program evaluation. Prerequisite: ENG 102 with a minimum grade of "C-" ; ESS 181 or ROE 182; or instructor permission.

ESS 290 Curriculum Development and the Learning Environment **3 credits**
A comprehensive overview of materials, suggested teaching methods, procedures, techniques, well-directed and well-selected activities, and ways of evaluating physical education in K-12 schools.

ESS 297 Special Topics **1-6 credits**

ESS 298 Fitness Instruction **3 credits**
Students develop knowledge and skills to plan and implement group fitness classes as well as personal training sessions. Topics include: risk management, exercise plans, group fitness instruction, personal training, fitness pedagogy, training special populations, cardiovascular fitness, resistance training, flexibility training, and core stability. Prerequisite: ESS 201 or BIOL 372.

ESS 320 Psychology of Sport and Physical Activity **3 credits**
A variety of issues and research areas in the psychology of sport and physical activity are addressed. Topics covered include an overview of the development of sport and exercise psychology, personality theories, exercise and mood, exercise adherence, goal setting, motivation, psychological interventions for athletes, and cohesion theories. Prerequisite: minimum junior standing.

ESS 330 Exercise Physiology **3 credits**
An emphasis on the theory and principles of exercise physiology to health, physical fitness, and athletic performance in diverse populations. Prerequisites: ESS 201 or both BIOL 372 and BIOL 373.

ESS 331 Exercise Physiology Lab **1 credit**
Basic laboratory techniques of exercise physiology correlating with ESS 330. Laboratory experiences include aerobic and anaerobic exercise, body composition, strength, flexibility, and body composition and other indicators of exercise. Prerequisites: completion of the University Mathematics course requirement; corequisite: ESS 330.

ESS 340 Mental Training for Peak Performance **3 credits**
An application of theories and concepts of sport psychology. This course focuses on application of specific psychological skills necessary for high level performance and assisting students in teaching others those same skills. Prerequisite: ESS 320 or instructor permission.

ESS 346 Psychology of Coaching **3 credits**
An exploration of psychological factors involved in coaching and leadership. Relevant theory and research, as well as practical applications, are discussed. Topics include expert coaching characteristics and behaviors, leadership and motivational styles, the coach-athlete relationship, stresses of coaching, reinforcement strategies, ethics in coaching, and issues related to youth sport coaching. Prerequisites: ESS 320, minimum junior standing or instructor permission.

ESS 350 Instructional Assessment in Physical Education **2 credits**
A study of planning, administering, and evaluating accountability systems in physical education settings. Multiple assessment strategies for psychomotor, cognitive and affective learning objectives are presented. Students select and/or construct assessment tools to match specific learning outcomes in the K-12 physical education curriculum. Prerequisites: Prerequisites: ESS 181, completion of the University Mathematics course requirement and ESS 290.

ESS 353 Coordinated School Health & Physical Activity Programs **2 credits**
Overview of coordinated school health programs with a heavy focus on local wellness policy, comprehensive school health education and the role of physical activity and physical education in schools. Includes 2-4 hours of required field experience. Prerequisites: EDUC 000 and junior standing.

ESS 355 Psychology of Injury **3 credits**
An exploration of psychological factors involved in sport-related injuries and the rehabilitation process. Course content includes relevant theory and research as well as practical applications. Topics include: stress, responses to injury, mental skills used to manage

injury (i.e., goal setting, motivation, and confidence), social support, potential psychological problems faced during rehabilitation, and returning to sport after injury. Prerequisites: ESS 320, minimum junior standing or instructor permission.

ESS 360 Sport Nutrition and Supplementation **3 credits**

A focus on concepts geared to promote peak performance based upon nutritional intake. An understanding of macronutrient ingestion along with other essential nutrients is gained and applied in detail to the physically active population. This includes an understanding of the metabolic effect of food. The pros and cons of select sport supplements are discussed and applied to real-life scenarios. Prerequisites or co-requisites: ESS 330 and ESS 331.

ESS 363 Adapted Physical Activity **3 credits**

Students develop knowledge and skills necessary to work with individuals having diverse needs in physical education, recreation, sport, fitness, or rehabilitation settings. Content includes planning, instructional design, assessment, coordination of resources, and advocacy in physical activity settings. Prerequisites: ESS 275 and minimum junior standing.

ESS 365 Topics in Physical Activity: **3 credits**

An interdisciplinary study of the role of physical activity under a variety of conditions and settings, and for a variety of populations. Content focuses on current research and practice as it relates to the topic under consideration. Topics rotate annually. Can be repeated up to three times for credit if a different topic is selected. Prerequisites: ESS 181, ESS 185; ESS 201 or BIOL 372; minimum junior standing.

ESS 370 Essentials of Strength Training and Conditioning **3 credits**

An inquiry into exercise prescription and conditioning in the form of resistance training, including free and fixed weights, Olympic lifts, and plyometrics. Muscular adaptations to anaerobic and aerobic training, testing and evaluation, program design, and appropriate training routines and lifting technique for a variety of populations are included. Content aligns with certification exam requirements for the Certified Strength and Conditioning Specialist (CSCS) from the National Strength and Conditioning Association (NSCA). Prerequisite: ESS 330 or instructor permission.

ESS 380 Biomechanics **3 credits**

Investigation and analysis of human movement. Basic mechanical principles of force, motion, and aerodynamics as related to fundamental physical skills and their application to exercise, sport, and physical activity. Prerequisites: ESS 181, ESS 185, ESS 201 or BIOL 372, completion of the University Mathematics course requirement.

ESS 382 Management of Sport and Fitness Facilities **3 credits**

A study of the principles, guidelines and recommendations for planning, construction and the use and maintenance of indoor and outdoor sports, physical education, recreational and fitness facilities. Prerequisite: ESS 181.

ESS 385 Program Design for Physical Activity Settings **3 credits**

A focus on the principles of behavior modification and how they apply to program design and implementation in physical activity settings. Comprehensive behavior modification programs within exercise, wellness or sport settings are designed. Prerequisite: ESS 185.

ESS 392 Methods of Secondary Activities **3 credits**

For students planning to obtain licensure in physical education. A variety of curriculum models (e.g., tactical, sport education, social responsibility) are used to present individual, dual and team sport activities. Lesson and unit plans are developed, implemented and assessed in keeping with Colorado and NASPE standards as they relate to secondary physical education. Prerequisites: two of the following: ESS 210, ESS 211, ESS 212, ESS 213; ESS 290; minimum junior standing. Prerequisite or corequisite: ESS 350.

ESS 395 Methods of Elementary Activities **3 credits**

Units covered may include apparatus and tumbling, dance, and games. Each unit breaks down into sub-units, and progressions are emphasized. Lesson and unit plans are developed, implemented, and assessed in keeping with national standards and as they relate to elementary physical education. Competencies in the basic skills of each unit are also tested. Prerequisites: ESS 290, minimum junior standing; admission to the major or instructor permission. Prerequisites: two of the following: ESS 210, 211, 212, 213; ESS 290; and minimum junior standing; Prerequisite or corequisite: ESS 350.

ESS 396 Methods of Alternative Physical Education **3 credits**

Units covered may be Nordic skiing, rock climbing, orienteering, camping, mountain biking, and adventure activities. Lesson and unit plans are developed, implemented, and assessed in keeping with national standards as they relate to secondary physical education. Prerequisites: ESS 290, ROE 189, and minimum of junior standing.

ESS 397 Special Topics **1-6 credits**

ESS 405 Practicum in Exercise and Sport Science **1 credit**

Pre-professional experience in a physical activity setting. Such experiences include observing and participating in the professional activities associated with the particular setting. Students work with an Exercise and Sport Science faculty member to select an approved practicum experience, and are required to develop an approved learning contract. May be repeated once for credit (in a different setting). Prerequisites: ESS 181, ESS 185, junior or senior standing.

ESS 410 Assessment and Exercise Prescription **3 credits**

Students work with assessment formats, appraisal techniques, and metabolic calculations to gain information needed to construct exercise prescriptions designed to meet individual needs for different segments of the population. Prerequisites: ESS 331 and ESS 298 or instructor permission.

ESS 430 Topics in Clinical Exercise Physiology **3 credits**

A study of diseased populations, including, but not limited to, exercise therapy in cardiac and cancer patients. Course content focuses on the etiology and pathophysiology of disease, electrocardiogram and diagnostic stress test interpretation, specialized exercise prescription, and other topics at the discretion of the instructor. Prerequisites: ESS 330 and ESS 331.

ESS 450 Risk Management in Physical Activity Settings **3 credits**

A focus on risk assessment and management for physical activity professionals. Topics covered include risk assessment, standard of

care, negligence, forms to limit liability, constitutional law as relevant for physical activity professionals, development of a risk management plan, and risk reduction strategies. Prerequisites: junior or senior

ESS 490 Sociology of Sport and Physical Activity **3 credits**

A focus on the social organization of sport and physical activity and their relationship to the institutional structure, cultural patterns, and dynamics of American society. Students use different sociological approaches/theories to analyze sport and physical activity and to analyze current issues and problems in sport and physical activity settings. Prerequisite: minimum junior standing.

ESS 492 Independent Study **1-4 credits**

For qualified upper-level students who have specialized interests in a particular area of advanced study in Exercise and Sport Science.

ESS 495 Senior Seminar in Exercise and Sport Science **3 credits**

A capstone course required for all ESS majors addressing issues, ethical considerations, problem-solving and decision-making, leadership and communication in the discipline. Students integrate content from their course of study, write and speak in discipline-specific formats, and complete a comprehensive self-assessment in preparation for graduate school, internship, or entry-level job. Prerequisite: ESS 181, ESS 185, senior standing. Students are encouraged to take this course during their final semester.

ESS 496 Field Experiences **1-6 credits**

Directed field experiences in teaching, coaching, and laboratory settings. Guidelines for the field experiences are provided and agreed upon at the beginning of the course.

ESS 497 Special Topics **1-6 credits**

ESS 498 Internship in Exercise and Sport Science **3-12 credits**

An opportunity for in-depth work at a professional site in an area of exercise and sport science. The internship must meet standards of the department and the University, including completion of a pre-internship checklist. Prerequisites: Satisfactory grade in ESS 405, overall GPA of 2.750, department advisor permission, and senior standing.

GEOGRAPHY AND GEOSPATIAL ANALYSIS (GEOG)

Geographers study places, natural and human-altered landscapes, and processes by which people make their livelihood and give their lives meaning, and in so doing, create and modify their environments. Geospatial analysis builds on the traditional tools of geography by applying specialized software to facilitate combination of data, maps, aerial and satellite images, and to analyze landscape processes and change over time, at multiple scales, and with attention to features not always visible from the ground.

The Geography and Geospatial Analysis minor provides a foundation in human geography and the fundamental skills and methods of the growing field of geospatial analysis, and complements studies in many other disciplines including Anthropology, Biology, Business Administration, Economics, English, Environment and Sustainability, Geology, History, Politics and Government, Psychology, and Sociology.

FACULTY

Professor Philip L. Crossley.

DESCRIPTION OF THE PROGRAM

Geography and Geospatial Analysis Minor

A minimum of 21 credits is required including:

GEOG 120 Introduction to Human Geography	3 cr
GEOG 222 Our Digital Earth	3 cr
One of the following:	
GEOG 110 World Regional Geography	3 cr
GEOG 250 Regional Geography of North America	3 cr
One of the following:	
BIOL 130 Environmental Biology	3 cr
BIOL 151 Diversity and Patterns of Life	4 cr
CS 190 Computer Science I	3 cr
GEOL 101 Physical Geology	3 cr
PHYS 120 Meteorology	3 cr
BIOL 130 Environmental Biology	3 cr
Three of the following:	
ANTH 320 Cultural Ecology	3 cr
ENVS 360 Global Environmental Policy	3 cr
GEOG 340 Geographic Information Systems	3 cr
GEOG 351 Geography of Latin America and the Caribbean	3 cr
GEOG 360 'Natural' Disasters	3 cr
GEOG 460 Geospatial Analysis	3 cr
GEOG 499 Internship in Geography	3 cr

GEOGRAPHY COURSES

GEOG 110 World Regional Geography **3 credits**

A survey of the major regions of the contemporary world—defined according to a combination of biophysical, cartographic, cultural, religious, linguistic, political, and economic criteria. Emphasis is given to understanding regional characteristics and processes, and to relationships between events and processes occurring in different regions. Current events of major importance are incorporated where appropriate. GT- SS2

GEOG 120 Introduction to Human Geography **3 credits**

A thematic study of cultural landscapes and the processes by which people create and modify them. Topics of discussion range from ancient to modern, rural to urban, local to international, and include themes as diverse as the origins and spread of agriculture, migration and immigration, urban morphologies and social interactions, ethnicity, development and underdevelopment, and environmental concerns.

GEOG 197 Special Topics **1-6 credits**

GEOG 222 Our Digital Earth **3 credits**

Using primarily on-line data and sources of maps, aerial photographs and satellite images, students develop and apply understanding of basic principles and techniques of map interpretation, communication with maps, and the appropriate use and interpretation of aerial photographs and satellite images. The course emphasizes both the skilled use of these standard tools of geographic analysis and visualization and communication of data and analysis with free on-line mapping tools and location-enabled mobile phone applications.

GEOG 250 Geography of North America **3 credits**

A survey of the major biophysical, cultural, and economic regions of the United States and Canada. Major themes of human geography including demography, migration, land use change, and ecological concerns are addressed in appropriate regional contexts. Prerequisite: GEOG 120 or sophomore standing. GT-SS2

GEOG 297 Special Topics **1-6 credits**

GEOG 340 Introduction to Geographic Information Systems **3 credits**

An introduction to the concepts and techniques of Geographic Information Systems (GIS). Topics covered include fundamentals of mapping, data formats, data acquisition, and quantitative analysis of spatial data. The laboratory component emphasizes practical applications of GIS to contemporary problems including but not limited to watershed analysis, land-use planning, environmental assessment, and market analysis. Prerequisites: GEOG 222 or GEOL 105; university-level mathematics requirement with a minimum grade of "C-"; junior standing or instructor permission.

GEOG 351 Geography of Latin America and the Caribbean **3 credits**

A thematic study of the physiographic and cultural regions of Latin America and the major historical and contemporary geographic processes that characterize the region. Major topics of discussion include climate and physiography, environmental concerns and human rights, the nature of Latin American cities, pre-Hispanic and modern agriculture, and the nature of contemporary economic processes in the region. Prerequisite: GEOG 120 or sophomore standing.

GEOG 360 'Natural' Disasters **3 credits**

This course examines a variety of natural processes which have the potential to inflict dramatic damage and loss of life and a wide range of social, economic, political, and other factors that tend to increase exposure to those events and reduce the abilities of certain populations to respond to them—causing natural processes to become disasters. Prerequisite: GEOG 120 or instructor permission.

GEOG 392 Independent Study **1-6 credits**

An opportunity for detailed study and/or research by advanced students. Prerequisites: GEOG 110 and GEOG 120.

GEOG 397 Special Topics **1-6 credits**

GEOG 460 Geospatial Analysis **3 credits**

Students enhance their understanding of concepts, skills, and techniques learned in an earlier GIS course by applying additional training in advanced vector and raster analysis, utilization of satellite imagery, and geospatial analysis methods to inform analysis of landscape change processes such as wildfire, deforestation, urbanization, reforestation, drought, flooding, climate change, and agricultural intensification. Prerequisite: GEOG 340.

GEOG 497 Special Topics **1-6 credits**

GEOG 499 Internship in Geography **1-3 credits**

Provides the opportunity for advanced students to apply skills and knowledge gained from course work to an applied setting typical of those in which geographers are employed. Prerequisite: junior standing and completion of all other geography requirements.

GEOLOGY (GEOL)

Geology is the study of the Earth. This includes the study of rocks and minerals, topography, the tectonics of the Earth (earthquakes, volcanism, and mountain building), the physical history of the Earth, and the history of life on the Earth. In studying the Earth, the Geology student is closely involved with the related sciences of chemistry, physics, and mathematics. The interrelationship between Earth processes and man is stressed in many Geology classes. Western State Colorado University is a particularly wonderful place to study Geology because of the natural setting that enables field studies to be utilized in all Geology classes.

The Geology Major successfully prepares students for entry-level positions in the petroleum and mineral industries, in environmental science, or in various government agencies. Students are also well prepared to enter graduate programs in Geology. The program meets or exceeds American Geological Institute standards.

FACULTY

Professors Robert P. Fillmore, David W. Marchetti, and Allen L. Stork;
Moncrief Chair in Petroleum Geology and Assistant Professor Elizabeth Petrie;
Rady Chair in Petroleum Geology and Assistant Professor Brad Burton; Lecturer Holly Brunkal.

DESCRIPTION OF THE PROGRAMS

The Geology program provides a Comprehensive Major with an area of emphasis selected according to the interests and career goals of the student. These emphases are: geology, geoarchaeology, petroleum geology, and secondary licensure in earth-space science. The program requirements for the various emphases range from 60 to 69 credits.

The Secondary Licensure in Earth-Space Science Emphasis qualifies students for the State of Colorado License in Science Education. Other Geology emphases may also be used for secondary licensure but may require additional classes.

Geology Major: Comprehensive Program

GEOLOGY EMPHASIS

The Standard Geology Emphasis requires a minimum of 66 credits:

GEOL 101 Physical Geology	3 cr
GEOL 105 Physical Geology Laboratory	1 cr
GEOL 201 Historical Geology (with laboratory)	4 cr
GEOL 302 Geoscience Writing	2 cr
GEOL 305 Mineralogy (with laboratory)	4 cr
GEOL 310 Stratigraphy/Sedimentation (with laboratory)	4 cr
GEOL 311 Igneous/Metamorphic Petrology (with laboratory)	4 cr
GEOL 320 Geomorphology (with laboratory)	4 cr
GEOL 345 Structural Geology (with laboratory)	4 cr
GEOL 450 Field Geology	4 cr
GEOL 495 Research Seminar in Geology (must be repeated for 2 credits)	2 cr
One of the following:	
GEOL 411 Research in Volcanology and Petrology (with laboratory)	3 cr
GEOL 420 Research in Quaternary Geology (with laboratory)	3 cr
GEOL 465 Research in Basin Analysis (with laboratory)	3 cr

Required supporting courses:

CHEM 111 General Chemistry I	3 cr
CHEM 112 General Chemistry Laboratory I	1 cr
CHEM 113 General Chemistry II	3 cr
CHEM 114 General Chemistry Laboratory II	1 cr
MATH 151 Calculus I	4 cr
MATH 251 Calculus II	4 cr
One of the following:	
CS 190 Computer Science I	3 cr
GEOG 340 Introduction to Geographic Information Systems	3 cr
MATH 213 Probability and Statistics	3 cr
MATH 252 Calculus III	4 cr
Either both:	
PHYS 170 Principles of Physics I (with laboratory)	4 cr
PHYS 171 Principles of Physics II (with laboratory)	4 cr
or both:	
PHYS 200 General Physics I (with laboratory)	4 cr
PHYS 201 General Physics II (with laboratory)	4 cr

GEOARCHAEOLOGY EMPHASIS

The Geoarchaeology Emphasis requires a minimum of 60 credits:

GEOL 101 Physical Geology	3 cr
GEOL 105 Physical Geology Laboratory	1 cr

GEOL 201 Historical Geology (with laboratory)	4 cr
GEOL 302 Geoscience Writing	2 cr
GEOL 310 Stratigraphy/Sedimentation (with laboratory)	4 cr
GEOL 320 Geomorphology (with laboratory)	4 cr
GEOL 345 Structural Geology (with laboratory)	4 cr
GEOL 450 Field Geology	4 cr
One of the following:	
GEOL 420 Research in Quaternary Geology (with laboratory)	3 cr
GEOL 465 Research in Basin Analysis (with laboratory)	3 cr

Required supporting courses:

ANTH 107 Introduction to General Anthropology	3 cr
ANTH 218 Physical Anthropology (with laboratory)	4 cr
ANTH 219 Archaeology (with laboratory)	4 cr
ANTH 230 Cultural Anthropology (with laboratory)	4 cr
GEOG 340 Introduction to Geographic Information Systems	3 cr
Two of the following:	
ANTH 322 Analysis of Material Culture (with laboratory)	4 cr
ANTH 333 Archaeology of Colorado	3 cr
ANTH 469 Archaeology Field School	4 cr
Either:	
CHEM 101 Introduction to Inorganic Chemistry	3 cr
or both of the following:	
CHEM 111 General Chemistry I	3 cr
CHEM 112 General Chemistry Laboratory I	1 cr
One of the following:	
ANTH 265 Anthropological Writing and Statistics	3 cr
MATH 213 Probability and Statistics	3 cr

PETROLEUM GEOLOGY EMPHASIS

A minimum of 69 credits is required:

GEOL 101 Physical Geology	3 cr
GEOL 105 Physical Geology Laboratory	1 cr
GEOL 201 Historical Geology (with laboratory)	4 cr
GEOL 302 Geoscience Writing	2 cr
GEOL 305 Mineralogy (with laboratory)	4 cr
GEOL 310 Stratigraphy/Sedimentation (with laboratory)	4 cr
GEOL 345 Structural Geology (with laboratory)	4 cr
GEOL 346 Subsurface Geology (with laboratory)	4 cr
GEOL 352 Applied Geophysics (with laboratory)	4 cr
GEOL 430 Hydrogeology	3 cr
GEOL 450 Field Geology	4 cr
GEOL 455 Petroleum Geology (with laboratory)	4 cr
GEOL 465 Research in Basin Analysis (with laboratory)	4 cr
GEOL 495 Geology Seminar	1 cr

Required supporting courses:

CHEM 111 General Chemistry I	3 cr
CHEM 112 General Chemistry Laboratory I	1 cr
CHEM 113 General Chemistry II	3 cr
CHEM 114 General Chemistry Laboratory II	1 cr
MATH 151 Calculus I	4 cr
MATH 251 Calculus II	4 cr
Either Both:	
PHYS 170 Principles of Physics I (with laboratory)	4 cr
PHYS 171 Principles of Physics II (with laboratory)	4 cr
Or both:	
PHYS 200 General Physics I (with laboratory)	4 cr
PHYS 201 General Physics II (with laboratory)	4 cr

SECONDARY LICENSURE IN EARTH-SPACE SCIENCE EMPHASIS

Students interested in pursuing this comprehensive program should consult with the Teacher Education Program advisor in addition to the advisor in their major as soon as possible. The Secondary Licensure in Earth-Space Science Emphasis requires a minimum of 68 credits, and the requirements of the Secondary Licensure Program (see description under Education).

Geology requirements:

GEOL 101 Physical Geology	3 cr
GEOL 105 Physical Geology Laboratory	1 cr
GEOL 201 Historical Geology (with laboratory)	4 cr
GEOL 302 Geoscience Writing	2 cr
GEOL 305 Mineralogy (with laboratory)	4 cr
GEOL 310 Stratigraphy/Sedimentation (with laboratory)	4 cr
GEOL 320 Geomorphology (with laboratory)	4 cr
GEOL 345 Structural Geology (with laboratory)	4 cr
GEOL 450 Field Geology	4 cr
GEOL 495 Research Seminar in Geology	1 cr

Required supporting courses:

BIOL 150 Biological Principles (with laboratory)	4 cr
BIOL 151 Diversity and Patterns of Life (with laboratory)	4 cr
BIOL 301 General Ecology	3 cr
CHEM 111 General Chemistry I	3 cr
CHEM 112 General Chemistry Laboratory I	1 cr
CHEM 113 General Chemistry II	3 cr
CHEM 114 General Chemistry Laboratory II	1 cr
PHYS 110 Solar System Astronomy	3 cr
PHYS 120 Meteorology	3 cr
Either both:	
PHYS 170 Principles of Physics I (with laboratory)	4 cr
PHYS 171 Principles of Physics II (with laboratory)	4 cr
Or both:	
PHYS 200 General Physics I (with laboratory)	4 cr
PHYS 201 General Physics II (with laboratory)	4 cr
One of the following:	
MATH 141 Precalculus	4 cr
MATH 151 Calculus I	4 cr

Geology Minor

A minimum of 18 credits including:

GEOL 101 Physical Geology	3 cr
GEOL 105 Physical Geology Laboratory	1 cr
GEOL 201 Historical Geology (with laboratory)	4 cr
Ten credits from the following	
GEOL 220 Field Geology of Western North America	1 cr
Or Geology courses numbered 300 or above	

Capstone Course Requirement. The following courses fulfill the capstone course requirement in the Geology Major: GEOL 495 Research Seminar in Geology, plus one of the following: GEOL 411 Research in Volcanology and Petrology, GEOL 420 Research in Quaternary Geology, or GEOL 465 Research in Basin Analysis (Geology Emphasis); GEOL 420 Research in Quaternary Geology, or GEOL 465 Research in Basin Analysis (Geoarchaeology Emphasis); GEOL 465 Research in Basin Analysis (Petroleum Geology Emphasis); EDUC 409 Secondary Student Teaching (Secondary Licensure in Earth-Space Science Emphasis).

GEOLOGY COURSES

GEOL 101 Physical Geology **3 credits**

An introductory class that emphasizes the environmental aspects of geology. The course covers the basic principles of physical geology, such as minerals, rocks, plate tectonics, earthquakes, volcanoes, and origin of landscapes by mass wasting, rivers, glaciers, ground water, and nearshore processes. Throughout this course, focus is on the effect of geology on human society through the study of geologic hazards, energy resources, and mineral resources. GT-SC2

GEOL 105 Physical Geology Laboratory **1 credit**

An introduction to identification of minerals and rocks and a discussion of their genesis followed by a study of landscapes formed by mass wasting, rivers, glaciers, ground water, and nearshore processes. Many of these principles are observed on local field trips. Prerequisite or corequisite: GEOL 101. GT-SC1

GEOL 197 Special Topics **1-6 credits**

GEOL 201 Historical Geology (with laboratory) **4 credits**

A study of the interpretation of the geologic history, structure, and evolution of the Earth with emphasis on methods and concepts rather than factual information. Colorado geo-logic history and various principles are observed during three or four field trips. Topics and concepts such as geophysics, continental drift, and plate tectonics are integrated into discussions of Earth history. Prerequisites: GEOL 101 and GEOL 105.

GEOL 220 Field Geology of Western North America **1 credit**
An illustration of basic geologic principles using field trips to classic localities through- out western North America. Field trips change each year depending on student interest. Past field trips have gone to the Grand Canyon as well as other locales. A student may earn a maximum of two credits under this course number. Prerequisite: GEOL 201 or instructor permission.

GEOL 240 Introduction to Petroleum and Mining Geology **3 credits**
A survey of the physical and chemical processes responsible for the distribution of hydro-carbon and mineral resources in the Earth's crust and techniques for hydrocarbon and mineral resource exploration, assessment, and development. Includes field trips to oil and gas and mining operations in Colorado and Utah. Prerequisites: GEOL 101 and GEOL 105.

GEOL 297 Special Topics **1-6 credits**

GEOL 300 Geology Field Trip **1-6 credits**
Provides students exposure to varied geologic terranes and settings. The course normally consists of preparatory lectures and the actual field trip, followed by a paper, talk, or examination. Students may earn a maximum of six credits under this course title. Prerequisite: GEOL 201.

GEOL 302 Geoscience Writing **2 credits**
An introduction to the proper methods and accepted formats of written, graphical, and oral communication in the geological sciences. These skills are addressed through critical evaluation and discussion of the geological literature, by writing reports, review papers and research proposals, and giving oral presentations. Prerequisites: ENG 102 with a grade of "C-" or above and GEOL 201. Corequisite: GEOL 310.

GEOL 305 Mineralogy (with laboratory) **4 credits**
An introduction to the study of minerals. Important topics include the crystallography, crystal chemistry, and optics of important rock and ore forming minerals. Emphasis is placed on the crystal chemistry and stability of major silicate mineral groups. The laboratory emphasizes the field identification of minerals and the application of optics to the identification of minerals in thin section. Prerequisites: GEOL 101, GEOL 105, MATH 141. Prerequisite or corequisite: CHEM 111 and CHEM 112.

GEOL 310 Stratigraphy and Sedimentation (with laboratory) **4 credits**
A study of the basic principles and origins of sedimentary rock units. Topics studied include sub-division of the geologic column and geologic time, depositional systems, stratigraphic nomenclature and rules, principles of correlation—including a review of modern geophysical, geochemical, and chronostratigraphic methods, biostratigraphy, and event stratigraphy. Laboratory includes measurement of sections, examination of depositional systems in the field, and surface and subsurface stratigraphic techniques, including geophysical-log interpretation and computer mapping. Prerequisites: GEOL 201 and ENG 102 with a minimum grade of "C-".

GEOL 311 Igneous and Metamorphic Petrology (with laboratory) **4 credits**
A study of igneous and metamorphic rocks, including their classification, field relations, tectonic setting, phase petrology, mineralogy, and geochemistry. The laboratory emphasizes both field identification of rocks and the use of petrographic microscopes. Several field trips are included. Prerequisite or corequisite: CHEM 113 and CHEM 114, GEOL 305.

GEOL 320 Geomorphology (with laboratory) **4 credits**
A study of the processes that create the landforms we see at the Earth's surface. In particular, processes associated with modern and ice-age climate are studied including erosion and weathering, soil formation, flooding, glaciation, and mass wasting. The laboratory emphasizes field-observation and data-collection techniques, and the interpretation of aerial photographs. Prerequisites: GEOL 101 and GEOL 105; CHEM 101 or CHEM 111.

GEOL 345 Structural Geology (with laboratory) **4 credits**
A study of the deformation of the Earth's crust. The course begins with a study of the forces and movements within the crust which cause folding and faulting of rocks and a description of the resulting structures. These topics are followed by an analysis of the regional tectonic patterns of the Earth's surface and theories for their origin. Prerequisite: GEOL 201 with a minimum grade of "C-"and MATH 141.

GEOL 346 Subsurface Geology (with laboratory) **4 credits**
An advanced undergraduate course in subsurface structural and stratigraphic methods pertinent to petroleum, groundwater, environmental, and tectonics investigations. The course applies traditional and computer-assisted techniques to subsurface problems. Students gain experience in integrating surface geology with subsurface well and geophysical data. Prerequisite: GEOL 310. Prerequisite or corequisite: GEOL 345.

GEOL 352 Applied Geophysics (with laboratory) **4 credits**
An advanced undergraduate course in the theoretical and practical application of physics to geology. Lectures cover seismic, gravity, and magnetic theory. Laboratory exercises and lecture problem sets emphasize the interpretation of real-world data, with application to problems in stratigraphy, structure, hydrology, environmental geology, mining, and oil and gas. Students gain proficiency in the use of several advanced analysis and modeling software packages. Prerequisite: GEOL 310. Prerequisites or corequisites: GEOL 345 and PHYS 170 or PHYS 200.

GEOL 360 Isotope Geochemistry **3 credits**
A study of the distribution and movement of chemical elements and isotopes in the geologic environment. Topics include nucleosynthetic processes and the isotopic abundances of the elements; geochronology using radioactive decay schemes, including U-Pb, Rb-Sr, Sm-Nd, K-Ar, U-series isotopes, and cosmogenic isotopes; trace element partitioning; and the use of stable isotopes in geothermometry and ore petrogenesis. Examples illustrate the use of radiogenic and stable isotopes in petrology and their application to study of the Earth and Solar system and the evolution of the crust and mantle. Prerequisites: GEOL 305 with a "C-" or better and CHEM 113 and 114.

GEOL 362 Environmental Geochemistry **3 credits**
An advanced geology course covering the low-temperature chemistry of the near-surface geologic environment. Topics include equilibrium thermodynamics, natural- water geochemistry, the carbonate system, mineral weathering, basic organic geochemistry and

the evolution of Earth's atmosphere. Students gain quantitative problem solving skills through comprehensive problem sets and the collection and analysis of real-world geochemical data. Prerequisite: GEOL 305 with a "C-" or better and CHEM 113 and 114.

GEOL 397 Special Topics **1-6 credits**

GEOL 411 Research in Volcanology and Petrology (with laboratory) **3 credits**

An examination of the physical volcanology, petrology, and petrogenesis of volcanic rocks. A strong emphasis is placed on fieldwork and the description of the volcanic rocks of the Gunnison Basin and adjacent regions. The course is topical in nature and emphasizes individual and/or group research projects through study of the geologic literature, the collection of geologic data, and the presentation of results. Prerequisite: GEOL 311.

GEOL 420 Research in Quaternary Geology (with laboratory) **3 credits**

A study of the geology and climate of Quaternary Period, a time commonly referred to as the ice ages. Topics include glacier dynamics, glacial landforms and soils, methods of dating Quaternary deposits, and paleoclimate modeling. The laboratory emphasizes individual or group research projects that explore the Quaternary geology of the Gunnison and Crested Butte area. Projects are presented at the standard expected for a professional presentation. Prerequisites: GEOL 310, GEOL 320, and CHEM 111.

GEOL 430 Hydrogeology **3 credits**

A study of the occurrence, movement, and chemical properties of groundwater. Topics include the hydrologic cycle, surface-water hydrology, principles of ground water flow, and natural water chemistry. Class assignments focus on quantitative analysis and modeling of groundwater data. Prerequisites: GEOL 310, CHEM 111, and MATH
151. Prerequisite or corequisite: PHYS 170 or PHYS 200.

GEOL 450 Field Geology **4 credits**

An emphasis on field observation, proper geologic mapping techniques—on both maps and aerial photos—and interpretation and synthesis of field data into a report. Different geologic terrains in Colorado or other states are examined. Ideally, this course should be taken during the summer semester, immediately prior to the senior year. Prerequisites: GEOL 310 and GEOL 345; or instructor permission.

GEOL 455 Petroleum Geology (with laboratory) **4 credits**

A study of the physical and chemical processes responsible for the distribution of hydrocarbons and associated fluids in the Earth's crust and techniques for hydrocarbon exploration and resource assessment. Topics include the principle components of Petroleum Systems Analysis, including: the maturation, expulsion, and migration of hydrocarbons; hydrocarbon reservoirs; hydrocarbon seals; and structural, stratigraphic, and unconventional hydrocarbon traps. Laboratories include geochemical modeling of
source rocks, geophysical log analysis and correlation, seismic interpretation, computer mapping, and a regional field trip. Prerequisites: GEOL 310 and GEOL 345.

GEOL 465 Research in Basin Analysis (with laboratory) **3 credits**

A study of sedimentary processes and environments, including the tectonic origin of sedimentary basins. This includes the most common terrestrial and marine depositional systems and their relationships. A strong emphasis is placed on field relations and research on the sedimentary rocks of Western Colorado and the Colorado Plateau. The course is topical in nature and requires individual and/or group research projects through the study of the geologic literature, the collection of geologic data in the field, and the presentation of results. Prerequisites: GEOL 310 and CHEM 113.

GEOL 493 Independent Study in Geology **1-4 credits**

Advanced undergraduates can engage in independent research projects under the direction of a faculty member. Topics may include any research specialty in geology or geophysics depending on the mutual interests of the student and faculty.

GEOL 495 Geology Seminar **1 credit**

A seminar where advanced undergraduate students can develop critical reading and thinking skill through discussion and presentation of research literature. Topics are chosen from the current research literature. A student may earn a maximum of four credits under this course title. Prerequisite: GEOL 305, GEOL 310, GEOL 320, or GEOL 345.

GEOL 497 Special Topics **1-6 credits**

HEADWATERS REGIONAL STUDIES (HWTR)

Western State Colorado University sits near the headwaters of the major rivers of the American Southwest and the lower Midwest—the South Platte and Arkansas Rivers that are part of the great Mississippi-Missouri Basin, the Rio Grande, and the central tributaries of the Colorado River. Surrounded by the geographically, ecologically, and culturally diverse "learning laboratories" of the Headwaters region, Western is uniquely situated for using "place" as a medium for integrated learning. These two Headwaters classes are designed to help students develop cross-disciplinary relationships with the qualities of the region that attract many students to the University.

HEADWATERS COURSES

HWTR 100 First Year Seminar **1 credit**

An introduction to Western's interactive educational experience and the diverse learning environments of the Gunnison Valley. Through a multidisciplinary study of the Headwaters region, this course provides students with skills for success in higher education and access to resources in the campus community. A discussion-based seminar, course may include regular convocations, community service projects, workshops, and field experiences. Academic themes include an introduction to the liberal arts, community sustainability, and the social, natural, and cultural surroundings of the region. First year students are required to attend Orientation and are expected to enroll in the first year seminar.

HWTR 200 Introduction to the Headwaters **1 credit**

A fall offering that gives students a broad cross-disciplinary overview of the Headwaters Region surrounding the University, with some field trips out into the region and an opportunity to look into some of the issues impacting the region.

HWTR 398 Headwaters Conference **1 credit**

An annual three-day gathering on campus each fall, bringing together writers and scholars, local community leaders and activists, artists, government officials, and other interested citizens from the colleges and communities of the Headwaters Region to consider challenges and opportunities confronting the region. Students attend and participate in the conference, complete applied research projects throughout the month following the conference, and write a paper about the experience in the context of their own lives and future plans. A student may take the course four times for credit. Prerequisites: junior standing or instructor permission.

HISTORY (HIST)

In a world increasingly characterized by the ten-second soundbite, our understanding of world events is often limited to the superficial. Despite the speed and intensity of these events, the conflicts and achievements of our times emerge from long established influences and sequences of events. The study of history adds both breadth and depth to an individual's understanding of our fast-changing world. History provides the means to discover how the past shapes and affects the present and how seemingly unrelated events and forces connect to frame human endeavors. There is something profoundly enduring about the study of history, as it allows us to realize the complexity of human affairs from a multitude of perspectives. It is both an intellectually satisfying and eminently practical pursuit. History majors at Western acquire and sharpen skills that enrich educational experiences and increase employment opportunities in a number of fields. Such skills include: cause and effect analysis, critical evaluation and organization of evidence, document and data base research, development and understanding of analytical frameworks, and organization and synthesis of information—all skills essential to solving problems and presenting results.

The History and Geography Club and the History Honor Society, Iota Nu Chapter of Phi Alpha Theta, the historian's honorary society, are active on campus.

FACULTY

Professors Heather Thiessen-Reily and Duane L. Vandenbusche. Emeritus Professor James M. Stewart.

DESCRIPTION OF THE PROGRAMS

History Major: Standard Program

A minimum of 39 credits is required including the following:

Two of the following 100 level courses:	
HIST 101 World History to 1500	3 cr
HIST 102 World History Since 1500	3 cr
HIST 126 U.S. History to 1865	3 cr
HIST 127 U.S. History Since 1865	3 cr
Two of the following courses in regional history:	
HIST 250 History of the Middle East	3 cr
HIST 254 History of Africa	3 cr
HIST 260 History of Latin America	3 cr
and the following:	
HIST 402 Seminar in History	3 cr
History electives numbered 300 or above	24 cr

No more than six credits in independent study or correspondence courses can be counted toward any History Major.

History Major: Comprehensive Program

The comprehensive program in History is the Secondary Licensure Emphasis. This Emphasis does not require a separate minor, and it allows the student to pursue a course of study in which History is integrated with other disciplines within the social sciences.

SECONDARY LICENSURE EMPHASIS

This emphasis qualifies students for the State of Colorado License in Social Science Education. A minimum of 66 credits is required, including:

HIST 101 World History To 1500	3 cr
HIST 102 World History from 1500	3 cr
HIST 126 US History to 1865	3 cr
HIST 127 US History from 1865	3 cr
HIST 327 Colorado History	3 cr
Three upper division History electives	3 cr
HIST 402 Seminar in History	3 cr
Three of the following:	
HIST 330 Colonial American History	3 cr
HIST 333 The Revolutionary Era and Early National Period	3 cr
HIST 336 Antebellum, Civil War and Reconstruction, 1830-1877	3 cr
HIST 340 Reform and Reorganization in American Society	3 cr
HIST 343 Depression and World War II	3 cr
HIST 346 Recent American History	3 cr
HIST 348 History of the Trans-Mississippi West	3 cr
HIST 349 History of the Hispanic Southwest	3 cr
Two of the following:	
HIST 311 Medieval History	3 cr
HIST 312 Renaissance and Reformation Era, 1350-1600	3 cr
HIST 315 The Old Regime and the French Revolution	3 cr
HIST 316 19th Century Europe	3 cr

HIST 318 20th Century Europe	3 cr
HIST 354 Conflict in Africa	3 cr
HIST 360 Mexico	3 cr
HIST 364 Women in Latin American History	3 cr
HIST 365 Latin American Revolutions	3 cr
One of the following:	
HIST 250 History of the Middle East	3 cr
HIST 254 History of Africa	3 cr
HIST 260 History of Latin America	3 cr

In addition, the student must fulfill the requirements of the Secondary Licensure Program (see description under Education), and the following:

ECON 201 Macroeconomics	3 cr
ECON 202 Microeconomics	3 cr
ECON 303 International Economics and Globalization .	3 cr
GEOG 110 World Regional Geography	3 cr
GEOG 120 Introduction to Human Geography	3 cr
GEOG 250 Geography of North America	3 cr
POLS 180 Introduction to American Government	3 cr
POLS 182 Issues in State and Local Government	3 cr
POLS 255 Comparative Government	3 cr

No more than six credits of independent study or correspondence can be counted toward any History Major.

History Minor

A minimum of 21 credits is required including 12 credits of upper-division History electives, and the following:

One of the following:	
HIST 101 World History to 1500	3 cr
HIST 102 World History Since 1500	3 cr
One of the following:	
HIST 126 U.S. History to 1865	3 cr
HIST 127 U.S. History Since 1865	3 cr
One of the following:	
HIST 250 History of the Middle East	3 cr
HIST 254 History of Africa	3 cr
HIST 260 History of Latin America	3 cr

No more than three credits of HIST 492 Independent Study may be used to satisfy the upper-division electives.

Capstone Course Requirement: The following course in the History Major fulfills the Capstone Course Requirement: HIST 402 Seminar in History.

HISTORY COURSES

HIST 101 World History to 1500 **3 credits**

A survey of the cultural, political, religious, artistic, technological and philosophical journeys of human beings, from the prehistoric age, the birth of civilization and emergence of agriculture to the establishment of great empires and the impact of the great religious and philosophical revolutions of the ancient and medieval world. GT-HI1

HIST 102 World History Since 1500 **3 credits**

A continuation of HIST 101 and a survey of the transformation of human development as a result of modernization. Students consider the rise and fall of empires and shifting regional influences as a result of the emergence of the transatlantic region. Europe's revolutionary transformation and its impact on the world; the rise of global interaction and conflict; the colonial and post-colonial eras and the resulting tensions and achievements of these events are examined within the context of modernity. GT-HI1

HIST 126 U.S. History to 1865 **3 credits**

A survey of American history from its European beginnings to the Civil War, providing description and analysis of the historical development of politics, economics, society, and foreign policy. Attention is given to the people and forces that influenced these developments. GT-HI1

HIST 127 U.S. History Since 1865 **3 credits**

A survey of American history from the Civil War to modern times, providing description and analysis of the major developments and trends in politics, economics, society, and foreign policy. Attention is given to the people and forces that influenced and shaped the American experience. GT-HI1

HIST 197 Special Topics **1-6 credits**

HIST 250 History of the Middle East **3 credits**

Students are introduced to some of the major historical events and patterns of the region which are then related to the politics of the modern Middle East (mainly the 20th and 21st centuries). Specific topics include the rise and nature of Islam, the achievements of Medieval Islamic civilization, the significance of the Ottoman Empire, rivalries with the West, the establishment of Israel and the nature of the Modern Middle East crisis. GT-HI1

HIST 254 History of Africa **3 credits**
A survey of sub-Saharan African history from earliest times to the present, with particular emphasis on social, cultural, economic, and political responses to imperialist or other outside influences.

HIST 260 History of Latin America **3 credits**
A survey of the major events, issues and themes of Latin American History from pre- Columbian times through the modern era. Tracing the development of political, cultural, social, and economic institutions resulting from the interaction of New and Old World cultures, students reflect upon the diverse responses of peoples in the region to the impact of change. Through the study of the complexities of indigenous cultures, colonialism, nation-building and identity politics, and the impact of modernity and globalization, students learn how larger human processes impact this particular region of the world and how the challenges and achievements of Latin America today are reflected in the region's historical experiences. GT-HI1

HIST 297 Special Topics **1-6 credits**

HIST 309 The History of Modern Germany 1871-1945 **3 credits**
Examines the cultural and political forces which led to the creation of Germany and then shaped its behavior through two world wars. Topics include the role of nationalism, the failure of liberalism, the causes of racism, and the nature of the Nazi regime. Prerequisite: minimum sophomore standing or instructor permission.

HIST 311 Medieval History **3 credits**
A study of Europe's history and political and religious institutions from the beginning of the reign of Diocletian to the Babylonian Captivity of the Church. Prerequisite: minimum sophomore standing or instructor permission.

HIST 312 Renaissance and Reformation Era, 1350-1600 **3 credits**
A course which covers the Babylonian Captivity of the Roman Catholic Church; the artistic, literary, and political developments of Renaissance Italy and Northern Europe; the subsequent emergence of the Protestant Reformation; and the religious wars which engulfed Europe. Prerequisite: minimum sophomore standing or instructor permission.

HIST 315 The Old Regime and the French Revolution **3 credits**
A study of the origins, character, and significance of the French Revolution. This course begins with an examination of the relation of the Old Regime to the failure of absolutism and concludes with a discussion of the general nature of revolution and social change. Prerequisite: minimum sophomore standing or instructor permission.

HIST 316 19th Century European History **3 credits**
A study of Europe from the Congress of Vienna to the outbreak of World War I. Prerequisite: minimum sophomore standing or instructor permission.

HIST 318 20th Century European History **3 credits**
A study of World War I and the search for peace, the rise of totalitarian democracy, social and economic tensions, Europe in the era of the Cold War, and the "semblance of peace." Prerequisite: minimum sophomore standing or instructor permission.

HIST 327 Colorado History **3 credits**
A study of the history of Colorado from prehistoric times to the modern era, emphasizing the Native American and Spaniard, mining, cattle, transportation and farming frontiers, and problems of the 20th century involving water, energy, and growth. Prerequisite: minimum sophomore standing or instructor permission.

HIST 330 Colonial American History **3 credits**
A study of the colonial origins of American institutions with an emphasis on government and society. Topics include the singular developments which occurred in the Chesapeake Bay area and New England, the first westward movements, women and the family, and intellectual endeavors from 1607 to the French and Indian War. Prerequisite: minimum sophomore standing or instructor permission.

HIST 333 The Revolutionary Era and Early National Period **3 credits**
An examination of the causes of the American Revolution and the development of politics and society during the early Republic. Major topics include the development of political parties, the shift from Jeffersonian to Jacksonian democracy, the burgeoning reform movements, and the status of the yeoman farmer and his family in both northern and southern societies. Prerequisite: minimum sophomore standing or instructor permission.

HIST 336 Antebellum, Civil War and Reconstruction, 1830-1877 **3 credits**
A study of the history of the United States during the 19th century, with special attention given to the Civil War, its causes, conflicts, and aftermath. Prerequisite: minimum sophomore standing or instructor permission.

HIST 340 Reform and Reorganization in American Society **3 credits**
American history in the Gilded Age and the eras of agrarian and progressive reform between the end of Reconstruction and the election of Herbert Hoover. Emphasis is placed upon the social, political, economic, and cultural changes that occurred in response to rapid industrialization. Prerequisite: minimum sophomore standing or instructor permission.

HIST 343 Depression and World War II **3 credits**
An exploration of the ramifications that the economic collapse had on America's social, economic, cultural, and political life. The United States' entrance into the World War II is also discussed, with major focus on the changes that took place, both internally and abroad, because of the conflict. Prerequisite: minimum sophomore standing or instructor permission.

HIST 346 Recent American History **3 credits**
A history of the United States since 1945 with emphasis on the Cold War, the Eisenhower years, the turbulent decade of the 1960s, and the transformations of the 1970s and 1980s. Prerequisite: minimum sophomore standing or instructor permission.

HIST 348 History of the Trans-Mississippi West **3 credits**
A history of the Trans-Mississippi West from 1800 to the present time, emphasizing the Native Americans, Spanish settlement, and Westward Expansion. Manifest Destiny, mining and cattle frontiers, settlement of the Great Plains and the Rocky Mountains, closing of the western frontier, and the "New West" of today. Prerequisite: minimum sophomore standing or instructor permission.

HIST 349 History of the Hispanic Southwest **3 credits**

Students examine the historical development of Hispanic settlement and culture in the American Southwest from its inception to the present day. Students study the interaction of Hispanic communities with nomadic and settled indigenous peoples and with Anglo ranchers, settler and commercial interests. From the 16th century settlements to the Mexican-American War and the territory's incorporation into the United States to the development of the Chicano identity in the 20th century, students analyze the American Southwest, as a patria chica of success and failure, achievement and potential. Prerequisite: junior standing or instructor permission.

HIST 350 Environmental History of the Borderlands **3 credits**

Students examine the process of historical development of the Borderlands region between Mexico and the United States and consider its implications for the region's environment. Settlement patterns, a blending of cultural and ethnic identities, economic development and integration and emerging social tensions have resulted in an environmental transformation of the region with far-reaching implications for both nations south of the Rio Grande/Bravo. Prerequisite: junior standing or instructor permission.

HIST 351 A History of Russia and the Soviet Union **3 credits**

A study of the roots of modern Russia in the Imperial period to the present era, emphasizing the ideas and events which contributed to the 1917 Revolution and to the development of the Soviet Union. Prerequisite: minimum sophomore standing or instructor permission.

HIST 354 Conflict in Africa **3 credits**

Students explore the historical, political, social and economic forces at play in Africa which have resulted in the high level of conflict the continent has and is experiencing. Using a case study approach, the students explore the historical context for current and on-going African conflicts to gain a deeper understanding of the complexities of the challenges and achievements of the continent. Prerequisite: junior standing or instructor permission.

HIST 360 Mexico **3 credits**

A broad survey of Mexican history from pre-Columbian times to the present, with particular emphasis on social, cultural, political and economic issues. This course also examines Mexico's relations with Europe during the colonial and early national periods and with the United States during the 19th and 20th centuries. Prerequisite: minimum sophomore standing or instructor permission.

HIST 364 Women in Latin American History **3 credits**

A survey of the roles of women in Latin American history. This course examines indigenous, Hispanic and mestizo women in economic, cultural, social and political roles from the pre-Columbian era to the modern period. Prerequisite: minimum sophomore standing or instructor permission; HIST 260 is recommended.

HIST 365 Latin American Revolutions **3 credits**

Beginning with an examination of theories of revolution, students explore how the theoretical relates to events in Latin American history. Students examine the development of revolutionary consciousness and the role of women, indigenous peoples and the rural and urban masses in revolutionary movements throughout the region. Students consider the influence of revolution on Latin American artistic expression. Finally, students investigate specific historical case studies of Latin American revolutions. Prerequisite: junior standing or instructor permission.

HIST 397 Special Topics **1-6 credits**

HIST 399 Internship in History **1-3 credits**

History majors and minors obtain archival and museum experience through direct, super-vised contact with archivists, curators and professionals from related areas. Prerequisites: junior standing and instructor permission. Graded Satisfactory/ Unsatisfactory only.

HIST 402 Seminar in History **3 credits**

A research seminar required for History majors. Focusing on a specified topic within the subject area, participants discuss issues and methods of historical writing and research and apply scholarship skills by writing a research paper or completing an approved appropriate project. History majors should take this course during or after their second semester of the junior year. Students in the Secondary Licensure program must complete a comparative history topic for completion of this course. Prerequisite: junior or senior standing and instructor permission.

HIST 492 Independent Study **1-4 credits**

A special study in areas of student interest. May be taken for a maximum of four credits.

HONORS PROGRAM (HNRS)

The Western Honors Program provides enhanced and challenging academic programming to a carefully selected group of highly motivated and accomplished students from all disciplines. The Honors Program at Western seeks to promote the goals of a liberal arts education by providing students with the opportunity to become autonomous learners within a highly supportive and collaborative academic community. Honors students are encouraged and challenged to free themselves from not only external constraints on the acquisition of knowledge and understanding but also from internal limitations that can prevent critical thinking, reflective analysis, and responsible choice. The Honors Program and its courses enable students to develop the capacity for informed analysis and responsible evaluation and a willingness to submit discoveries and conclusions to an academic community of their peers and mentors to be mutually investigated and critiqued. Small class size, extensive interaction among peers and teachers, experiences outside the traditional classroom, and interdisciplinary and multidisciplinary approaches to education are all features of the program. Such opportunities allow students to explore avenues of intellectual inquiry with-in and outside of their selected majors and minors.

Program Benefits. Honors students have the opportunity to become a part of a scholarly community comprised of faculty and students committed to the pursuit of intellectual inquiry and academic excellence. Benefits of membership in the Western Honors Program also include automatic eligibility for Honors classes, use of the Honors Center, computer lab and classroom in Taylor Hall, participation in Honors Orientation and Honors activities, priority registration, and special recognition at graduation upon completion of the program. Students may also register for Honors Special Topics classes or develop independent and special Honors projects which offer challenging and accelerated learning experiences inside and outside the regular course offerings.

Admission Requirements. Students qualified to become part of the Western Honors Program are invited to apply for membership as incoming students or in their first or second year of study at Western (transfer and upper-division students are considered on an individual basis). Invitations to apply to the program are extended to high school students who have achieved a 3.50 cumulative grade point average or who have completed International Baccalaureate programs and who have an ACT composite score of 25 or higher or an SAT composite score of 1120. Western students who have a 3.50 grade point may also apply.

Program Requirements. Continuation in the program is based on maintaining an overall grade point average of 3.0. Graduation from the program requires a grade point average of 3.3 and completion of program requirements.

HONORS COUNCIL

Dan Cress, Honors Director; Sumaya Abu-Haidar, Politics and Government; Kelsey Bennet, Communication Arts; Robin Bingham, Biology; Paul A. Edwards, Communication Arts; Lindsey Fast, Pschology; John Hausdoerffer, Environment and Sustainability; Shelley Read, Communication Arts; Terry Schliesman, Communication Arts; Don Seastrum, Art.

DESCRIPTION OF THE PROGRAM

A minimum of 21 credits is required:

HNRS 100 The Gateway	3 cr
HNRS 200 Honors Forum (repeated twice for 2 credits)	1 cr
HNRS 304 Introduction to the Great Conversation	1 cr
HNRS 400 Oxford Tutorial	1 cr
Honors General Education courses*	6 cr
Eight credits from the following (at least six credits must be upper division):	
ENG 240 Writing Center Workshop	2 cr
ENG 396 Writing Center Assistantship	1-3 cr
HNRS 101 Honors Colloquium	1 cr
HNRS 197 Special Topics	1-3 cr
HNRS 201 Honors Colloquium	1 cr
HNRS 202 Service Learning in Honors	1-2 cr
HNRS 297 Special Topics	1-3 cr
HNRS 301 Honors Colloquium	1 cr
HNRS 302 Service Learning in Honors	1-2 cr
HNRS 303 Honors Field Studies	1-2 cr
HNRS 305 Place as Text	2-3 cr
HNRS 397 Special Topics	1-3 cr
HNRS 402 Service Learning in Honors	1-2 cr
HNRS 401 Honors Colloquium	1 cr
HNRS 403 Honors Field Studies	1-2 cr
HNRS 492 Independent Study	1-3 cr
HNRS 494 Thesis Preparation	1 cr
HNRS 495 Thesis	2-3 cr
HNRS 497 Special Topics	1-3 cr

*The six Honors General Education credits will be redistributed to Honors Electives for students who enter the Honors program with completed General Education programs either through Western or gtPathways.

HONORS COURSES

HNRS 100 The Gateway **3 credits**

Through the Gateway students are introduced to different ways of knowing thereby laying the foundation for the further development of a liberal arts education. Students enhance their capacity for informed analysis, responsible evaluation and effective argument construction leading to the ability to base actions and decisions upon the former. The students are encouraged to recognize value in varying epistemologies and engage in an active and intellectual exchange of ideas as part of an academic community formed via students' and instructors' co-investigation of various topics and disciplines. The course culminates with student-chosen and directed group presentations. Prerequisites: admission to the Honors Program and participation in the Honors Orientation program.

HNRS 101 Honors Colloquium **1 credit**

A complement to courses offered outside of the Honors program. Through formal arrangement between a course instructor and the Honors Program, the instructor and student develop an additional course project(s) to allow the Honors student enrolled in the class deeper engagement with the course material. Honors students who successfully complete both the Colloquium and the course to which it is linked receive Honors credit for both. May be taken more than once. Prerequisite: Completion of the Honors Colloquium project form in consultation with supervising faculty and the Honors Director.

HNRS 197 Special Topics **1-3 credits**

HNRS 200 Honors Forum **1 credit**

An application of the core principles of the Honors Program including active learning, interpretation, integration and collaborative learning. Students engage in active investigation and intellectual exchange of ideas and information surrounding a theme or topic agreed upon by all students in the class. The entire class determines an appropriate vehicle for a public presentation of their work and must demonstrate coherent understanding of the selected issue or topic rather than presenting a collection of separate insights. Prerequisites: HNRS 100, and sophomore standing.

HNRS 201 Honors Colloquium **1 credit**

A complement to courses offered outside of the Honors program. Through formal arrangement between a course instructor and the Honors Program, the instructor and student develop an additional course project(s) to allow the Honors student enrolled in the class deeper engagement with the course material. Honors students who successfully complete both the Colloquium and the course to which it is linked receive Honors credit for both. May be taken more than once. Prerequisite: Completion of the Honors Colloquium project form in consultation with supervising faculty and the Honors Director.

HNRS 202 Service Learning in Honors **1-2 credits**

Service Learning in Honors complements university course offerings by adding a hands- on service learning component with a community organization or community project. Through formal arrangement between an instructor and the Honors Program, the instructor meets with Honors students enrolled in the class to help provide specific disciplinary insights on issues affecting local communities, providing students with an opportunity to apply concepts, theories, and methods to practical real-world issues. Students gain familiarity with social problems and social responses, learn about communities as informed citizens, and gain expertise about the relationship between their roles as students and citizens. Honors students who complete both the Service Learning and the course to which it is linked receive Honors credit for both. Service Learning may be taken more than once. Prerequisite: Completion of the Honors Service Learning project form in consultation with supervising faculty and the Honors Director.

HNRS 297 Special Topics **1-3 credits**

HNRS 301 Honors Colloquium **1 credit**

A complement to courses offered outside of the Honors program. Through formal arrangement between a course instructor and the Honors Program, the instructor and student develop an additional course project(s) to allow the Honors student enrolled in the class deeper engagement with the course material. Honors students who successfully complete. both the Colloquium and the course to which it is linked receive Honors credit for both. May be taken more than once. Prerequisite: Completion of the Honors Colloquium project form in consultation with supervising faculty and the Honors Director.

HNRS 302 Service Learning in Honors **1-2 credits**

Service Learning in Honors complements university course offerings by adding a hands-on service learning component with a community organization or community project. Through formal arrangement between an instructor and the Honors Program, the instructor meets with Honors students enrolled in the class to help provide specific disciplinary insights on issues affecting local communities, providing students with an opportunity to apply concepts, theories, and methods to practical real-world issues. Students gain familiarity with social problems and social responses, learn about communities as informed citizens, and gain expertise about the relationship between their roles as students and citizens. Honors students who complete both the Service Learning and the course to which it is linked receive Honors credit for both. Service Learning may be taken more than once. Prerequisite: Completion of the Honors Service Learning project form in consultation with supervising faculty and the Honors Director.

HNRS 303 Honors Field Experience **1-2 credits**

Honors students develop field experiences outside the classroom to complement courses with-out specified field experiences or to develop a more in-depth project for disciplinary-based field experiences. Through formal arrangement between the instructor and the Honors Program, the instructor meets with Honors students enrolled in the class to develop a specific field experience related to the course material. Honors students who successfully complete both the Field Experience and the course to which it is linked receive Honors credit for both. May be taken more than once. Prerequisite: Completion of the Honors Field Experience project form in consultation with supervising faculty and the Honors Director.

HNRS 304 Introduction to the Great Conversation **1 credit**

An introduction to the ongoing discussion of the timeless and universal ideas that are the foundation of Western Civilization. Students pursue the study of these ideas through guided reading of selections taken from the range of Western intellectual history. Prerequisites: HNRS 100, and junior standing, or instructor permission.

HNRS 305 Place as Text **2-3 credits**

Provides Honors students with opportunities to integrate experiences of theory and observation with place, time and self through a site-specific active learning experience. Students participate in a series of orientation sessions and complete associated assignments in preparation for a site visit. The class travels to a selected site and explores the concept of "extending text' and mapping the site from a variety of multi and inter-disciplinary perspectives. Modeled on the National Collegiate Honors Council City as Text program. Students may take this course twice for credit. Prerequisite: junior standing.

HNRS 397 Special Topics **1-3 credits**

HNRS 400 Oxford Tutorial **1 credit**

Honors students come together as autonomous learners in a supportive academic community to investigate a mutually decided upon theme or topic relating to a liberal arts education and constructive citizenship. Students are expected to illustrate a mastery of the goals promoted by the Honors Program and a liberal arts education including the rigorous application of analysis resulting in a coherent and integrated understanding of the selected theme or topic. Provides an opportunity to engage in larger philosophical inquiry and debate. Prerequisite: HNRS 200, HNRS 304 and senior standing or instructor permission.

HNRS 401 Honors Colloquium **1 credit**

A complement to courses offered outside of the Honors program. Through formal arrangement between a course instructor and the Honors Program, the instructor and student develop an additional course project(s) to allow the Honors student enrolled in the class deeper engagement with the course material. Honors students who successfully complete both the Colloquium and the course to which it is linked receive Honors credit for both. May be taken more than once. Prerequisite: Completion of the Honors Colloquium project form in consultation with supervising faculty and the Honors Director.

HNRS 402 Service Learning in Honors **1-2 credits**

Service Learning in Honors complements university course offerings by adding a hands-on service learning component with a community organization or community project. Through formal arrangement between an instructor and the Honors Program, the instructor meets with Honors students enrolled in the class to help provide specific disciplinary insights on issues affecting local communities, providing students with an opportunity to apply concepts, theories, and methods to practical real-world issues. Students gain familiarity with social problems and social responses, learn about communities as informed citizens, and gain expertise about the relationship between their roles as students and citizens. Honors students who complete both the Service Learning and the course to which it is linked receive Honors credit for both. Service Learning may be taken more than once. Prerequisite: Completion of the Honors Service Learning project form in consultation with supervising faculty and the Honors Director.

HNRS 403 Honors Field Experience **1-2 credits**

Honors students develop field experiences outside the classroom to complement courses without specified field experiences or to develop a more in-depth project for disciplinary-based field experiences. Through formal arrangement between the instructor and the Honors Program, the instructor meets with Honors students enrolled in the class to develop a specific field experience related to the course material. Honors students who successfully complete both the Field Experience and the course to which it is linked receive Honors credit for both. May be taken more than once. Prerequisite: Completion of the Honors Field Experience project form in consultation with supervising faculty and the Honors Director.

HNRS 492 Independent Study **1-3 credits**

An opportunity for Honors students to undertake detailed study and/or research into a unique topic or issue stemming from an interdisciplinary or multi-disciplinary approach under supervision of the Honors Director and appropriate regular faculty. May be taken for a maximum of three credits in one semester. Maximum credit toward Honors Program is six credits.

HNRS 494 Thesis Preparation **1 credit**

An introduction to the process of developing a thesis project. Students will undertake initial research on a potential thesis topic, develop a research plan and write a thesis proposal in preparation of writing an Honors thesis.

HNRS 495 Thesis **2-3 credits**

The student is required to complete a written thesis based on advanced study in a self designed research project and present his/her findings to the Honors Council in a public forum. The project must be supervised by a faculty member from a field of study relevant to the student's thesis. Prerequisites: junior or senior standing; good standing in the Honors Program; and successful completion of at least nine hours in Honors, including HNRS 100 and HNRS 494.

HNRS 497 Special Topics **1-3 credits**

LATIN AMERICAN STUDIES

Latin America is a complex and diverse region that resulted from the encounter of indigenous societies, European colonizers, and African peoples. Latin America today is one of the most dynamic regions in the world in terms of economic growth, political interaction with the U.S., and the preservation of natural and cultural resources. The minor in Latin American Studies provides students an opportunity to study this field from a variety of disciplinary angles. By employing the tools of various disciplines, including art and art history, history, Spanish, geography and others, students can begin the process of understanding these fascinating peoples and nations. The increasing interdependence of the Americas demands that students gain as much exposure as possible to the issues and forces related to the constantly changing relationships between the United States and Latin America.

FACULTY

Phil Crossley, Heather Orr, Heather Thiessen-Reily, Lynn Sikkink

DESCRIPTION OF THE PROGRAM

Latin American Studies Minor:

The Latin American Studies minor consists of 21 credits: 15 credits of core courses (including 6 Spanish language credits beyond SPAN 101 and 102) and 6 credits of electives:

ART 421 Art of Mesoamerica and the Andean Region of South America	3 cr
GEOG 351 Geography of Latin America and the Caribbean	3 cr
HIST 260 History of Latin America	3 cr
SPAN 254* Intermediate Spanish I	3 cr
SPAN 255* Intermediate Spanish II	3 cr
LAS 400 Latin American Studies Senior Portfolio	0 cr
*Two of the following***:	
ANTH 320 Cultural Ecology	3 cr
ECON 303 International Economics and Globalization	3 cr
HIST 360 Mexico	3 cr
HIST 364 Women in Latin American History	3 cr
HIST 365 Latin American Revolutions	3 cr
POLS 255 Introduction to Comparative Politics	3 cr
SPAN 341 Latin American Civilization and Culture	3 cr

* Requests for substitute languages spoken in Latin America (e.g., Portuguese) may be submitted to the designated coordinator of the Latin American Studies minor for substitution consideration.

**Students may petition to have other courses that have at least 40% Latin American content count toward the minor. The student is required to submit written evidence of the Latin American content of such courses, including the instructor's signature, to the Coordinator for approval.

LATIN AMERICAN STUDIES COURSES

LAS 400 Latin American Studies Senior Portfolio **0 credit**

A culminating experience to the minor in Latin American Studies in which students develop a portfolio of their best work from courses taken in the minor, and write a reflective essay indicating how those projects represent their learning in the program. The portfolio and essay will be assessed by the LAS Council members, and the Coordinator's signature is required as evidence of completion of the requirement. A grade of Satisfactory/Unsatisfactory will be reported to the Registrar once the portfolio has been evaluated by the Coordinator. Prerequisite: senior standing and prior completion of all, or co-enrollment in any remaining LAS requirements.

MATHEMATICS (MATH)

Mathematics is the language used to understand the universe, from atomic-level chemical reactions, to the motion of the planets around the sun, and everything in between. While many graduates continue on to masters- or doctoral-level studies it's no surprise that others use the critical thinking and reasoning skills learned at Western in a wide variety of fields including engineering, education, software programming, database management, research for business firms, and more. A degree in Mathematics can open the door to almost any career.

Western's Mathematics program provides several paths into these exciting professions. The standard major gives a sound foundation from which one can pursue advanced degrees or enter the business world with excellent quantitative skills. The secondary licensure emphasis is designed for people who want to teach in high schools or middle schools, where a shortage of well-qualified math teachers provides excellent job opportunities. The actuarial science emphasis trains students to analyze risk for the insurance and finance industries. Many actuarial science students are able to pass the first professional certification test before they graduate.

Regardless of one's major, the two mathematics minors will add quantitative skills critical to success and advancement in any profession. The standard minor provides a well-rounded set of problem solving skills and the ability to analyze complicated situations. The data analytics minor is designed to add the computational fluency which is driving nearly every profession now. This minor prepares students to analyze large data sets and extract valuable knowledge from data. These data are being produced in many fields and this minor allows students to work with professionals in other fields to derive appropriate solutions.

FACULTY

Professors Robert A. Cohen, Andrew G. Keck, Heidi L. Keck, and Daniel L. Schuster;
Associate Professors Kimberly J. Fix and Jeremy Muskat;
Lecturers Edith Cranor-Buck, Erik Kjosness, Anthony Luehrs, and Zachary Treisman.

DESCRIPTION OF THE PROGRAMS

Each Mathematics Major requires the 25-credit Mathematics Core.

Mathematics Core

CS 190 Computer Science I	3 cr
MATH 151 Calculus I	4 cr
MATH 220 Introduction to Advanced Mathematics	3 cr
MATH 251 Calculus II	4 cr
MATH 260 Applied Linear Algebra	3 cr
MATH 451 Analysis I	3 cr
MATH 471 Abstract Algebra I	3 cr
MATH 495 Senior Seminar	2 cr

Mathematics Major: Standard Program

A minimum of 41 credits is required, including the 25-credit Mathematics Core and at least 16 credits from the following:

CS 191 Computer Science II	3 cr
MATH 213 Probability and Statistics	3 cr
MATH 252 Calculus III	4 cr
MATH 300 Introduction to Mathematical Modeling	3 cr
MATH 313 Statistical Modeling and Simulation	3 cr
MATH 314 Applied Probability	3 cr
MATH 330 Topics in Geometry	3 cr
MATH 354 Differential Equations	3 cr
MATH 360 Linear Algebra	3 cr
MATH 370 History of Mathematics	3 cr
MATH 397 Special Topics	1-6 cr
MATH 414 Actuarial Mathematics	3 cr
MATH 456 Introduction to Complex Analysis	3 cr
MATH 497 Special Topics	1-6 cr

Mathematics Major: Comprehensive Programs

ACTUARIAL SCIENCE EMPHASIS

A minimum of 56 credits is required, including the 25-credit Mathematics Core and the following:

BUAD 311 Essential Excel Skills for the Workplace	1 cr
BUAD 312 Advanced Excel Applications	2 cr
ECON 201 Macroeconomics	3 cr
ECON 202 Microeconomics	3 cr
ECON 316 Econometrics	3 cr
ECON 361 Money, Banking, and Financial Markets	3 cr

MATH 213 Probability and Statistics	3 cr
MATH 252 Calculus III	4 cr
MATH 313 Statistical Modeling and Simulation	3 cr
MATH 314 Applied Probability	3 cr
MATH 414 Actuarial Mathematics	3 cr

SECONDARY LICENSURE EMPHASIS

This emphasis qualifies students for the State of Colorado License to teach Mathematics in junior high, middle school or high school. Students interested in pursuing this comprehensive program should consult with the Teacher Education Program advisor in addition to the advisor in their major as soon as possible. A minimum of 50 credits is required including the 25-credit Mathematics Core and the courses listed below. In addition, the student must fulfill the requirements of the Secondary Licensure Program (see description under Education).

MATH 213 Probability and Statistics	3 cr
MATH 252 Calculus III	4 cr
MATH 266 Secondary Mathematics from an Advanced Perspective	3 cr
MATH 330 Topics in Geometry	3 cr
MATH 360 Linear Algebra	3 cr
MATH 366 Methods of Teaching Secondary Mathematics	3 cr
MATH 370 History of Mathematics	3 cr
One of the following:	
MATH 300 Mathematical Modeling	3 cr
MATH 313 Statistical Modeling and Simulation	3 cr

Mathematics Minor

The Mathematics Minor requires a minimum of 18 credits:

MATH 151 Calculus I	4 cr
MATH 251 Calculus II	4 cr
MATH elective (300-level or above)	3 cr
At least seven credits from the following:	
MATH 213 Probability and Statistics	3 cr
MATH 220 Introduction to Advanced Mathematics	3 cr
MATH 252 Calculus III	4 cr
MATH 260 Applied Linear Algebra	3 cr
MATH 275 Scientific Programming Modeling and Simulation	3 cr
MATH 297 Special Topics	3 cr
or any upper-division Mathematics course	3 cr

Data Analytics Minor

The Data Analytics Minor consists of the following courses:

One of the following:	
MATH 213 Probability and Statistics	3 cr
ECON 216 Statistics for Business and Economics	3 cr
And:	
CS 190 Computer Science I	3 cr
ECON 202 Microeconomics	3 cr
MATH 260 Applied Linear Algebra	3 cr
MATH 313 Statistical Modeling and Simulation	3 cr
ECON 316 Econometrics	3 cr
CS 303 Machine Learning	3 cr

Capstone Course Requirement. The following course fulfills the capstone course requirement: MATH 495 Senior Seminar.

MATHEMATICS COURSES

MATH 098 Beginning Algebra **3 credits**

An introduction to algebra with a review of basic arithmetic. Includes decimals, fraction, percentage, ratio, proportion, signed numbers, algebraic expressions, factoring, exponents and radicals, linear equations, and graphs. MATH 098 is offered through Extended Studies and a fee is assessed. Credit does not count toward graduation. Graded Satisfactory/Unsatisfactory only.

MATH 099 Intermediate Algebra **3 credits**

A review of the arithmetic of fractions and decimals, percentage problems, signed numbers, arithmetic, and topics of basic algebra, including simplifying algebraic expressions, solving and graphing linear equations, basic factoring, working with algebraic fractions, and solving rational and quadratic equations. This course is designed for students who need a review of the basic algebra skills necessary to complete the required mathematics courses MATH 131 or MATH 140. MATH 099 is offered through Extended Studies

and a fee is assessed. Credit does not count toward graduation. Graded Satisfactory/ Unsatisfactory only. Prerequisite: ACT math score of 16 or above; SAT math score of 400 or above, MATH 098; or Accuplacer Elementary Algebra test score of 60 or above.

MATH 100 Math for Liberal Arts Skills **1 credits**

A review of the math skills necessary to succeed in MATH 105, Mathematics for the Liberal Arts. Corequisite MATH 105.

MATH 101 Math for Social Sciences Skills **1 credits**

A review of the math skills necessary to succeed in MATH 131, Mathematics for the Social Sciences. Prerequisite: an assessment equivalent to ACT math score of 17 or above; SAT math score of 400 or above; or Accuplacer Elementary Algebra test score of 60 or above. Corequisite MATH 131.

MATH 102 College Algebra Skills **1 credits**

A review of the math skills necessary to succeed in MATH 140, College Algebra. Prerequisites: an assessment equivalent to ACT math score between 17-20; a SAT Math score between 410-500; an Accuplacer Elementary Algebra score between 75-105; or a Compass Algebra score between 26-44; and a high school GPA of 2.75 or higher. Co-requisite MATH 140. Note: this course is intended for those qualified students wanting to complete the Supplemental Academic Instruction (SAI) program in Math.

MATH 105 Mathematics for the Liberal Arts **3 credits**

An investigation into a variety of mathematical concepts with an emphasis on quantitative literacy. Topics may include practical applications such as personal finance and numbers in the media, along with aesthetic applications such as connections between mathematics and art or music. Prerequisite: ACT math score of 19 or above; SAT math score of 460 or above; or MATH 098 or MATH 099; or Accuplacer Elementary Algebra test score of 85 or above; or corequisite MATH 100. GT-MA1

MATH 131 Mathematics for the Social Sciences **3 credits**

A course for the student majoring in the social sciences. Topics may include the study of linear functions, linear regression, systems of linear equations and matrix inverses, linear optimization, financial calculations, sets and counting, basic and conditional probability, the binomial and normal probability distributions, and descriptive statistics. Prerequisite: ACT math score of 21 or above; SAT math score of 500 or above; MATH 099; or Accuplacer Elementary Algebra test score of 85 or above; or corequisite MATH 101. GT-MA1

MATH 140 College Algebra **3 credits**

An integration of the essential algebraic manipulations, solving equations and inequalities, polynomial functions, exponential and logarithmic functions, and techniques of graphing. Prerequisite: ACT math score of 21 or above; SAT math score of 510 or above; MATH 099; or Accuplacer Elementary Algebra test score of 106 or above; or co-requisite MATH 102 (SAI).

MATH 141 Precalculus **4 credits**

Preparation for calculus by the study of functions of one variable over the real numbers. These are introduced in general and then applied to the usual elementary functions, namely polynomial and rational functions, exponential and logarithmic functions, and trigonometric functions. Inverse functions, polar coordinates and trigonometric identities are included. Prerequisite: ACT math score of 23 or above; SAT math score of 530 or above; MATH 140 with a minimum grade of "C-"; or Accuplacer university- level mathematics test with a score of 65 or above.

MATH 151 Calculus I **4 credits**

A study of differential calculus, including limits, continuous functions, Intermediate Value Theorem, tangents, linear approximation, inverse functions, implicit differentiation, extreme values and the Mean Value Theorem. This course also introduces Integral calculus including anti-derivatives, definite integrals, and the Fundamental Theorem of Calculus. Prerequisite: ACT math score of 27 or above; SAT math score of 610 or above; MATH 141 with a minimum grade of "C-"; or Accuplacer university-level mathematics test with a score of 95 or above. GT-MA1

MATH 197 Special Topics **1-6 credits**

MATH 200 Discrete Mathematics **3 credits**

Designed to provide some of the mathematical background necessary for advanced work in computer science. Topics include logic, set theory, Boolean algebra, switching theory, counting and enumeration, number theory, mathematical induction, linear modeling, basic matrix algebra, and the graphical and simplex methods of linear programming. Applications of the topics covered are emphasized. Prerequisite: MATH 141 with a minimum grade of "C-."

MATH 209 Mathematics for Elementary School Teachers I **3 credits**

First of two courses designed for prospective elementary teachers. Emphasizes the real number system, arithmetic operations, and algebra. Explorations focus on representing, analyzing, generalizing, formalizing, and communicating patterns and structures. Content is presented using problem solving and exploration. Prerequisite: ACT math score of 23 or above; SAT math score of 530 or above; MATH 140 with a minimum grade of "C-"; or Accuplacer university-level mathematics test with a score of 65 or above.

MATH 210 Mathematics for Elementary School Teachers II **3 credits**

Second of two courses designed for prospective elementary teachers. Emphasizes probability, data analysis, and geometry. Explorations focus on representations of data and two-and three-dimensional shapes, their properties, measurements, constructions, and transformations. Prerequisite: MATH 209 with a minimum grade of "C-."

MATH 213 Probability and Statistics **3 credits**

An introduction to descriptive statistics, probability concepts, and inferential statistics. The topics for the course include presentation of data, counting principles, probability rules, and discrete and continuous probability distributions. Prerequisite: MATH 141 with a minimum grade of "C-," or Accuplacer university-level mathematics test score of 85 or above; or instructor permission. GT-MA1

MATH 220 Introduction to Advanced Mathematics **3 credits**

Students develop and use elementary logic and set theory to construct deductive proofs with relations, functions, and some algebraic structures. Topics include indexing, equivalence relation theory, and cardinality. Prerequisite: MATH 151 with a minimum grade of "C-."

MATH 251 Calculus II **4 credits**
Topics include techniques of integration, area computations, improper integrals, infinite series and various convergence tests, power series, Taylor's Formula, polar coordinates, and parametric curves. Prerequisite: MATH 151 with a minimum grade of "C-."

MATH 252 Calculus III **4 credits**
Topics include calculus of functions of several variables, differentiation and elementary integration, vectors in the plane and space. Prerequisite: MATH 251 with a minimum grade of "C-."

MATH 260 Applied Linear Algebra **3 credits**
A course in the techniques and applications of linear algebra. The core topics include solving systems of linear equations, eigenvalues and eigenvectors, matrix decomposition, the pseudoinverse and least squares approximations, and the singular value decomposition. The theory is supplemented with extensive applications and computer programming. Prerequisite: MATH 141.

MATH 266 Secondary Mathematics from an Advanced Perspective **3 credits**
A course designed to help Secondary Licensure Emphasis majors understand the core mathematical content of high school mathematics courses before calculus. These concepts are treated from an advanced standpoint, emphasizing connections and extensions. Topics include number systems, polynomial and transcendental functions, analytic geometry, theory of equations, and measurement. Prerequisite: MATH 151 with a minimum grade of "C-."

MATH 275 Scientific Programming, Modeling and Simulation **3 credits**
Designed to develop programming skills appropriate for scientific and industrial applications. Topics may include numerical solution of differential equations, singular value decomposition, and Fourier analysis. Emphasis is placed on problem modeling, algorithm development, and data visualization. Prerequisites: CS 190 and MATH 151 with minimum grades of "C-."

MATH 297 Special Topics **1-6 credits**

MATH 300 Introduction to Mathematical Modeling **3 credits**
Designed to teach the basic principles of mathematical modeling and applied mathematics. Techniques from calculus, statistics, and probability are utilized to model real-world problems. Analytic and numeric tools are used to implement the models, obtain predictions and investigate underlying mechanisms. Topics include dimensional analysis, curve fitting, simulations, differential and difference equations. Prerequisites: MATH 251 and MATH 213 with minimum grades of "C-."

MATH 311 Mathematical Knowledge for Teaching Elementary School **3 credits**
This problem based class uses video and written records of children doing mathematics to enable prospective elementary educators to develop a connected framework of mathematical knowledge, understand mathematical thinking of others, and recognize how specific mathematical tasks contribute to a child's emerging mathematical knowledge. Problems are tied to specific mathematical standards and practices from the Common Core State Standards for Mathematics (grades K-6). Prerequisite: MATH 210 with a minimum grade of "C-."

MATH 313 Statistical Modeling and Simulation **3 credits**
A study of statistical techniques used to model and simulate stochastic processes. The core topics include linear and nonlinear multivariate models, generalized additive models, time series models with auto-correlated error, and mixed effects models. Emphasis is placed on computational techniques appropriate to large data sets and data visualization. Prerequisites: ECON 316, MATH 260, CS190.

MATH 314 Applied Probability **3 credits**
A study of the basic principles of probability theory and their applications. Topics include combinational analysis, conditional probabilities, discrete and continuous random variables, and measures of centrality and variance. Emphasis is placed on applications using probability distributions (including binomial, geometric, Poisson, uniform, exponential, and normal distributions) to assess and manage risk in the fields of finance, insurance, medicine, and quality control. Prerequisite: MATH 251 with minimum grade of "C-."

MATH 330 Topics in Geometry **3 credits**
An introduction to modern geometries. Topics include synthetic, analytic, vector, and transformational approaches to geometry. Classification of geometries, axiomatics, and the application of geometry may also be included. Prerequisite or corequisite: MATH 220.

MATH 354 Differential Equations **3 credits**
A study of the theory and methods for solving ordinary differential equations. Prerequisite: MATH 251 with a minimum grade of "C-."

MATH 360 Linear Algebra **3 credits**
A study of systems of linear equations, matrix operations, vector spaces, properties of determinants, eigenvalues, eigenvectors, orthogonality and least-squares. Emphasis is placed on theoretical aspects and general vector space properties with proof. Prerequisite: MATH 260 and MATH 220 with minimum grades of "C-."

MATH 366 Methods of Teaching Secondary Mathematics **3 credits**
Secondary Licensure Emphasis majors learn to use the latest teaching techniques and technologies, to prepare valid mathematics tests, to be able to effectively evaluate their students, to know the latest developments in secondary mathematics curriculum, and to become familiar with professional mathematics teaching organizations and their journals. Prerequisites: MATH 220 and MATH 266 with minimum grades of "C-."

MATH 370 History of Mathematics **3 credits**
Acquaints the student with the historical development of mathematics. Includes an introduction to the proper methods and accepted formats of written, graphical, and oral communication in mathematics. Prerequisites: MATH 220 and MATH 251 with minimum grades of "C-."

MATH 375 Numerical Methods **3 credits**
A study of techniques of computation for power-series calculation of functions; roots of equations; nonlinear simultaneous

equations; matrices, determinants, and linear simultaneous equations; numerical integration; and differential equations. Prerequisites: MATH 251 and either CS 275 or CS 310 with minimum grades of "C-."

MATH 390 Introduction to Peer Tutoring in Mathematics **1 credit**

Strategies for tutoring mathematics at the university level, with a focus on presenting mathematical concepts and procedures, reducing anxiety, and improving study skills. May be repeated for up to four credits. Graded Satisfactory/Unsatisfactory only. Prerequisite: MATH 151 with a minimum grade of "B-" and instructor permission.

MATH 391 Seminar in Mathematics **1 credit**

A selected topic from areas of mathematics not usually included in the regular curriculum. Student involvement through presentations is emphasized. May be taken under different topics for a total of two credits.

MATH 392 Independent Study in Mathematics **1-4 credits**

MATH 397 Special Topics **1-6 credits**

MATH 414 Actuarial Mathematics **3 credits**

A study of mathematical concepts useful in risk management, including multivariate probability and interest theory. Topics include the Central Limit Theorem, joint distributions, combinations of distributions, conditional and marginal probabilities, time value of money, annuities, and loans. Emphasis is placed on solving problems from the actuarial field, including applications to insurance and business. Prerequisites: MATH 252 and MATH 314 with minimum grades of "C-."

MATH 451 Analysis I **3 credits**

An introduction to the theory of calculus. Topics include the usual topology of the reals, sequences, limits, continuity, differentiation, and Riemann integration. Prerequisites: MATH 220 and MATH 252 with minimum grades of "C-."

MATH 456 Introduction to Complex Analysis **3 credits**

An introduction to the theory and applications of complex variables. Topics include analytic and elementary functions, integrals, series, residues, and conformal mapping. Prerequisites: MATH 220 and MATH 252 with minimum grades of "C-."

MATH 471 Abstract Algebra I **3 credits**

An introduction to the theory of groups and rings. The fundamental group properties and concepts including cyclic groups, subgroups, direct products, symmetric groups, cosets, normal subgroups, and the group homomorphism theorems are discussed. Prerequisite: MATH 220 with a minimum grade of "C-."

MATH 490 Workshop **2 credits**

A study of a variety of mathematical topics generally dictated by student interest. The course may be taken for credit three times if the content of the workshop differs.

MATH 495 Senior Seminar **2 credits**

A capstone course for the Mathematics Standard Major and for the Secondary Licensure Emphasis. Each student selects an area of interest, researches the selected area, generates a reference list and research paper, and presents the paper to a seminar of faculty and students. Prerequisites: MATH 360 and either MATH 451 or MATH 471.

MATH 497 Special Topics **1-6 credits**

MUSIC (MUS)

The discipline of music and music making requires the integration of technical skills, creativity, analytical thinking, and understanding. Students electing to study music work with faculty musicians in classes, ensembles, and private lessons to acquire basic musicianship skills, develop performance abilities, learn about music's role in past and present cultures, and gain the enthusiasm and tools needed for lifelong teaching and learning in the field of music. A degree in music within a liberal arts curriculum provides a broad background, allowing students to enter many careers and to pursue further study and graduate work in many areas. Graduates of Western's Music Department are now involved in a variety of careers, including the recording industry, concert management, counseling, librarianship, music business, accompanying, coaching, church music, independent teaching, and performance. Many graduates have elected to take the additional music and education courses leading to licensure in Music Education and are pursuing careers in the public schools of Colorado and the nation, often pursuing graduate study in a variety of fields within the education profession.

The Music Department also provides opportunities for all members of the Western community to gain rewarding musical experience as participants in ensembles. Many courses are offered to all students of the University to provide an awareness of music and its importance to all cultures. Free concerts by faculty, students, and guests are performed for the University and the Gunnison community.

Three Comprehensive Program Emphases are available for students who wish to major in music: Music Emphasis, Music Education Emphasis, and Business Emphasis. All programs require study in all areas of music—theory, basic keyboard skills, history and literature, individual and group performance, conducting, and research methods. The Music Education Emphasis includes additional methods and techniques courses designed to qualify students for music-teacher licensure in Colorado. Additional Education courses for the K-12 licensure are administered by the Education Program.

The Music Minor consists of theory and history courses and electives chosen from the offerings of the Music Department.

Western State Colorado University is an accredited institutional member of the National Association of Schools of Music.

FACULTY

Professor Robert H. Barrett; Associate Professor Heather D. Roberson;
Assistant Professors Michael Flynn and Greg Haynes;
Emeritus Professor Martha W. Violett; Lecturer Kenneth W. Todd.

DESCRIPTION OF THE PROGRAM

All Music majors require the 28-credit Musicianship Core, 14 or 21 credits from the Performance Curriculum (depending upon the emphasis), the six credits (or the equivalent) of foreign language (not required for the Music Education Emphasis), and Concert and Convocation Attendance Course (must be taken each semester of residence with a "Satisfactory" grade a minimum of six semesters). A minimum grade of "C" is required in all Music courses counted toward the major. To qualify for graduation all Music majors must meet performance requirements and piano proficiency.

Musicianship Core

MUS 128 Theory of Music Laboratory I	1 cr
MUS 129 Theory of Music I	3 cr
MUS 130 Theory of Music Laboratory II	1 cr
MUS 131 Theory of Music II	3 cr
MUS 140 Introduction to Music	3 cr
MUS 212 Introduction to Music Technology	1 cr
MUS 253 Theory of Music Laboratory III	1 cr
MUS 254 Theory of Music III	3 cr
MUS 255 Theory of Music Laboratory IV	1 cr
MUS 256 Theory of Music IV	3 cr
MUS 352 History of Music	3 cr
MUS 353 History of Music	3 cr
MUS 491 Seminar in Research	2 cr

Performance Curriculum. The Performance Curriculum consists of courses in Conducting, Major Performing Organizations, Small Ensembles, and Private Lessons.

Conducting:

MUS 250 Beginning Conducting: Choral and Instrumental	2 cr

Major Performance Organizations: **(courses may be repeated)** The specific major performing organization required is determined by major instrument or voice.

MUS 101 Orchestra	1 cr
MUS 102 Band	1 cr
MUS 104 Chorus	1 cr
MUS 301 Orchestra	1 cr
MUS 302 Band	1 cr
MUS 304 Chorus	1 cr

Small Ensembles: (courses may be repeated)

MUS 121 Instrumental and Vocal Chamber Music	.5-1 cr
MUS 321 Instrumental and Vocal Chamber Music	1 cr
MUS 105 Opera	1 cr
MUS 305 Opera	1 cr

Private Lessons: (courses may be repeated)

MUS 180 Piano	1-2 cr
MUS 181 Organ	1-2 cr
MUS 182 Voice	1-2 cr
MUS 183 Violin	1-2 cr
MUS 184 Viola	1-2 cr
MUS 185 Cello	1-2 cr
MUS 186 Contra Bass	1-2 cr
MUS 187 Flute	1-2 cr
MUS 188 Oboe	1-2 cr
MUS 189 Clarinet	1-2 cr
MUS 190 Bassoon	1-2 cr
MUS 191 Saxophone	1-2 cr
MUS 192 Trumpet	1-2 cr
MUS 193 French Horn	1-2 cr
MUS 194 Trombone	1-2 cr
MUS 195 Baritone	1-2 cr
MUS 196 Tuba	1-2 cr
MUS 198 Percussion	1-2 cr
MUS 380 Piano	1-2 cr
MUS 381 Organ	1-2 cr
MUS 382 Voice	1-2 cr
MUS 383 Violin	1-2 cr
MUS 384 Viola	1-2 cr
MUS 385 Cello	1-2 cr
MUS 386 Contra Bass	1-2 cr
MUS 387 Flute	1-2 cr
MUS 388 Oboe	1-2 cr
MUS 389 Clarinet	1-2 cr
MUS 390 Bassoon	1-2 cr
MUS 391 Saxophone	1-2 cr
MUS 392 Trumpet	1-2 cr
MUS 393 French Horn	1-2 cr
MUS 394 Trombone	1-2 cr
MUS 395 Baritone	1-2 cr
MUS 396 Tuba	1-2 cr
MUS 398 Percussion	1-2 cr

Foreign Language. Six credits of foreign language are required in the Music Emphasis and Business Emphasis. This requirement may be fulfilled by passing the appropriate CLEP test if sufficient skill has been attained.

Concert and Convocation Attendance. All Music majors must take MUS 000 Concert and Convocation Attendance each semester in residence. Six semesters of MUS 000 with a grade of "satisfactory" are required of all Music majors prior to graduation.

Performance Requirements for Majors. In order to qualify for graduation, all Music majors must pass specific levels of performance as judged by a jury of Music faculty. All Music Education majors must also present a senior recital (MUS 400 Senior Recital). Majors in the Music Emphasis and the Business Emphasis may elect MUS 400 Senior Recital/Senior Project, or MUS 499 Internship. Please contact the Music Department for exact requirements.

Piano Proficiency. All students with a Music Major or Minor must pass the piano proficiency examination by the end of the required theory sequence. MUS 173 Piano Class, MUS 174 Piano Class, MUS 275 Piano Class, and MUS 276 Piano Class, may be taken for elective credits to prepare for the exam. Please contact the Music Department for exact requirements.

Music Major: Comprehensive Programs

MUSIC EMPHASIS

A minimum of 58 credits is required, including the 28-credit Musicianship Core, 21 credits from the Performance Curriculum (seven credits in Major Performance Organizations, four credits in Small Ensembles, eight credits in Private Lessons, the two-credit MUS 250 Beginning Conducting: Choral and Instrumental, the one-credit MUS 212 Introduction to Music Technology; students must be registered for a major performing organization every semester in residence), three credits of Music electives, Concert and Convocation Attendance, six credits of foreign language, Performance Requirement (MUS 400 Senior Recital/Senior Project, or

MUS 499 Internship), and Piano Proficiency.

K-12 MUSIC EDUCATION EMPHASIS

This program prepares students for the State of Colorado License in Music Education. A minimum of 64 credits is required, including the 28-credit Musicianship Core, 21 credits from the Performance Curriculum (seven credits in Major Performance Organizations, four credits in Small Ensembles, eight credits in Private Lessons, the two-credit MUS 250 Beginning Conducting: Choral and Instrumental, the one-credit MUS 212 Introduction to Music Technology; students must be registered for a major performing organization every semester in residence), Concert and Convocation Attendance, the Performance Requirement (MUS 400 Senior Recital/ Senior Project), Piano Proficiency, and the following:

MUS 120 Introduction to Music Education	1 cr
MUS 212 Introduction to Music Technology	1 cr
MUS 213 Woodwind Methods	1 cr
MUS 214 Brass Methods	1 cr
MUS 215 String Methods	1 cr
MUS 216 Percussion Methods	1 cr
MUS 217 Voice Methods	1 cr
MUS 290 Introduction to Improvisation	1 cr
MUS 350 Advanced Conducting: Choral and Instrumental	2 cr
MUS 360 Teaching General Music in Elementary Schools	2 cr
MUS 365 Methods and Philosophy of Teaching and Supervising Instrumental Music in the Public Schools: K-12	2 cr
MUS 370 Methods and Philosophy of Teaching and Supervising Vocal and General Music in the Public Schools: K-12	2 cr

The student must also fulfill the requirements of the K-12 Music Licensure Program (see description under Education) to qualify for the Colorado License in Music Education. Please contact the Chair of the Department of Music or the Director of the Teacher Education Program for exact required course work in Education.

BUSINESS EMPHASIS

A minimum of 66 credits is required including the 28-credit Musicianship Core, 14 credits in Musical Performance (seven credits from Major Performing Organizations or Small Ensembles and seven credits from Private Lessons), the one-credit MUS 312 Introduction to Music Technology, Performance Requirement (MUS 400 Senior Recital/ Senior Project, or MUS 499 Internship), Piano Proficiency, the six-credit foreign language requirement, Concert and Convocation Attendance, and the following:

ACC 201 Introduction to Financial Accounting	3 cr
BUAD 210 Legal Environment of Business	3 cr
MUS 212 Introduction to Music Technology	3 cr
BUAD 270 Principles of Marketing	3 cr
BUAD 333 Organizational Behavior	3 cr
One of the following:	
CS 120 Information Management and Analysis	3 cr
BUAD 220 Computer Applications in Business	3 cr
One of the following:	
ECON 201 Macroeconomics	3 cr
ECON 202 Microeconomics	3 cr

Music Minor

A minimum of 19 credits is required, including at least three hours of upper-division credit from private lessons or performing organizations. The Piano Proficiency is required of Music Minors. A minimum grade of "C" is required in all music courses counted toward the Music Minor.

Required courses:

MUS 128 Theory of Music Laboratory I	1 cr
MUS 129 Theory of Music I	3 cr
MUS 130 Theory of Music Laboratory II	1 cr
MUS 131 Theory of Music II	3 cr
MUS 140 Introduction to Music	3 cr
Private Lessons	4 cr
Major Performing Organizations or Small Ensembles	4 cr

Music Technology Minor

This program is designed to expose students to recording practices, electronic music composition, and other topics occurring at the intersection of music and technology. A minimum of 19 credits is required. A minimum grade of "C" is required in all courses counted toward the Music Technology Minor.

Required courses:

MUS 129 Theory of Music I	3 cr
MUS 131 Theory of Music II	3 cr

MUS 212 Introduction to Music Technology	1 cr
MUS 313 Music Production	3 cr
At least nine credits from the following:	
PHYS 115 Physics of Music	3 cr
MUS 135 Introduction to Algorithmic Music	3 cr
CS 190 Computer Science I	3 cr
CS 311 Embedded Systems	3 cr

Capstone Course Requirement. The following course in the Music Major fulfills the Capstone Course Requirement: MUS 491 Seminar in Research.

MUSIC COURSES

MUS 000 Concert and Convocation Attendance **0 credits**
Designed to encourage concert and convocation attendance as a means of learning about music literature and style, performance practice, and topics of interest to musicians. Attending 75 per cent of the posted events in each semester (as either listener or performer) qualifies as a "Satisfactory" grade. Graded Satisfactory/Unsatisfactory only.

MUS 100 Fundamentals of Music **3 credits**
An introduction to music literacy and theory. Students acquire basic skills of reading, writing, and performing music and gain an understanding of scales, intervals, chords, and transposition. The course is open to students with little or no musical background. GT-AH1

MUS 101 Orchestra **1 credit**
Open to all who play orchestral instruments and who wish to experience playing orchestral music. The course includes the study and performance of orchestral literature.

MUS 102 Band **1/2-1 credit**
Open to all who play band instruments. The course includes the study and performance of symphonic band literature. Membership is open to Music majors and non-Music majors by audition. Credit is determined by the type of ensemble and amount of rehearsal time.

MUS 104 Chorus **1/2-1 credit**
An opportunity for participation in a vocal ensemble. The Western Concert Choir per forms choral masterworks from all historical periods of music and also performs major works as part of the Western University-Community Choir. Membership is open to Music majors and non-Music majors by audition. Credit is determined by the type of ensemble and amount of rehearsal time.

MUS 105 Opera **1 credit**
Designed to provide experience in musical-dramatic activities. May be taken two times for credit. Prerequisite: admission by campus-wide audition.

MUS 120 Introduction to Music Education **1 credit**
An introductory course for the music major interested in music education K-12. This course provides students with an overview of the concepts, methods and techniques used in music education. Students learn the historical, philosophical, and practical conventions, of all areas of music education, including elementary music, choir orchestra, and band. Students examine different aspects involved in teaching music in public schools, goals of various music programs, and existing curricula including sample lesson plans. Included is an introduction to the Colorado standards for music education K-12 and technology used in music education. Prerequisite to the 300-level music education methods classes.

MUS 121 Instrumental and Vocal Chamber Music **1/2-1 credit**
Designed to give the student-musician rehearsal and performance experience in the area of ensemble and chamber music. Includes the Brass, Woodwind, Percussion, String, and Jazz Ensembles, as well as Chamber Singers, and additional small ensembles. Membership is open to Music majors and non-Music majors by audition. Credit is deter- mined by the type of ensemble and amount of rehearsal time.

MUS 128 Theory of Music Laboratory I **1 credit**
Development of musicianship skills related to MUS 129. Students will study, sight read, and perform (voice and keyboard) rhythms, tonicization patterns in major and minor keys, intervals, scales, and diatonic chords. Students will also learn to take melodic, harmonic, and rhythmic dictation. (Offered spring) Prerequisite: MUS 100 or the equivalent. Corequisite: MUS 129.

MUS 129 Theory of Music I **3 credits**
A study of musical analysis, notation, and composition. This course concentrates on fundamentals such as major and minor scales, meter, rhythm, pitch intervals, key signatures, triads and inversions, simple chord building, harmonic progressions, and voice leading.(Offered spring) Prerequisite: MUS 100 or the equivalent.

MUS 130 Theory of Music Laboratory II **1 credit**
Designed to enhance and build on the musical skills and knowledge learned in MUS 128 and MUS 129 and develop those areas of musicianship through performance (voice and keyboard) and dictation. This course builds on knowledge of diatonic triads with the inclusion of inversions, non-chord tones, and diatonic seventh chords. (Offered fall) Prerequisite: MUS 128 and MUS 129 with minimum grades of "C." Corequisite: MUS 131.

MUS 131 Theory of Music II **3 credits**
A study of musical analysis, notation, and composition. This course builds on knowledge gained in MUS 128 and MUS 129 and introduces non-chord tones; diatonic seventh chords, phrase structure and cadences, tonicization and rudimentary counter- point. (Offered fall) Prerequisite: MUS 129 with minimum grades of "C."

MUS 135 Introduction to Algorithmic Music **3 credits**
An introduction to musical representation and creation using computer programming code. This class explores musical concepts

using functional language programming techniques. Primary topics include representation of musical structures through abstraction and thematic code-based composition using generative structures. Significant focus is placed on modern compositional styles that can be expressed using algorithmic tools.

MUS 140 Introduction to Music **3 credits**

A study of the elements of musical structure designed to form a basis for intelligent listening. Music is selected to illustrate representative styles of music from different historical periods and world cultures. Required of Music majors and minors during their freshman year. GT-AH1

MUS 173 Piano Class **1 credit**

Beginning piano.

MUS 174 Piano Class **1 credit**

A continuation of MUS 173.

MUS 180 Piano **1-2 credits**

Private instruction.

MUS 181 Organ **1-2 credits**

Private instruction. Prerequisite: at least four years of private piano study.

MUS 182 Voice **1-2 credits**

Private instruction.

MUS 183 Violin **1-2 credits**

Private instruction.

MUS 184 Viola **1-2 credits**

Private instruction.

MUS 185 Cello **1-2 credits**

Private instruction.

MUS 186 Contra Bass **1-2 credits**

Private instruction.

MUS 187 Flute **1-2 credits**

Private instruction.

MUS 188 Oboe **1-2 credits**

Private instruction.

MUS 189 Clarinet **1-2 credits**

Private instruction.

MUS 190 Bassoon **1-2 credits**

Private instruction.

MUS 191 Saxophone **1-2 credits**

Private instruction.

MUS 192 Trumpet **1-2 credits**

Private instruction.

MUS 193 French Horn **1-2 credits**

Private instruction.

MUS 194 Trombone **1-2 credits**

Private instruction.

MUS 195 Baritone **1-2 credits**

Private instruction.

MUS 196 Tuba **1-2 credits**

Private instruction.

MUS 197 Special Topics **1-6 credits**

MUS 198 Percussion **1-2 credits**

Private instruction.

MUS 212 Introduction to Music Technology **1 credits**

Designed to acquaint students with music technology hardware (including MIDI-Musical
Instrument Digital Interface) and a variety of software programs to enhance learning, teaching, and performing situations at all ages and levels. Students have the opportunity to work with available equipment. Offered in alternate years (Fall 2013). Prerequisite: MUS 100 or MUS 129 with a minimum grade of "C" or instructor permission.

MUS 213 Woodwind Methods (with laboratory) **1 credit**

Designed to cover basic performing skills and teaching techniques for all woodwind instruments. Emphasis is on application in the elementary, middle, and secondary schools. Offered in alternate years (Spring 2014).

MUS 214 Brass Methods (with laboratory) **1 credit**

Designed to cover basic performing skills and teaching techniques for all brass instruments. Emphasis is on application in the elementary, middle, and secondary schools. Offered in alternate years (Fall 2013).

MUS 215 String Methods (with laboratory) **1 credit**

Instruction in violin, viola, violoncello and bass for the Music Education student. Emphasis is on application in the elementary, middle, and secondary schools. Offered in alternate years (Fall 2014).

MUS 216 Percussion Methods (with laboratory) **1 credit**

An introduction to the basic percussion instruments with special attention given to standard and contemporary performance

techniques and sound production. Emphasis is on application in the elementary, middle, and secondary schools. Offered in alternate years (Spring 2015).

MUS 217 Voice Methods (with laboratory) **1 credit**

A study of tone production, breathing as applied to singing, attack and release, muscular control, posture, and vocal health. Special exercises adapted to individual needs of pupils and simple English songs are sung in the class. Emphasis is on basic skills and techniques for use with young voices in the elementary, middle, and secondary schools. Offered in alternate years (Spring 2014).

MUS 240 Perspectives in Music: Jazz History/Music in Media/Women in Music/other selected topics **3 credits**

A study of a specific perspective or repertory of music and its relationship to other aspects of musical culture. Historical, sociological, and multicultural influences and implications, are also considered. The course may be taken two times (with different titles) for credit.

MUS 245 History of Rock and Roll **3 credits**

An introductory course emphasizing the history and development of Rock and Roll music. The growth and development of major historical periods of rock music and related styles will be explored through the study of historical, social, political and cultural influences. Music is selected to illustrate representative styles of music from different historical periods of Rock music and culture.

MUS 250 Beginning Conducting: Choral and Instrumental **2 credits**

A study of the basic techniques of conducting, score reading, beat patterns, rehearsal procedures, and style in the instrumental and vocal media. Emphasis is placed on physical exercises, coordination, and the development of fundamental baton techniques. Students conduct in class and observe rehearsal situations with the University ensembles. Offered in alternate years (Fall 2014). Prerequisites: MUS 130 and MUS 131 with minimum grades of "C."

MUS 253 Theory of Music Laboratory III **1 credit**

Designed to enhance and build on the musical skills and knowledge learned in MUS 130 and MUS 131 and develop those areas of musicianship through performance (voice and keyboard) and dictation. Studies incorporate modulation using diatonic chords, modemixture, chromaticism, and secondary dominants. (Offered Spring) Prerequisites: MUS 130 and MUS 131 with minimum grades of "C." Corequisite: MUS 254.

MUS 254 Theory of Music III **3 credits**

A study of musical analysis, notation, and composition. This course builds on knowledge gained in MUS 130 and MUS 131 and introduces modulation, chromaticism and altered chords, extension of tertian harmony, and binary and ternary forms. (Offered Spring) Prerequisites: MUS 130 and MUS 131 with minimum grades of "C." Corequisite: MUS 253.

MUS 255 Theory of Music Laboratory IV **1 credit**

Designed to enhance and build on the musical skills and knowledge learned in MUS 253 and MUS 254 and develop those areas of musicianship through performance (voice and keyboard) and dictation. This course continues the study of chromaticism including enharmonic modulations, extended chords, and harmonic practices of the late nineteenth and twentieth century. (Offered Fall) Prerequisites: MUS 253 and MUS 254 with minimum grades of "C." Corequisite: MUS 256.

MUS 256 Theory of Music IV **3 credits**

A study of musical analysis, notation, and composition. This course builds on knowledge gained in MUS 253 and MUS 254 and introduces extended chords, quartal harmony, expanded tonality and serialism, additional twentieth-century compositional techniques, and counterpoint. (Offered Fall) Prerequisites: MUS 253 and MUS 254 with minimum grades of "C." Corequisite: MUS 255.

MUS 275 Piano Class **1 credit**

A continuation of MUS 174.

MUS 276 Piano Class **1 credit**

A continuation of MUS 275.

MUS 285 Pedagogy for the Applied Instrument or Voice **2 credits**

The student becomes acquainted with the methods and materials to be used in the teaching of music students, in both private and class situations.

MUS 290 Introduction to Improvisation **1 credit**

An introduction to improvisation for singers and instrumentalists including improvisational experiences in a variety of styles (jazz, classical, and other), integration of music theory with improvisation, and methods of teaching improvisation. Required of majors in the Music Education Emphasis. Offered in alternate years (Spring 2014). Prerequisites: MUS 130 and MUS 131 with a minimum grades of "C", or instructor permission.

MUS 292 Independent Study **1-3 credits**

MUS 297 Special Topics **1-6 credits**

MUS 301 Orchestra **1 credit**

Open to all who play orchestral instruments and who wish to experience playing orchestral music. The course includes the study and performance of orchestral literature. Prerequisites: junior or senior standing; minimum of one semester of MUS 101; instructor permission.

MUS 302 Band **1/2-1 credit**

Open to all who play band instruments. The course includes the study and performance
of marching and symphonic band literature. Membership is open to Music majors and non-Music majors by audition. Credit is determined by the type of ensemble and amount of rehearsal time. Prerequisites: junior or senior standing; minimum of one semester of MUS 102; instructor permission.

MUS 304 Chorus **1/2-1 credit**

An opportunity for participation in a vocal ensemble. The WSC Concert Choir performs choral masterworks from all historical periods of music and also performs major works as part of the WSC University-Community Choir. Membership is open to Music majors and non-Music majors by audition. Credit is determined by the type of ensemble and amount of rehearsal time. Prerequisites:

junior or senior standing; minimum of one semester of MUS 104; instructor permission.

MUS 305 Opera **1 credit**

Designed to provide experience in musical-dramatic activities. May be taken two times for credit. Prerequisites: admission by campus-wide audition; junior or senior standing; minimum of one semester of MUS 105; instructor permission.

MUS 306 Piano Ensemble **1 credit**

Designed to acquaint the piano student with ensemble repertoire and performance traditions. Prerequisite: four credits of piano private study or equivalent performance background.

MUS 311 Principles and Techniques of Composition **3 credits**

A study of the basic principles of composition. Harmonic, contrapuntal, and formal structures of various stylistic periods are employed. Prerequisites: MUS 255 and MUS 256 with minimum grades of "C."

MUS 313 Music Production **3 credits**

An introduction to current production software designed to give students experience utilizing digital audio recording techniques and electronic sequencers. Students utilize sequencing and sound design software to create electronic music, demonstrate signal flow analysis using real and virtual hardware, understand and demonstrate a variety of microphone-based recording techniques, and create projects using a digital audio workstation. Prerequisite: MUS 131 with a minimum grade of "C."

MUS 320 Scoring **2 credits**

A study of techniques of arranging for instrumental and vocal ensembles. Prerequisite: MUS 256 with minimum grade of "C."

MUS 321 Instrumental and Vocal Chamber Music **1/2-1 credit**

Designed to give the student-musician rehearsal and performance experience in the area of ensemble and chamber music. Includes the Brass, Woodwind, Percussion, String, and Jazz Ensembles, as well as Chamber Singers and additional small ensembles. Membership is open to Music Majors and non-Music Majors by audition. Credit is determined by the type of ensemble and amount of rehearsal time. Prerequisites: junior or senior standing; minimum of one semester of MUS 121; instructor permission.

MUS 350 Advanced Conducting: Choral and Instrumental **2 credits**

A study of advanced techniques of conducting, score reading, musical style, materials, and repertoire in the instrumental and vocal media. Emphasis is placed on physical exercises and coordination of the mind and hands, as well as musical terms necessary for proper interpretation of musical scores. Students conduct in both class and laboratory situations with University ensembles. Offered in alternate years (Spring 2015). Prerequisites: MUS 250 with minimum grade of "C."

MUS 352 History of Music **3 credits**

A study of the development of music from Antiquity through the Renaissance and Baroque periods. Emphasis is placed on acquaintance with the music literature of successive periods. Offered in alternate years (Fall 2013). Prerequisites: Music major or minor status; MUS 140.

MUS 353 History of Music **3 credits**

A study of the development of music from the Classical and Romantic periods to the present. Emphasis is placed on acquaintance with the music literature of successive periods. Offered in alternate years (Spring 2014). Prerequisites: Music major or minor status; MUS 140.

MUS 355 Counterpoint **2 credits**

A study of contrapuntal techniques necessary to compose polyphonic music in two, three, four, or more parts. Prerequisites: MUS 255 and MUS 256 with minimum grades of "C."

MUS 360 Teaching General Music in Elementary Schools **2 credits**

A study of the teaching of general music in the elementary classroom. Acquaints Music Education majors with methods of teaching the elements of music, working with children's voices, using instruments, and developing listening skills. Current approaches such as Dalcroze, Orff, Kodaly, and Suzuki are also addressed. Students survey elementary music texts and learn how to develop and plan a music program. Offered in alternate years (Spring 2015). Prerequisites: MUS 120 and MUS 250 with a minimum grade of "C."

MUS 365 Methods and Philosophy of Teaching and Supervising Instrumental Music in the Public Schools: K-12 **2 credits**

A study of the supervision, organization, and administration of instrumental music in the public schools, K-12, providing background and experience with the philosophical, historical, and practical foundation of instrumental music in the public schools. Emphasis is placed upon contemporary methodology, all aspects of teaching and conducting activities in instrumental music, comprehensive musicianship through performance, and preparation for student teaching. Offered in alternate years (Fall 2014). Prerequisites: MUS 120 and MUS 250 with a minimum grade of "C."

MUS 370 Methods and Philosophy of Teaching and Supervising Vocal Music in the Public Schools: K-12 **2 credits**

An intensive study of materials and methods for teaching vocal and general music in the elementary and secondary school, plus objectives, organization, administration, curriculum content, guidance for student teachers, and background in contemporary trends in music education for all age levels, K-12. Offered in alternate years (Spring 2015). Prerequisites: MUS 120 and MUS 250 with a minimum grade of "C."

MUS 380 Piano **1-2 credits**

Private instruction. Prerequisites: junior or senior standing; minimum of one semester of MUS 180; instructor permission.

MUS 381 Organ **1-2 credits**

Private instruction. Prerequisite: at least four years of piano study; junior or senior standing; minimum of one semester of MUS 181; instructor permission.

MUS 382 Voice **1-2 credits**

Private instruction. Prerequisites: junior or senior standing; minimum of one semester of MUS 182; instructor permission.

MUS 383 Violin **1-2 credits**

Private instruction. Prerequisites: junior or senior standing; minimum of one semester of MUS 183; instructor permission.

MUS 384 Viola **1-2 credits**
Private instruction. Prerequisites: junior or senior standing; minimum of one semester of MUS 184; instructor permission.
MUS 385 Cello **1-2 credits**
Private instruction. Prerequisites: junior or senior standing; minimum of one semester of MUS 185; instructor permission.
MUS 386 Contra Bass **1-2 credits**
Private instruction. Prerequisites: junior or senior standing; minimum of one semester of MUS 186; instructor permission.
MUS 387 Flute **1-2 credits**
Private instruction. Prerequisites: junior or senior standing; minimum of one semester of MUS 187; instructor permission.
MUS 388 Oboe **1-2 credits**
Private instruction. Prerequisites: junior or senior standing; minimum of one semester of MUS 188; instructor permission.
MUS 389 Clarinet **1-2 credits**
Private instruction. Prerequisites: junior or senior standing; minimum of one semester of MUS 189; instructor permission.
MUS 390 Bassoon **1-2 credits**
Private instruction. Prerequisites: junior or senior standing; minimum of one semester of MUS 190; instructor permission.
MUS 391 Saxophone **1-2 credits**
Private instruction. Prerequisites: junior or senior standing; minimum of one semester of MUS 191; instructor permission.
MUS 392 Trumpet **1-2 credits**
Private instruction. Prerequisites: junior or senior standing; minimum of one semester of MUS 192; instructor permission.
MUS 393 French Horn **1-2 credits**
Private instruction. Prerequisites: junior or senior standing; minimum of one semester of MUS 193; instructor permission.
MUS 394 Trombone **1-2 credits**
Private instruction. Prerequisites: junior or senior standing; minimum of one semester of MUS 194; instructor permission.
MUS 395 Baritone **1-2 credits**
Private instruction. Prerequisites: junior or senior standing; minimum of one semester of MUS 195; instructor permission.
MUS 396 Tuba **1-2 credits**
Private instruction. Prerequisites: junior or senior standing; minimum of one semester of MUS 196; instructor permission.
MUS 397 Special Topics **1-6 credits**
MUS 398 Percussion **1-2 credits**
Private instruction. Prerequisites: junior or senior standing; minimum of one semester of MUS 198; instructor permission.
MUS 400 Senior Recital / Senior Project **0 credits**
Students demonstrate competency in an area of performance, research, composition, or music technology. Senior projects may include a research project, composition, music technology project, or non-credit internship. Graded Satisfactory/Unsatisfactory only. Prerequisite: senior standing and consent of faculty advisor.
MUS 424 Band Literature **2 credits**
A study and analysis of the literature available to the concert band and the various types of large wind ensembles.
MUS 426 Literature for the Applied Instrument or Voice **2 credits**
An historical study of the standard repertoire for the applied instrument or voice.
MUS 429 Diction for Singers **2 credits**
A basic course in Italian, German, and French diction designed for voice students. Foreign language diction are studied in selected vocal repertoire.
MUS 488 Composition **3 credits**
Students write original compositions for solo or ensemble performing media.
MUS 490 Workshop in Music **1-6 credits**
A study of topics related to music study suitable for workshop format. Includes discussion, practice, and demonstration.
MUS 491 Seminar in Research **2 credits**
Senior students research and write papers in the area of music appropriate to their courses of study. Offered in alternate years (spring 2012).
MUS 492 Independent Study **1-4 credits**
A special study in areas of student interest. May be taken for a maximum of four credits.
MUS 497 Special Topics **1-6 credits**
MUS 499 Internship in Music **1-12 credits**
An internship may be arranged in this course. Credit earned in this course may be applied to the major or minor with faculty approval. Consult advisor for details.

PHILOSOPHY (PHIL)

The Philosophy Minor provides students with an understanding of the history of philosophy, an exploration of diverse worldviews, and the tools to examine the complex, unexamined assumptions underlying contemporary society. The Philosophy Minor emphasizes development of logical and analytical skills, affording students the intellectual ability to theorize, articulate, and support sophisticated philosophical perspectives.

FACULTY

Professor John C. Hausdoerffer; Assistant Professor Anthony Miccoli.

DESCRIPTION OF THE PROGRAM

Philosophy Minor

A minimum of 18 credits is required, including the following:

PHIL 101 Introduction to Philosophy	3 cr
PHIL 201 Logic and Epistemology	3 cr
PHIL 335 Ethics	3 cr
One of the following.:	
PHIL 315 Eastern Philosophy	3 cr
PHIL 345 Philosophy of Religion	3 cr
PHIL 355 Philosophy of Science	3 cr
One of the following:	
POLS 309 Political Theory I–Ancient to Early Modern	3 cr
POLS 310 Political Theory II–Late Modern and Contemporary	3 cr
One of the following:	
ENG 371 Literary Theory and Criticism	3 cr
ENVS 410 Environmental Ethics	3 cr
PHIL 325 Women and Gender in Philosophy	3 cr
PHIL 401 Reality and Representation	3 cr

PHILOSOPHY COURSES

PHIL 101 Introduction to Philosophy **3 credits**

An introduction to the central philosophical questions that have historically spanned and conceptually founded Western civilization. The course surveys key thinkers, philosophical movements, and academic fields of the discipline. Questions regarding the meaning of existence, the freedom of the self, the nature of a just society, and the workings of human knowledge expose students to the pursuits of metaphysics, ontology, epistemology, philosophy of science, moral and political philosophy, and ethics. GT-AH3

PHIL 197 Special Topics **1-6 credits**

PHIL 201 Logic and Epistemology **3 credits**

An introduction to historical and contemporary approaches to epistemology, philosophical methodology, logic, systems of classification, and methods of validation. Emphasis is placed on critical inquiry into the complex relationship among logic, empiricism, and rationalism, while focusing on the real-world implications of the epistemological assumptions of logic itself. Prerequisite: PHIL 101.

PHIL 297 Special Topics **1-6 credits**

PHIL 315 Eastern Philosophy **3 credits**

An introduction to the central philosophical questions which have conceptually founded Eastern philosophy. This course surveys primary texts, intellectual movements, and cultural traditions that inform and influence Eastern philosophy while investigating the theoretical spaces that exist between philosophical assumptions of the East and West. Prerequisite: PHIL 101.

PHIL 325 Women and Gender in Philosophy **3 credits**

A discussion of the significance of women and gender in the development of philosophy. This course questions how the philosophical canon has appropriated, incorporated, and sometimes erased women's contributions. Drawing upon a variety of discourses, in and outside of philosophy itself (including feminist and queer theory), students assess how the philosophical endeavor changes in light of previously overlooked and currently influential gender studies work. Students use gender and sexuality as a framework that enriches and interrogates philosophical fields ranging from cultural theory to epistemology. Prerequisite: PHIL 101.

PHIL 335 Ethics **3 credits**

An examination of influential moral philosophers and contrasting theories concerning how one "ought" to live, from ancient Greek and Eastern philosophers to contemporary thinkers. Central questions of the course explore the "good life," critique ideologies that limit ethical options, and imagine how to expand individual choices in cultivating a just society. The course concludes with student applications of ethical theories to current global issues. Prerequisite: PHIL 101.

PHIL 345 Philosophy of Religion **3 credits**

An exploration of the significance of faith in our human worldview. Through a comparative approach to major world religions, students investigate the underlying assumptions behind the ways of "knowing" God and participating in the "divine," and how those assumptions diversely manifest themselves culturally, metaphorically, and psychologically. Prerequisite: PHIL 101.

PHIL 355 Philosophy of Science **3 credits**

An exploration of the ongoing relationship between philosophy and science, and an examination of how philosophical movements have informed some of the major shifts in scientific paradigms throughout history. The course concludes with an examination of how scientific revolutions potentially "de-center" humans and reorient the relationship between the self and the world. Prerequisite: PHIL 101.

PHIL 397 Special Topics **1-6 credits**

PHIL 401 Reality and Representation **3 credits**

The course analyzes, and provides students the opportunity to more deeply investigate, the philosophical foundations of spoken and written representation through a broad survey of theoretical readings in aesthetics, authorship, interpretation, realism, and subjectivity. Examining a diverse range of classic and contemporary thinkers in philosophy and cultural studies, the course explores the ways representation frames the experience of being in the world, and asks such questions as: 'How do ideas become the words we speak?'; 'Do the words we speak mean the same when writ-ten?'; and 'What makes the narrative possible?' The answers to these questions have broad philosophical, political, and cultural implication. Prerequisite: PHIL 201 or PHIL 335 or ENG 371.

PHIL 492 Independent Study **1-6 credits**

PHIL 497 Special Topics **1-6 credits**

PHYSICS (PHYS)

The word *physics* comes from the Greek word for nature, and we think of it today as the study of matter and energy. Physicists are concerned with understanding the way nature operates: the basic constituents of the universe and how they interact. The pursuit of that understanding leads to many practical applications. Physics is a rewarding area to study because it provides the basis for much of today's technology, and it helps us satisfy our intellectual curiosity. The fundamental character of physics makes it a discipline that is central to the liberal arts.

The Physics curriculum at Western provides opportunities for students to take course work that supports other scientific and technical disciplines, to complete an academic minor, or to prepare for physics or engineering programs at other institutions.

FACULTY

Assistant Professors John D. Mason, and M. Suzanne Taylor; Lecturer Steve Griggs.

DESCRIPTION OF THE PROGRAM

Physics Minor

The Physics Minor consists of a minimum of 21 credits, including nine credits chosen from Physics courses numbered 320 or above and the following:

PHYS 170 Principals of Physics I (with laboratory)	4 cr
PHYS 171 Principals of Physics II (with laboratory)	4 cr
Or	
PHYS 200 General Physics I (with laboratory)	4 cr
PHYS 201 General Physics II (with laboratory)	4 cr

Required supporting courses:

MATH 252 Calculus III	4 cr

PHYSICS COURSES

PHYS 110 Solar System Astronomy **3 credits**

An overview of the historical development of astronomy and the basic physical principles that are relevant to it. The overall structure of the solar system is studied and its various components examined. Includes limited observational activities. Prerequisite: completion of the general education essential skills mathematics requirement. GT-SC2

PHYS 115 Physics of Music **3 credits**

A practical introduction to the physics of sound, with emphasis on music. Students investigate the properties of sounds produced by musical instruments. Topics include periodic functions, waves, resonance, overtones, frequency spectra, digital sound production and basic acoustic principles. Prerequisite: ACT math score of 19 or above; SAT math score of 460 or above; MATH 099; or Accuplacer Elementary Algebra test score of 85 or above.

PHYS 120 Meteorology **3 credits**

A summary of the structure of the Earth's atmosphere, worldwide weather disturbances, weather forecasting, and snow avalanches. This course may not be taken for credit toward the Physics Minor. GT-SC2

PHYS 125 Energy and the Environment **3 credits**

A practical study of energy generation and its environmental impact, including the physics of energy fundamentals, fossil fuel use, alternative energy uses, and energy conservation. Primarily for non-science majors, this course qualitatively details basic physical principles behind the use of energy, including mechanics, electricity and magnetism, and thermodynamics. This course is designed to provide the student with a physicist's perspective on energy use and environmental issues. Prerequisite: completion of the general education essential skills mathematics requirement. GT-SC2

PHYS 140 Introductory Physics (with laboratory) **4 credits**

A semi-quantitative introduction to the fundamental concepts of physical science, particularly the laws of physics as they relate to the structure of matter. Laboratory experiences play an important role in the investigations. This course may not be taken for credit toward the Physics Minor. Prerequisite: ACT math score of 19 or above; SAT math score of 460 or above; MATH 099; Accuplacer Elementary Algebra test score of 85 or above. GT-SC1

PHYS 170 Principles of Physics I (with laboratory) **4 credits**

A quantitative lecture and laboratory introduction to the basic principles of physics. Topics covered include the motions of particles, forces in nature, field concepts, energy, conservation laws, and many-particle systems. A mathematical proficiency at the level of university algebra is recommended. Prerequisites: PHYS 140 or one year of high school physics; and Accuplacer university-level mathematics test score of 95 or above, or MATH 141. GT-SC1

PHYS 171 Principles of Physics II (with laboratory) **4 credits**

A continuation of PHYS 170 dealing with electromagnetism, light, thermodynamics, and the atomic structure of matter. Prerequisite: PHYS 170. GT-SC1

PHYS 197 Special Topics **1-6 credits**

PHYS 200 General Physics I (with laboratory) **4 credits**

A quantitative lecture and laboratory introduction to the basic principles of physics, using the concepts of calculus as a tool. Topics covered include the motions of particles, forces in nature, field concepts, energy, conservation laws, many-particle systems, and thermodynamics. A student may not receive credit for both PHYS 170 and PHYS 200. Prerequisites: PHYS 140 or one year of high

school physics; and completion of MATH 151 preferred but may be taken concurrently. GT-SC1

PHYS 201 General Physics II (with laboratory) **4 credits**

A continuation of PHYS 200 dealing with electromagnetism, light, and the atomic structure of matter. A student cannot receive credit for both PHYS 171 and PHYS 201. Prerequisite: PHYS 200. GT-SC1

PHYS 250 Statics **3 credits**

An investigation of systems in static equilibrium. Topics covered include force systems, 2d and 3d equilibrium, structural analysis, internal forces, friction, distributed forces and virtual work. Prerequisites: PHYS 171 or PHYS 201; MATH 251.

PHYS 251 Dynamics **3 credits**

An investigation of the kinematics and kinetics of particles and rigid bodies as well as modes of vibration and time response. Topics covered include coordinate systems, work-energy relations, momentum, relative motion and vibrations. Prerequisite: PHYS 250.

PHYS 297 Special Topics **1-6 credits**

PHYS 310 Astronomy I **2 credits**

A summary of the historical development of astronomy and the pertinent underlying physical principles, including descriptions of the objects comprising the solar system and their motions. Prerequisite: ACT math score of 19 or above; SAT math score of 460 or above; MATH 099; or Accuplacer Elementary Algebra test score of 85 or above.

PHYS 311 Astronomy II **2 credits**

A discussion of the techniques used to study and classify stars, energy production in stars, stellar structures, stellar evolution, galaxies, cosmological theories, and current developments in astronomy. Prerequisite: PHYS 310.

PHYS 320 Modern Physics **3 credits**

A consideration of the inadequacies of classical physics and some of the fundamental advances in physics since 1890, including the special theory of relativity and elementary particle physics. Prerequisites: PHYS 171 or PHYS 201; corequisite: MATH 252.

PHYS 330 Mechanics **3 credits**

A treatment of basic mathematical methods including vector analysis, coordinate systems and transformations, particle dynamics, energy, and gravitation. Prerequisites: PHYS 171 or PHYS 201; MATH 251.

PHYS 350 Electricity and Magnetism I **3 credits**

A study of electrostatic fields and potentials, the electrical properties of matter, magnetic phenomena and the magnetic properties of matter. Prerequisites: PHYS 171 or PHYS 201; MATH 252.

PHYS 351 Electricity and Magnetism II **3 credits**

A continuation of PHYS 350 treating direct and alternating currents, electromagnetic induction Maxwell's equations, and electromagnetic radiation. Prerequisite: PHYS 350.

PHYS 397 Special Topics **1-6 credits**

PHYS 452 Quantum Theory **3 credits**

An introduction to the mathematical formalism of quantum mechanics and its application to various types of natural systems, such as multi-electron atoms, molecules, and solids. Prerequisites: PHYS 171 or PHYS 201; corequisite: MATH 252.

PHYS 462 Astrophysics **3 credits**

A study of selected topics in astrophysics as they relate to the core areas of physics: mechanics, electromagnetism, quantum physics, and thermodynamics. Topics covered may include stellar formation and life cycles, galactic dynamics and dark matter, planetary systems, multiple star systems, interstellar medium, cosmology, and the nature of light. Prerequisites: PHYS 171 or PHYS 201; MATH 252.

PHYS 480 Observational Astronomy **4 credits**

A presentation of some of the fundamental concepts of astronomy through a series of observational activities and laboratory exercises supported by appropriate lecture presentations. Motions and intrinsic properties of various astronomical objects are investigated, and some of the tools and methods of modern astronomy are studied. Subjects include constellations, time reckoning, nature and analysis of light, optics, telescopes, photography, and properties of planets, satellites, stars, and galaxies. A student may not receive credit for both PHYS 310-311 and 480. This course may not be taken for credit towards the Physics Minor. Prerequisite: ACT math score of 19 or above; SAT math score of 460 or above; MATH 099; Accuplacer Elementary Algebra test score of 85 or above.

PHYS 490 Geophysics I (with laboratory) **4 credits**

Through lecture and field experiences, the seismic techniques of geophysical exploration are emphasized. Prerequisites: CS 190, GEOL 201, and PHYS 200; corequisite: MATH 252.

PHYS 491 Geophysics II (with laboratory) **4 credits**

Lecture and field experiences are used to introduce gravity, magnetic, and electrical methods of geophysical exploration. Prerequisites: CS 190, GEOL 201, MATH 252, and PHYS 201.

PHYS 493 Special Problems in Physics **1-4 credits**

An investigation which is tailored to the interests and background of the individual student. It may be of an experimental nature.

PHYS 497 Special Topics **1-6 credits**

POLITICS AND GOVERNMENT (POLS)

The Politics and Government curriculum presents different and often conflicting points of view on a variety of important political ideas in the Western political tradition (for example: democracy, freedom, equality, development, and power). Study of how different individuals have looked at these ideas, as well as how such ideas have been practiced in the contexts of real institutions and political controversies, enlarges the mind, develops the tools necessary for effective citizenship, and serves to cultivate critical reasoning. Students are encouraged to find ways to address problems, such as the loss of biodiversity, disparities between neighboring communities and personal responsibility, global gender and social inequalities, foreign policy decision making and international security, and the relationship between private and public life in a democracy. As political scientists we seek to understand the causes of wars, social injustices, economic disparities, and uneven technological growth for the purpose of alleviating suffering and providing sustainable solutions. Students study these questions through an engagement with historical texts as well as case studies and ongoing contemporary debates.

The faculty is committed to teaching students how to effect social change through active citizenship —whether in local, state, national or international communities. By learning from different people and situations in internships and service learning, Western students are prepared for graduate or professional school or to better understand and prepare for careers in business, journalism, government service, or public life. Such internships have ranged from working in local law offices or offices at the state capitol to interning in United States Senate offices in Washington, D.C. The Politics and Government Program offers a standard major, a pre-law emphasis, a secondary licensure emphasis, a standard minor, and a pre-law minor.

FACULTY

Professor William L. Niemi; Associate Professor Maria B. Struble; Assistant Professor Brian Bernhardt.

DESCRIPTION OF THE PROGRAMS

Politics and Government Major: Standard Program

A minimum of 36 credits is required including the following:

POLS 117 Introduction to Political Ideas	3 cr
POLS 180 Introduction to American Politics	3 cr
POLS 255 Introduction to Comparative Politics	3 cr
POLS 260 Introduction to World Politics	3 cr
POLS 309 Political Theory I–Ancient to Early Modern	3 cr
POLS 310 Political Theory II–Late Modern and Contemporary	3 cr
Five of the following:	
POLS 250 Politics of the Environment	3 cr
POLS 282 Issues in State and Local Government	3 cr
POLS 300 Constitutional Law I	3 cr
POLS 301 Constitutional Law II	3 cr
POLS 331 Politics of the Presidency	3 cr
POLS 340 Politics of Social Movements	3 cr
POLS 350 Human Rights	3 cr
POLS 355 Politics of Development	3 cr
POLS 360 American Foreign Policy	3 cr
POLS 370 Political Economy	3 cr
POLS 376 American Political Thought I-From Puritans to Slaveholders	3 cr
POLS 380 The United Nations	3 cr
POLS 476 American Political Thought II-American Capitalism & Democracy	3 cr
POLS 499 Internship in Politics and Government	3 cr
A statistics course may be used to meet the POLS elective requirement.	
One of the following capstone courses:	
POLS 485 Studies in Political Theory	3 cr
POLS 486 Studies in American Politics	3 cr
POLS 487 Studies in International Relations	3 cr
POLS 488 Studies in Comparative Politics	3 cr

Politics and Government Major: Comprehensive Programs

GLOBAL STUDIES EMPHASIS

A minimum of 54 credits is required including the following:

POLS 117 Introduction to Political Ideas	3 cr
POLS 180 Introduction to American Politics	3 cr
POLS 255 Introduction to Comparative Politics	3 cr
POLS 260 Introduction to World Politics	3 cr
POLS 309 Political Theory I – Ancient to Early Modern	3 cr
POLS 310 Political Theory II – Later Modern and Contemporary	3 cr
Six of the following:	

POLS 250 Environmental Politics	3 cr
POLS 340 Politics of Social Movements	3 cr
POLS 350 Human Rights	3 cr
POLS 355 Politics of Development	3 cr
POLS 360 American Foreign Policy	3 cr
POLS 370 Political Economy	3 cr
POLS 380 The United Nations	3 cr
POLS 499 Internship in Politics and Government	3 cr
Two of the following:	
ECON 201 Macroeconomics	3 cr
ECON 202 Microeconomics	3 cr
ECON 303 International Economics and Globalization	3 cr
Two of the following:	
HIST 250 History of the Middle East	3 cr
HIST 254 History of Africa	3 cr
HIST 260 History of Latin America	3 cr
HIST 354 Conflict in Africa	3 cr
Or another 300 or 400-level History course on an international thematic	
One of the following:	
GEOG 110 World Regional Geography	3 cr
GEOG 120 Introduction to Human Geography	3 cr
GEOG 351 Geography of Latin American and the Caribbean	3 cr
One of the following capstone courses:	
POLS 485 Studies in Political Theory	3 cr
POLS 486 Studies in American Politics	3 cr
POLS 487 Studies in International Relations	3 cr
POLS 488 Studies in Comparative Politics	3 cr

PRE-LAW EMPHASIS

A minimum of 57 credits is required including the following:

POLS 117 Introduction to Political Ideas	3 cr
POLS 180 Introduction to American Politics	3 cr
POLS 255 Introduction to Comparative Politics	3 cr
POLS 260 Introduction to World Politics	3 cr
POLS 300 Constitutional Law I	3 cr
POLS 301 Constitutional Law II	3 cr
POLS 309 Political Theory I–Ancient to Early Modern	3 cr
POLS 310 Political Theory II–Late Modern and Contemporary	3 cr
Four of the following:	
POLS 250 Politics of the Environment	3 cr
POLS 282 Issues in State and Local Government	3 cr
POLS 331 Politics of the Presidency	3 cr
POLS 340 Politics of Social Movements	3 cr
POLS 350 Human Rights	3 cr
POLS 355 Politics of Development	3 cr
POLS 360 American Foreign Policy	3 cr
POLS 370 Political Economy	3 cr
POLS 376 American Political Thought I–From Puritans to Slaveholders	3 cr
POLS 380 The United Nations	3 cr
POLS 476 American Political Thought II–American Capitalism and Democracy	3 cr
POLS 499 Internship in Politics and Government	3 cr
Six of the following courses in at least four disciplines:	
ACC 201 Introduction to Financial Accounting	3 cr
ACC 350 Income Tax	3 cr
BUAD 210 Legal Environment of Business	3 cr
BUAD 315 Business Law	3 cr
COM 271 Small Group Communication	3 cr
COM 371 Argument and Conflict Management	3 cr
COM 372 Issues Management	3 cr
ECON 201 Macroeconomics	3 cr
ECON 202 Microeconomics	3 cr
ECON 476 American Economic Development	3 cr
ENG 237 Women and Literature	3 cr

ENG 238 Literary Culture of the American West	3 cr
ENG 255 Ancient World Literature	3 cr
ENG 331 Literature and Ethnicity	3 cr
HIST 333 The Revolutionary Era and Early National Period	3 cr
HIST 336 Antebellum, Civil War and Reconstruction, 1830-1877	3 cr
HIST 340 Reform and Reorganization in American Society	3 cr
HIST 343 Depression and World War II	3 cr
PHIL 101 Introduction to Philosophy	3 cr
PSY 368 Abnormal Psychology	3 cr
SOC 259 Introduction to Criminal Justice	3 cr
SOC 349 Law Enforcement	3 cr
SOC 367 Corrections	3 cr
One of the following capstone courses:	
POLS 485 Studies in Political Theory	3 cr
POLS 486 Studies in American Politics	3 cr
POLS 487 Studies in International Relations	3 cr
POLS 488 Studies in Comparative Politics	3 cr

SECONDARY LICENSURE EMPHASIS

This emphasis qualifies students for State of Colorado Licensure in Social Science Education. Students interested in pursuing this comprehensive program should consult with the Teacher Education Program advisor in addition to the advisor in their major as soon as possible. A minimum of 72 credits is required. In addition, students must fulfill the Secondary Licensure Option described under Education. The following courses are required:

ECON 201 Macroeconomics	3 cr
ECON 202 Microeconomics	3 cr
ECON 303 International Economics and Globalization	3 cr
ECON 476 American Economic Development	3 cr
GEOG 110 World Regional Geography	3 cr
GEOG 120 Human Geography	3 cr
GEOG 250 Geography of North America	3 cr
GEOL 101 Physical Geology	3 cr
HIST 101 World History to 1500	3 cr
HIST 102 World History Since 1500	3 cr
HIST 126 U.S. History to 1865	3 cr
HIST 127 U.S. History Since 1865	3 cr
HIST 327 Colorado History	3 cr
POLS 117 Introduction to Political Ideas	3 cr
POLS 180 Introduction to American Politics	3 cr
POLS 255 Introduction to Comparative Politics	3 cr
POLS 282 Issues in State and Local Government	3 cr
POLS 309 Political Theory I—Ancient to Early Modern	3 cr
POLS 310 Political Theory II—Late Modern and Contemporary	3 cr
POLS 376 American Political Thought I-From Puritans to Slaveholders	3 cr
POLS 476 American Political Thought II-American Capitalism and Democracy	3 cr
One of the following:	
POLS 260 Introduction to World Politics	3 cr
POLS 360 American Foreign Policy	3 cr
One of the following:	
POLS 300 Constitutional Law I	3 cr
POLS 301 Constitutional Law II	3 cr
One of the following capstone courses:	
POLS 485 Studies in Political Theory:	3 cr
POLS 486 Studies in American Politics:	3 cr
POLS 487 Studies in International Relations:	3 cr
POLS 488 Studies in Comparative Politics:	3 cr

Politics and Government Minor

A minimum of 18 credits is required including a three-credit, upper-division Politics and Government elective chosen in consultation with an advisor and the following:

POLS 117 Introduction to Political Ideas	3 cr
POLS 180 Introduction to American Politics	3 cr
POLS 255 Introduction to Comparative Politics	3 cr
POLS 260 Introduction to World Politics	3 cr

One of the following:

POLS 309 Political Theory I–Ancient to Early Modern	3 cr
POLS 310 Political Theory II–Late Modern and Contemporary	3 cr

Politics and Government Pre-Law Minor

A minimum of 21 credits is required including a three-credit elective chosen from the courses listed for the Politics and Government major: Pre-Law Emphasis chosen in consultation with an advisor and the following:

BUAD 210 Legal Environment of Business	3 cr
BUAD 315 Business Law	3 cr
POLS 117 Introduction to Political Ideas	3 cr
POLS 180 Introduction to American Politics	3 cr
POLS 300 Constitutional Law I	3 cr
POLS 301 Constitutional Law II	3 cr

Capstone Course Requirement. The following courses in the Politics and Government Major fulfill the capstone course requirement: POLS 485 Studies in Political Theory; POLS 486 Studies in American Politics; POLS 487 Studies in International Relations POLS 488 Studies in Comparative Politics.

POLITICS AND GOVERNMENT COURSES

POLS 117 Introduction to Political Ideas **3 credits**

An introduction to political analysis through a study of important political concepts and theories, as well as their historical development. Students study the ideas and practices of the public and philosophical development of concepts such as citizenship, democracy, equality, justice, liberty, or power. GT-SS1

POLS 180 Introduction to American Politics **3 credits**

An introduction to institutions and processes of American politics, including themes such as constitutionalism, representation, participation, political development, political economy, civil liberties and rights, public policy, and the ideas and values of American democracy. GT-SS1

POLS 250 Politics of the Environment **3 credits**

A survey of key issues of national and international environmental politics. Students are introduced to the historical foundations and ongoing debates concerning the natural environment. Topics include international environmental treaties, government responses to environmental disasters and crises, environmental justice movements, environmental causes of war and displacement, and environmental agreements and developments in the United States. Prerequisite: POLS 117 recommended.

POLS 255 Introduction to Comparative Politics **3 credits**

An introduction to the challenges and problems encountered in the study of comparative politics. Students examine issues of local and national governance through a comparative lens. By looking at similar political phenomena in several contexts, students explore the question of why some countries have successfully developed their political, economic and social systems while others are lagging behind. Issues examined include women's rights, poverty, underdevelopment, the environment, and democracy. Prerequisite: ENG 102 with a grade of C- or above.

POLS 260 Introduction to World Politics **3 credits**

An introduction to some of the more important concepts and approaches to understanding world politics. Students examine the politics between different countries and seek to answer questions about the promise and peril of the global future. Quest- ions contemplated include: What are the sources of political conflict and how can they be minimized? Under what conditions will nation states cooperate with each other to accomplish common goals? Should tyranny and human rights violations justify humanitarian intervention? Prerequisite: ENG 102 with a grade of C- or above.

POLS 282 Issues in State and Local Government **3 credits**

Using the foundations of American Federalism, the class examines policy issues at the state and local levels. With a comparative perspective and, at the same time, with particular attention paid to Colorado, some of the themes examined in states and localities include: budgets and economic policy, education, energy, and environmental Policy. Prerequisite: recommended POLS 180.

POLS 297 Special Topics **3 credits**

POLS 300 Constitutional Law I **3 credits**

A study of the historical development of the United States Constitution and Supreme Court through the most important Supreme Court decisions. The course focuses on the areas of jurisdiction of the courts, development of the common law, the separation of powers, federalism, and the interstate commerce power. Prerequisite: POLS 180.

POLS 301 Constitutional Law II **3 credits**

A continuation of POLS 300. An examination of the constitutional protections of individual liberties as defined by the Supreme Court. Students study the historical development of the Supreme Court's point of view in such areas as freedom of speech, subversion and disloyalty, religious freedom, church-state separation, and equal protection of the law. Prerequisite: POLS 180 recommended.

POLS 309 Political Theory I–Ancient to Early Modern **3 credits**

A survey of the historical development of western political theories from their origins in ancient Greece to the development of early modern political theories such as liberalism and republicanism. Students study thinkers such as Sophocles, Plato, Aristotle, William Shakespeare, Niccolo Machiavelli, John Locke, and Jean-Jacques Rousseau. Prerequisite: POLS 117 recommended.

POLS 310 Political Theory II–Late Modern and Contemporary **3 credits**

A survey of the historical development of modern and contemporary political theories since the French Revolution. Issues

investigated might include the rise of liberal democracy and its critics, the impact of the industrial revolution on modern politics, and how technological change and environmental limitations have affected contemporary political thought. Students study thinkers such as Mary Wollstonecraft, John Stuart Mill, Karl Marx, Friedrich Nietzsche, Hannah Arendt, and Michel Foucault. Prerequisite: POLS 117 recommended.

POLS 331 The Politics of the Presidency **3 credits**

After more than two centuries of change and development, the presidency stands not only as the nation's preeminent public office but also its most problematic. This course examines the design and creation of the office, the impact various officeholders have made on shaping future expectations, and the problems of contemporary leadership. Prerequisite: POLS 180 recommended.

POLS 340 Politics of Social Movements **3 credits**

A study of social movements, past and present, in both domestic and international contexts. Students examine theories on why social movements develop, spread, and decline, while considering the factors that lead to their successes and failures. Through an examination of transnational movements, students consider the roles of social networks and participatory democracy in a globalized world. Prerequisite: ENG 102.

POLS 350 Human Rights **3 credits**

An engagement with the history and current developments in international human rights practices, offering a justification and critique of universal human rights through the lens of various schools of thought, discussing pre and post-WWII developments with attention to specific cases, and examining the relationship between culture, globalization and human rights violations in the 21st century. Prerequisite: ENG 102.

POLS 355 Politics of Development **3 credits**

An historical and case-specific examination of development and underdevelopment debates, including assumptions about poverty, sustainability, liberal democratic regimes and free-market economy. Specific topics include malnutrition, food security, rights of indigenous populations, international aid and donors, disease, democratization processes, human rights, and the environment. Prerequisites: POLS 255 and/or POLS 260 recommended.

POLS 360 American Foreign Policy **3 credits**

Not since the Roman Empire has any nation had as much economic, cultural and military power as the United States does today. Yet, as has become all too evident through the problems of terrorism, environmental degradation and the proliferation of weapons of mass destruction, that power is not enough to solve many global issues. This course examines the way in which U.S. foreign policy is made and the variety of ongoing and emerging foreign policy problems the U.S. faces in the context of their evolution. Prerequisites: POLS 255 and POLS 260 recommended.

POLS 376 American Political Thought I-From Puritans to Slaveholders **3 credits**

A study of the development of early American political thought including enduring themes such as the Puritans and community, the ideas behind the Declaration of Independence, and the significance of the arguments found in the Federalists Papers or the work of Alexis de Tocqueville. Students also engage political ideas often challenging and reshaping the accepted order from sources such as Jacksonian workingmen and Abolitionism.

POLS 380 The United Nations **3 credits**

A study of the United Nations, focusing on the relationship between the UN, the proliferation of human rights regimes and international human development. Students think about the importance of creating international norms, working toward a sustainable world peace, political efficacy, and human rights in the world. A Model UN simulation is part of the course requirements. Prerequisite: ENG 102.

POLS 370 Political Economy **3 credits**

A study of economic systems that focuses on the structure and uses of economic power and the relationship between economic and political power. Students think about questions such as: What is capitalism? What varieties of capitalism exist around the world? How has capitalism changed over time? Ultimately, students consider the relationship between capitalism, freedom, and democracy. Prerequisite: ENG 102.

POLS 397 Special Topics **3 credits**

POLS 476 American Political Thought II–American Capitalism and Democracy **3 credits**

A survey of American political thought and practice since the Civil War focusing on how democracy and capitalism have enabled and constrained one another in the course of the development of the American polity. Surveys key thinkers, social movements, and institutional developments such as Reconstruction, Populism, Progressivism, the Labor Movement, the Women's movement, the New Deal, and the Civil Rights Movement. Prerequisite: instructor permission.

POLS 485 Studies in Political Theory: **3 credits**

Senior seminar in political theory with varying topics. This course meets the Capstone requirement. Prerequisite: senior standing or instructor permission.

POLS 486 Studies in American Politics: **3 credits**

Senior seminar in American politics with varying topics. This course meets the capstone requirement. Prerequisite: senior standing or instructor permission.

POLS 487 Studies in International Relations: **3 credits**

Senior seminar in International Relations with varying topics. This course meets the cap-stone requirement. Prerequisite: senior standing or instructor permission.

POLS 488 Studies in Comparative Politics: **3 credits**

Senior seminar in Comparative politics with varying topics. This course meets the cap- stone requirement. Prerequisite: senior standing or instructor permission.

POLS 492 Independent Study **1-3 credits**

POLS 499 Internship in Politics and Government **1-12 credits**

Credit earned in an internship may be applied to the Major or Minor with advisor approval.

PSYCHOLOGY (PSY)

Psychology is the scientific study of individual human and animal behavior. A student of psychology can expect to investigate the following topics: learning, motivation, social influences, perception, cognition, neuroscience, human development, personality, and abnormal behavior. The study of psychology also involves learning how psychologists work, including the areas of experimental methods, statistical analysis, and clinical psychology. From the basic courses to the more advanced, students achieve a greater understanding of themselves and others that will serve them well in their relationships and in any careers they may pursue.

In addition to the basic skills in writing, critical thinking, and use of technology expected of all Western students, Psychology majors have the opportunity to be involved in laboratory work. As students advance in their experience and knowledge, they can become involved in individual projects under faculty supervision. There are also internship opportunities available outside the classroom with programs for at-risk children, in domestic victim advocacy, at the local probation departments, and in other social service agencies statewide and nationally.

As many careers in psychology require a graduate degree, the Psychology Major at Western not only contributes to a solid liberal education, but also provides excellent preparation for graduate study. Students interested in careers in applied psychology are encouraged to pursue the Clinical, Counseling and School Psychology Emphasis. The Experimental Psychology Emphasis provides students with a broad background in the biological bases of behavior and offers preparation for graduate studies in experimental psychology or the neurosciences. The General Psychology Emphasis allows Psychology majors the freedom to choose courses that meet individual needs and interests.

FACULTY

Professor Susan J. Coykendall; Associate Professor Scott I. Cohn; Assistant Professor Lindsey Fast; Lecturers Kari E. Commerford, Mae MacIntire, and David Pinkerton.

DESCRIPTION OF THE PROGRAMS

Psychology Major: Standard Programs

GENERAL PSYCHOLOGY EMPHASIS

A minimum of 39 credits is required:

PSY 100 General Psychology	3 cr
PSY 200 Statistics and Data Analysis	3 cr
PSY 210 History of Psychology	3 cr
Psychology electives	8-9 cr
Two of the following:	
PSY 270 Developmental Psychology	3 cr
PSY 368 Psychopathology	3 cr
PSY 460 Psychological Testing	3 cr
PSY 475 Clinical Psychology	3 cr
Two of the following:	
PSY 258 Introduction to Personality	3 cr
PSY 324 Forensic Psychology	3 cr
PSY 361 Industrial and Applied Psychology	3 cr
PSY 369 Health Psychology	3 cr
PSY 457 Social Psychology	3 cr
Two of the following:	
PSY 301 Research Methods	3 cr
PSY 335 Learning and Behavior	4 cr
PSY 336 Psychology of Motivation	3 cr
PSY 338 Cognitive Psychology	3 cr
PSY 345 Biological Psychology (with laboratory)	4 cr
PSY 380 Evolutionary Psychology	3 cr
PSY 437 Behavioral Pharmacology	3 cr
One of the following capstone courses:	
PSY 498 Capstone Seminar in Psychology	3 cr
PSY 499 Capstone Internship in Psychology	3 cr

CLINICAL, COUNSELING, AND SCHOOL PSYCHOLOGY EMPHASIS

A minimum of 40 credits is required:

PSY 100 General Psychology	3 cr
PSY 200 Statistics and Data Analysis	3 cr
PSY 210 History of Psychology	3 cr
PSY 270 Developmental Psychology	3 cr
PSY 301 Research Methods	3 cr
PSY 345 Biological Psychology (with laboratory)	4 cr

PSY 368 Psychopathology	3 cr
PSY 457 Social Psychology	3 cr
PSY 460 Psychological Testing	3 cr
PSY 475 Clinical Psychology	3 cr
One of the following:	
PSY 335 Learning and Behavior	4 cr
PSY 336 Psychology of Motivation	3 cr
PSY 338 Cognitive Psychology	3 cr
PSY 380 Evolutionary Psychology	3 cr
PSY 437 Behavioral Pharmacology	3 cr
One of the following:	
PSY 258 Introduction to Personality	3 cr
PSY 324 Forensic Psychology	3 cr
PSY 361 Industrial and Applied Psychology	3 cr
PSY 369 Health Psychology	3 cr
One of the following capstone courses:	
PSY 498 Capstone Seminar in Psychology	3 cr
PSY 499 Capstone Internship in Psychology	3 cr

EXPERIMENTAL EMPHASIS

A minimum of 40 credits is required:

PSY 100 General Psychology	3 cr
PSY 200 Statistics and Data Analysis	3 cr
PSY 210 History of Psychology	3 cr
PSY 301 Research Methods	3 cr
PSY 345 Biological Psychology (with laboratory)	4 cr
Psychology Electives	9 cr
Four of the following:	
PSY 335 Learning and Behavior	4 cr
PSY 336 Psychology of Motivation	3 cr
PSY 338 Cognitive Psychology	3 cr
PSY 380 Evolutionary Psychology	3 cr
PSY 437 Behavioral Pharmacology	3 cr
One of the following capstone courses:	
PSY 492 Independent Study	3 cr
PSY 498 Capstone Seminar in Psychology	3 cr
PSY 499 Capstone Internship in Psychology	3 cr

Psychology Minor

The Psychology Minor consists of a minimum of 18 credits:

PSY 100 General Psychology	3 cr
Psychology electives	15 cr

Capstone Course Requirement. The following courses in the Psychology Major fulfill the capstone course requirement: PSY 498 Capstone Seminar in Psychology, or PSY 499 Capstone Internship in Psychology (with a minimum grade of "C").

PSYCHOLOGY COURSES

PSY 100 General Psychology **3 credits**

An introduction to psychology including research methodology, biological bases of behavior, human development, sensation, perception, intelligence, cognition, language, states of consciousness, learning, memory, motivation, emotion, personality, abnormal behavior and stress and health. GT-SS3

PSY 197 Special Topics **1-6 credits**

PSY 200 Statistics and Data Analysis **3 credits**

An introduction to statistical procedures often encountered in the analysis of data from behavioral science research. Statistical methods covered include measures of central tendency and variability, correlation, regression, t-tests and analysis of variance. Prerequisites: PSY 100; MATH 131, or MATH 140 with a minimum grade of "C-", or instructor permission.

PSY 210 History of Psychology **3 credits**

Introduces psychology majors to the philosophical underpinnings and historical context underlying the development of the discipline. Prerequisite: PSY 100.

PSY 258 Introduction to Personality **3 credits**

An examination of the fundamental theories of personality including the psychoanalytic, trait, behavioral, social-learning, humanist and existential perspectives.

PSY 270 Developmental Psychology **3 credits**
A critical look at the change and continuity that occurs throughout the life span, emphasizing the interrelationships among physical, cognitive and psychosocial realms of human development. Current research findings are emphasized.

PSY 297 Special Topics **1-6 credits**

PSY 301 Research Methods **3 credits**
An examination of experimental and non-experimental research methods, the design of research studies, measurement issues, research ethics, research reporting and advanced topics in data analysis using computer statistical software. Students design and conduct their own study and present the results following APA approved format. Prerequisite: PSY 200.

PSY 324 Forensic Psychology **3 credits**
An overview of the different tasks performed by forensic psychologists, including assessment, civil commitment, jury selection, eyewitness testimony, behavioral profiling, provision of clinical services to incarcerated individuals, and custody evaluations. Prerequisites: PSY 100 or instructor permission.

PSY 335 Learning and Behavior **4 credits**
An exploration of the relationship between behaviors and their consequences through the application of basic behavioral principles. Topics include classical conditioning, instrumental conditioning, stimulus control, aversive control, and the biological constraints on learning. Students conduct their own experiments to apply the behavioral principles discussed throughout the course. Prerequisite: PSY 200 or instructor permission.

PSY 336 Psychology of Motivation **3 credits**
A systematic consideration of a theoretical context for the study of motivation. Analysis of several current theories of motivation and explanations of recurrent instrumental and consummatory behaviors. Prerequisite: PSY 200.

PSY 338 Cognitive Psychology **3 credits**
A theoretical and empirical investigation into the processes and outcomes of thinking. Topics such as memory and forgetting, problem solving and creativity, cognitive disso- nance and consistency, defensive repression, language, optimism, and attribution are studied in relation to current scientific research findings. Prerequisites: PSY 100 and minimum sophomore standing or instructor permission.

PSY 345 Biological Psychology (with laboratory) **4 credits**
An investigation of the physiological basis of human behavior. Topics include functional neuroanatomy, neurophysiology and the activity of the nervous system in relation to behaviors such as sexual behavior, drug effects, emotion, and memory. Prerequisite: PSY 200.

PSY 361 Industrial and Applied Psychology **3 credits**
A course designed to show how psychology is directly related to the student's career and the student's life as a job applicant, employee, manager, and consumer. Topics cov- ered include worker morale, leadership, work climate, communication networks, and productivity.

PSY 368 Psychopathology **3 credits**
A systematic study of the etiology, symptoms, assessment, and treatment of major forms of psychopathology. An interdisciplinary approach is employed as a basis for understanding mental disorders and mental illness. Prerequisites: PSY 100, PSY 258, or PSY 270.

PSY 369 Health Psychology **3 credits**
An overview of the emerging, multidisciplinary field of health psychology, which synthesizes research from clinical psychology, behavioral medicine and alternative therapies. Psychological aspects of prevention, health promotion and wellness are addressed. Content is both theory and application-based.

PSY 380 Evolutionary Psychology **3 credits**
Evolutionary psychology examines mental and psychological traits such as memory, perception, attraction, or aggression, as adaptations or functions of the natural selection process. Topics addressed include the nature and nurture conflict, relationships between the two sexes, group cooperation, crime, and racism. Prerequite: PSY100

PSY 397 Special Topics **1-6 credits**

PSY 399 Internship in Psychology **1-9 credits**
An opportunity for psychology majors to obtain field experience through direct, super- vised contact with professionals in psychology and related areas. Graded Satisfactory/ Unsatisfactory only. Prerequisite: completion of a minimum of 18 credits in psychology, including six credits at Western.

PSY 437 Behavioral Pharmacology **3 credits**
Considers the relationship between our sensation of the physical world and our internal perceptions through the lens of behavioral pharmacology. Attention is given to the exploration of altered perceptions produced by drugs. Prerequisites: PSY 100 and PSY 200.

PSY 457 Social Psychology **3 credits**
A discussion of theories and research findings concerning the individual in social situations with an emphasis on their applications to current social issues. Included are such topics as interpersonal attraction, persuasion, altruism, morality, aggression, and intra-group relations.

PSY 460 Psychological Testing **3 credits**
An introduction to the general methodology and theory of psychological testing. Students have the opportunity to take, score, administer and interpret several common assessment instruments. Ethics and limitations of testing are emphasized. Prerequisite: PSY 100, PSY 258, or PSY 270.

PSY 475 Clinical Psychology **3 credits**
An introduction to the profession of clinical/counseling psychology through the presentation and analysis of different theoretical orientations and their respective techniques. Students have in-class opportunities to practice basic skills. Professional ethics in the delivery of mental health services are addressed. Prerequisites: PSY 100, PSY 258, or PSY 270.

PSY 491 Topical Seminar in Psychology **1-3 credits**

A seminar involving advanced reading, discussion, and research. Different areas of study are selected as student and faculty interests dictate. A goal of this course is to stimulate critical thinking and analysis.

PSY 492 Independent Study **1-4 credits**

An opportunity for detailed study and research for advanced students. Topics and course requirements are determined in consultation with the sponsoring faculty member.

PSY 497 Special Topics **1-6 credits**

PSY 498 Seminar in Psychology **3 credits**

This capstone course is required for all psychology majors, except those who opt to complete the capstone internship. It is intended to provide the opportunity for the synthesis of the ideas and concepts acquired during undergraduate education in psychology. The seminar includes a discussion of controversial issues and ethical considerations in both experimental and applied areas, the completion of a comprehensive literature review and a consideration of the future of the field. Prerequisites: completion of a minimum of 18 credits in psychology including PSY 210.

PSY 499 Capstone Internship in Psychology **3 credits**

An opportunity for psychology majors to gain field experience through direct, supervised contact with professionals in psychology and related fields. In addition to on-site responsibilities, students write a comprehensive paper integrating the field experience and psychological theory and later formally present the paper in an open forum. Prerequisites: completion of a minimum of 18 credits in psychology, including six credits at Western.

RECREATION AND OUTDOOR EDUCATION (ROE)

The field of ROE is dedicated to creating opportunities for people to live healthy, engaged, and happy lives. The ROE program at Western State Colorado University is a professional preparation program for individuals seeking career in recreation, outdoor leadership, or outdoor environmental education. This entails providing opportunities and requisite support for students to cultivate knowledge and practical skills in the following areas: leadership and facilitation, pedagogy, written and oral communication, environmental stewardship, philosophy and ethics, critical and creative thinking, program planning and execution, problem solving and resourcefulness, serving different populations, and the ability to manage risk. High value is placed on experiential education, as well as field-based learning through participation in backcountry inter-semester expeditions (generally in January, May, August, and spring break). Excellence in professional preparation is achieved through an interdisciplinary approach, including public and private partnerships, close proximity to recreation facilities and extensive public lands.

In addition to the traditional competencies expected of all liberal arts students, those majoring in ROE learn how the overall quality of life can be enhanced by the integration of appropriate leisure and educational activities. Students who graduate from the program gain confidence and leadership skills that can be applied in a variety of professional fields. Examples of options include employment with outdoor and environmental education centers, specialty outdoor training schools, municipal parks and recreation departments, social services, land management agencies, recreation and student services in higher education, and commercial guiding operations. Many students pursue graduate degrees, after garnering industry experience, allowing for more professional opportunities.

To participate in and graduate from the program, students must maintain a GPA of 2.5 or higher for all courses required of the ROE major. Students whose GPA drops below a 2.5 must repeat the applicable course(s) to raise the major GPA prior to taking additional ROE courses, or obtain permission from the instructor and Program Coordinator to repeat the course(s) while pursuing further coursework.

FACULTY

Professors Mark A. Gibson and M. Brooke Moran;
Senior Lecturers Matthew H. Ebbott; Paul G. M. Tame.

DESCRIPTION OF THE PROGRAMS

The 36-credit Recreation and Outdoor Education Core is required for all Recreation and Outdoor Education majors:

Recreation and Outdoor Education Core

ROE 182 Introduction to Recreation and Outdoor Education	3 cr
ROE 189 Principles of Outdoor Recreation	3 cr
ROE 240 Alternative Programming	3 cr
ROE 283 Leadership and Facilitation	3 cr
ROE 351 Inquiry into Sustainability	3 cr
ROE 398 Program Planning (with laboratory)	3 cr
ROE 454 Human Development and Counseling for Outdoor Educators	3 cr
ROE 468 Leadership and Administration of Outdoor Pursuits	3 cr
ROE 490 Recreation Philosophy and Ethics	3 cr
ROE 491 Senior Seminar	3 cr
ROE 499 Internship in Recreation and Outdoor Education	6-9 cr

Medical and work/volunteer hour requirements:
Medical and work/volunteer hour requirements: All Recreation and Outdoor Education majors must obtain a medical competency prior to graduation. Recreation emphasis majors must take ESS 276 Emergency Response or equivalent. Students with an emphasis in Outdoor Environmental Education or Outdoor Leadership must obtain certification as a Wilderness First Responder (WFR) or Wilderness Emergency Medical Technician (WEMT). Additionally, all Recreation and Outdoor Education majors must work or volunteer for a total of 600 hours within their chosen area of specialization within four years prior to graduation. The hours need to be garnered from at least two organizations, with no organization counting for more than 400 hours.

Recreation and Outdoor Education Major: Comprehensive Programs

RECREATION EMPHASIS

Recreation consists of 51 credits including the 36-credit Recreation and Outdoor Education Core, First Aid/CPR Competency and the following courses.

Required Supporting Courses:

ESS 282 Principles of Sport and Fitness Management	3 cr
ESS 450 Risk Management in Physical Activity Settings	3 cr
ROE 468 Leadership and Administration of Outdoor Pursuits	3 cr
One of the following:	
ROE 293 Outdoor Pursuits Education – Water Based	3 cr
ROE 295 Outdoor Pursuits Education – Snow Based	3 cr
ROE 296 Outdoor Pursuits Education – Land Based	3 cr
One of the following:	
ESS 382 Management of Sport and Fitness Facilities	3 cr

ROE 466 Facilities Management	3 cr
One of the following:	
ROE 333 Recreation and Sport Marketing	3 cr
ROE 364 Entrepreneurship and Commercial Recreation	3 cr

OUTDOOR ENVIRONMENTAL EDUCATION EMPHASIS

A minimum of 69 credits is required, including the 36-credit ROE Core and the courses listed below. Additionally, students must become certified as a Wilderness First Responder (WFR).

ROE 230 Interpretation of Natural and Cultural History	3 cr
ROE 235 Foundations of Teaching Environmental Education	3 cr
ROE 320 Leave No Trace Master Educator	1 cr
ROE 391 Experiential Education Theory and Pedagogy	3 cr
Two of the following:	
ROE 293 Outdoor Pursuits Education–Water Based	3 cr
ROE 295 Outdoor Pursuits Education–Snow Based	3 cr
ROE 296 Outdoor Pursuits Education–Land Based	3 cr
Required supporting courses:	
ENVS 100 Introduction to Environmental Studies	3 cr
ENVS 200 Writing in the Environment	3 cr
One of the following:	
ANTH 320 Cultural Ecology	3 cr
ENVS 350 U.S. and Western Environmental Politics	3 cr
ENVS 360 Global Environmental Politics	3 cr
HIST 350 Environmental History of the Borderlands	3 cr
Eight credits from the following:	
BIOL 151 Diversity and Patterns of Life (with laboratory)	4 cr
SCI 110 Habitable Planet (with laboratory)	4 cr
or both:	
BIOL 130 Environmental Biology	3 cr
BIOL 135 Environmental Biology Laboratory	1 cr
or both:	
GEOL 101 Physical Geology	3 cr
GEOL 105 Physical Geology Laboratory	1 cr

OUTDOOR LEADERSHIP EMPHASIS

A minimum of 58 credits is required, including the 36-credit ROE Core and the following courses. Additionally, students must 1) become a certified Wilderness First Responder (WFR), and 2) complete at least 100 hours of certification-based or skill-based courses (not including WFR or LNT).

ROE 293 Outdoor Pursuits Education–Water Based	3 cr
ROE 295 Outdoor Pursuits Education–Snow Based	3 cr
ROE 296 Outdoor Pursuits Education–Land Based	3 cr
ROE 320 Leave No Trace Master Educator	1 cr
ROE 391 Experiential Education Theory and Pedagogy	3 cr
One of the following:	
BIOL 130 Environmental Biology	3 cr
ENVS 100 Introduction to Environmental Studies	3 cr
One of the following:	
ROE 230 Interpretation of Natural and Cultural History	3 cr
ROE 235 Foundations of Teaching Environmental Education	3 cr
One of the following:	
ROE 333 Recreation and Sport Marketing	3 cr
ROE 364 Entrepreneurship and Commercial Recreation	3 cr

Recreation and Outdoor Education Minor

The Recreation and Outdoor Education Minor requires a minimum of 18-credits. No more than seven credits of skills courses (e.g., 293, 295, 296, 320) may count toward the minor:

ROE 182 Introduction to Recreation and Outdoor Education	3 cr
ROE 189 Principles of Outdoor Education	3 cr
ROE 283 Leadership and Facilitation	3 cr
ROE 351 Inquiry into Sustainability	3 cr
Recreation and Outdoor Education electives	6 cr

Capstone Course Requirement: The following courses in the Recreation and Outdoor Education Major fulfill the capstone course requirements: ROE 499 Internship in Recreation and Outdoor Education.

RECREATION AND OUTDOOR EDUCATION COURSES

ROE 182 Introduction to Recreation and Outdoor Education **3 credits**
An introduction to the history, philosophy, founders, and principles of recreation and outdoor education, the agencies providing programs, and an investigation of professional employment opportunities in recreation.

ROE 189 Principles of Outdoor Recreation **3 credits**
An exploration of the characteristics of wilderness and backcountry environments in terms of potential hazards and human capability for adverse impact on resource lands. The course is designed to create an outdoor education foundation and to enhance the knowledge of and appreciation for the natural environment so that safe, responsible and enjoyable outdoor adventures are possible. Leave No Trace Trainer curriculum will be covered and students will be provided the opportunity to earn a certificate. Prerequisite: instructor permission.

ROE 197 Special Topics **1-6 credits**

ROE 230 Interpretation of Natural and Cultural History **3 credits**
A study of the principles, philosophies, and practices of interpretation, as well as active approaches to describing, relating, displaying, and revealing resources to a variety of audiences, primarily through observation and involvement in a variety of interpretation programs. Prerequisites: BIOL 130, BIOL 150, BIOL 151, or GEOL 101.

ROE 235 Foundations of Teaching Environmental Education **3 credits**
A survey of environmental education examples from land management agencies, nature centers, and educational organizations. Students are guided to create their own curriculum employing environmental content. Field trips required.

ROE 240 Alternative Programming **3 credits**
Course participants gain insight into alternative programming for special populations. Students explore case studies, specialized equipment, and profiles of special populations. Guest speakers and site visits will help students understand the intricacies of alternative programming and requisite career qualifications. Field trips required.

ROE 283 Leadership and Facilitation **3 credits**
A study of recreation and outdoor education leadership, including leading activities, managerial leadership, and the art of facilitation. Emphasis is placed upon appropriate theories and techniques for varying populations.

ROE 293 Outdoor Pursuits Education—Water Based (with laboratory) **3 credits**
Water-based outdoor leadership, skill development in areas such as rescue techniques, rafting, and kayaking. Field trips required. Summer offering only. Consult with instructor prior to registration week. Prerequisites: ROE 189; ROE 283; and instructor permission.

ROE 295 Outdoor Pursuits Education—Snow Based (with laboratory) **3 credits**
Snow-based outdoor leadership, skill development in areas such as rescue techniques, mountaineering, backcountry skiing, and winter camping. Field trips required. Spring offering only. Consult with instructor prior to registration week. Prerequisites: ROE 189; ROE 283; and instructor permission.

ROE 296 Outdoor Pursuits Education—Land Based (with laboratory) **3 credits**
Land-based outdoor leadership and skill development in areas such as rescue techniques, mountaineering, rock climbing, backpacking, and caving. Field trips required. Fall and summer offering only. Consult with instructor prior to registration week. Prerequisites: ROE 189; ROE 283; and instructor permission; co-requisite: ROE 320.

ROE 297 Special Topics **1-6 credits**

ROE 320 Leave No Trace Master Educator **1 credit**
A comprehensive overview of Leave No Trace skills and ethics. Time in the classroom, as well as in a backcountry setting, allows students to gain understanding of LNT history, theory, wilderness ethics and practical application of the seven principles and teaching techniques. Prerequisites: ROE 189; ROE 283; instructor permission; and pre-requisite or co-requisite of ROE 293, ROE 295, or ROE 296.

ROE 333 Recreation and Sport Marketing **3 credits**
A survey of recreation and sport marketing topics: buyer behavior, segmentation, positioning, demand analysis, information and research, pricing, promotion, channels, "product" policies, destinations, sponsorship, endorsement, merchandising, and fundraising. Prerequisites: ENG 102 with a minimum grade of "C-" and completion of at least 30 credits; or instructor permission.

ROE 351 Inquiry into Sustainability **3 credits**
An investigation of sustainability and the interconnectedness of environment, economics, and society. Students are provided opportunities to examine their thoughts and practical examples of sustainsable businesses, communities, and other systems. Teaching, applied projects, field trips, and/or participation in conferences may be required. Prerequisites: ENG 102 with a minimum grade of "C-" and completion of at least 30 credits; or instructor permission.

ROE 364 Entrepreneurship and Commercial Recreation **3 credits**
An analysis of the types of commercial and private enterprises, along with the qualities of the entrepreneur specific to recreation businesses. The student is also exposed to small-business management practices as they relate to commercial recreation. Case study analysis and field investigation methods are emphasized to provide the student the opportunity to learn through active participation. Prerequisites: ENG 102 with a minimum grade of "C-" and completion of at least 30 credits; or instructor permission.

ROE 391 Experiential Education Theory and Pedagogy **3 credits**
An introduction to the historical, theoretical, and pedagogical foundations of experien- tial education. Teaching opportunities in the classroom and/or in the outdoors allow students to hone facilitation styles and effectiveness. Course topics include the experi- ential learning cycle, reflective learning, feedback, edgework, communication tech- niques, and multiple intelligences. Prerequisites: ENG 102 with a minimum grade of "C-" and completion of at least 30 credits; or instructor permission.

ROE 397 Special Topics **1-6 credits**

ROE 398 Program Planning (with laboratory) **3 credits**

Equips students with a variety of program-planning methodologies and skills. Emphasis is placed on the planning, organization, implementation, and evaluation of recreation programs. Theories are applied in an experiential setting. Prerequisites: ENG 102 with a minimum grade of "C-" and completion of at least 30 credits; or instructor permission.

ROE 454 Human Development and Counseling for Outdoor Educators **3 credits**

An investigation of human development theories enabling students to better understand their own motives in outdoor pursuits and allow them to more effectively program for, manage, and support a variety of client needs. Prerequisite: ROE 182; ROE 189; ROE 283; and one of the following: ROE 293, ROE 295, or ROE 296; and senior standing; or instructor permission.

ROE 466 Facilities Management **3 credits**

A study of management, clientele considerations, facilities, outdoor area planning, and operation. Also addressed are personnel, finance, architectural and environmental barri- ers, plus equipment as related to recreation areas and facilities. Field visits required. Prerequisites: ENG 102 with a minimum grade of "C-" and completion of at least 30 credits; or instructor permission.

ROE 468 Leadership and Administration **3 credits**

A focus on the implementation of recreation and outdoor education programs, including planning, management and leadership, administrative duties, risk management, and specialized populations. Practical projects are employed as a means to provide students authentic experience in the field. Field trip(s) may be required. Prerequisites: senior standing or instructor permission.

ROE 490 Recreation Philosophy and Ethics **3 credits**

An exploration of recreation philosophy from Plato to Petzoldt and its implications to professionals in the field. Designed to prepare ROE majors for the ethical challenges and time use dilemmas of the 21st century. Prerequisites: senior standing; corequisite: ROE 491.

ROE 491 Senior Seminar **3 credits**

A small group of graduating seniors pursue a practical project necessitating professional levels of problem solving, research, written and oral prowess, critical thinking, and familiarity with core curriculum. Final projects are of high quality, so they can be used by professionals and decision-makers in the field. Prerequisites: senior standing. corequisite: ROE 490.

ROE 492 Independent Study **1-4 credits**

A course open to qualified upper-division students who have specialized interests in a particular area of advanced study in recreation. Prerequisite: instructor permission.

ROE 494 Research **1-4 credits**

Provides students the opportunity to pursue research in the field of recreation. Prerequisite: instructor permission.

ROE 496 Field Experiences **1-6 credits**

Provides students with directed field experiences in teaching, coaching, and laboratory settings. Guidelines for the field experiences are provided and agreed upon prior to registering for the course. Graded Satisfactory/Unsatisfactory only. Prerequisite: instructor permission.

ROE 497 Special Topics **1-6 credits**

ROE 499 Internship in Recreation and Outdoor Education **6-9 credits**

A course providing full-time concentration on a specific practical experience at an approved agency. It allows for comprehensive involvement in an agency program with faculty and on-site supervision. Prerequisites: senior standing and instructor permission.

SCIENCE (SCI)

The courses designated with the SCI prefix do not constitute a program or curriculum within themselves. Instead they are courses which support or complement programs across all of the science disciplines.

SCIENCE COURSES

SCI 110 Habitable Planet (with laboratory) **4 credits**

An introduction to earth science and ecology. Topics include earth history, the fossil record, biogeochemical cycles, climate, energy flow, biodiversity, evolution, population growth and regulation. This course is designed for students seeking licensure as elementary teachers (grades K-6).

SCI 111 Nature of Science **1 credit**

An introduction to science as it relates to the individual, society, and the elementary school classroom. The process of science is examined, as well as the connection between science as it is done and science in textbooks. This course is designed for students seeking licensure as elementary teachers (grades K-6). Prerequisite or corequisite: SCI 110.

SCI 120 Living Planet (with laboratory) **4 credits**

An introduction to human biology, chemistry and biochemistry. Topics explored include anatomy, physiology, nutrition, cell biology, genetics, inorganic chemistry, biochemistry, development, and the application of biological and biochemical principles to understanding disease. This course is designed for students seeking licensure as elementary teachers (grades K-6).

SCI 197 Special Topics **1-6 credits**

SCI 202 Scientific Writing **3 credits**

An introduction to the effective oral, written, and graphical communication in the sciences. Students address these skills by exploring current issues in science. Prerequisites: ENG 102 and minimum sophomore standing with a major in anthropology, biology, or chemistry.

SCI 210 Dynamic Planet (with laboratory) **4 credits**

A foundation in physics, earth science, and space science. Topics explored include motion, force, energy, weather, plate tectonics, earthquakes, volcanoes, and the solar system. This course is designed for students seeking licensure as elementary teachers (grades K-6). Prerequisite: SCI 110 or SCI 120 and completion of the general education essential skills mathematics requirement.

SCI 297 Special Topics **1-6 credits**

SCI 390 Science Teaching Practicum **1-2 credits**

An opportunity for students in the sciences to participate in laboratory design, instruction and execution, and in field experiences. Specifically designed for recipients of awards, such as undergraduate assistantships and teaching assistantships, or for students pursuing degrees in science with an education emphasis. May be taken for a maximum of six credits. Graded Satisfactory/Unsatisfactory only.

SCI 397 Special Topics **1-6 credits**

SCI 400 Environmental Science Seminar **1 credit**

An examination of the environmental sciences through readings of primary literature, secondary literature and discussions of the environmental science discipline. The professional practices, procedures and standards of environmental science are discussed. Students will develop a professional portfolio of an environmental science project. Graded Satisfactory/Unsatisfactory only. Prerequisites: Instructor approval. This course is intended for students at the end of their Environmental Science minor.

SCI 497 Special Topics **1-6 credits**

SCI 499 Internship in Science **1-5 credits**

An opportunity for students to gain experience through direct involvement with professionals in various fields of science.

SOCIOLOGY (SOC)

While all social sciences are interested in understanding human behavior, sociology is distinguished by its focus on understanding patterns of human behavior and emphasizing the social forces that shape and influence these patterns. Often, this perspective is surprising and can challenge assumptions of how the world works. The subject matter of sociology is broad—anything about social life one is interested in can be (and likely has been) studied by sociologists. Ultimately, students of sociology develop an appreciation for ways in which social structures and culture shape the world they live in and thus shape their own lives.

This breadth of social life is reflected in the sociology curriculum. After taking SOC 101 Introduction to Sociology, which is a prerequisite for other sociology courses, students are free to pursue other areas of interest. Courses on social institutions (such as religion, medicine, and the criminal justice system), social processes (such as the relationship between the self and society, social movements, and deviance), and social stratification (such as race, class and gender) represent the rich diversity of social life that sociologists are interested in understanding. These offerings are complimented by grounding in social theory and methodology. As a social science, sociological knowledge is based on empirical observation and analysis that is informed by and informs social theory.

The standard major provides a mix of seven core courses and six elective choices. Students with an interest in criminal justice can pursue a concentration in that area taking an addition-al list of core courses in the criminal justice emphasis. Students who wish to pursue the minor take the introductory course and then choose five elective courses. SOC 101 Introduction to Sociology and SOC 168 Social Problems also fulfill Area I General Education requirements. Sociology majors are encouraged to take MATH 140 College Algebra, to fulfill the general education mathematics competency requirement.

In addition to classroom instruction, The Sociology Club and the International Honors Society in Sociology, Alpha Kappa Delta, are active on campus with social and intellectual activities. While sociology provides a useful perspective for any kind of employment, graduates typically find employment in social services, law enforcement, teaching, and research.

FACULTY

Professors Daniel M. Cress and Greg P. Haase.
Assistant Professor Matt Aronson; Lecturer Cindy Whitney

DESCRIPTION OF THE PROGRAMS

Sociology Major: Standard Program

A minimum of 39 credits is required including:

SOC 101 Introduction to Sociology	3 cr
SOC 202 Sociological Theory	3 cr
SOC 225 Self and Society	3 cr
SOC 310 Qualitative Research Methods	3 cr
SOC 380 Social Inequalities	3 cr
SOC 498 The Capstone Experience	3 cr
One of the following:	
PSY 200 Statistical Analysis and Experimental Methodology I	3 cr
SOC 211 Quantitative Research Methods	3 cr
Six of the following:	
SOC 150 Environmental Sociology	3 cr
SOC 168 Social Problems	3 cr
SOC 259 Introduction to Criminal Justice	3 cr
SOC 303 Contemporary Theory	3 cr
SOC 320 The Family	3 cr
SOC 321 Religion	3 cr
SOC 322 Medical Sociology	3 cr
SOC 323 Cultural Studies	3 cr
SOC 340 Social Movements	3 cr
SOC 349 Law Enforcement	3 cr
SOC 350 Deviance	3 cr
SOC 351 Juvenile Delinquency	3 cr
SOC 355 Drugs and Society	3 cr
SOC 367 Corrections	3 cr
SOC 397 Special Topics	3 cr
SOC 399 Internship in Sociology	1-6 cr
SOC 492 Independent Study	1-6 cr
ESS 490 Sociology of Sport and Physical Activity	3 cr

Criminal Justice Emphasis

A minimum of 42 credits is required including:

POLS 301 Constitutional Law II	3 cr
SOC 101 Introduction to Sociology	3 cr

SOC 202 Sociological Theory	3 cr
SOC 225 Self and Society	3 cr
SOC 259 Introduction to Criminal Justice	3 cr
SOC 310 Qualitative Research Methods	3 cr
SOC 349 Law Enforcement	3 cr
SOC 367 Corrections	3 cr
SOC 380 Social Inequalities	3 cr
SOC 498 The Capstone Experience	3 cr
One of the following:	
PSY 200 Statistical Analysis and Experimental Methodology I	3 cr
SOC 211 Quantitative Research Methods	3 cr
One of the following:	
PSY 368 Psychopathology	3 cr
SOC 350 Deviance	3 cr
SOC 351 Juvenile Delinquency	3 cr
At least two of the following:	
ESS 490 Sociology of Sport and Physical Activity	3 cr
SOC 150 Environmental Sociology	3 cr
SOC 168 Social Problems	3 cr
SOC 303 Contemporary Theory	3 cr
SOC 320 The Family	3 cr
SOC 321 Sociology of Religion	3 cr
SOC 322 Medical Sociology	3 cr
SOC 323 Cultural Studies	3 cr
SOC 340 Social Movements	3 cr
SOC 355 Drugs and Society	3 cr
SOC 397 Special Topics	3 cr
SOC 399 Internship in Sociology	1-6 cr
SOC 492 Independent Study	1-6 cr

Sociology Minor

A minimum of eighteen credits is required:

SOC 101 Introduction to Sociology	3 cr
Sociology electives	15 cr

Capstone Course Requirement. The following courses in the Sociology Major fulfill the capstone course requirement: SOC 498 The Capstone Experience, or SOC 399 Internship (Criminal Justice Emphasis).

SOCIOLOGY COURSES

SOC 101 Introduction to Sociology **3 credits**

An introduction to the discipline of sociology with special emphasis on the unique per- spective this science utilizes to examine the social world. Sociology is distinguished by its focus on understanding patterns of human behavior and emphasizing the social forces that shape and influence these patterns. Primary course focus is on culture, inequality, race and gender, and social institutions. This course serves as a "gateway" course for all Sociology majors and minors, and must be passed with a minimum grade of "C" to be used as a prerequisite. Prerequisite for all 200-, 300-, and 400-level Sociology courses.

SOC 150 Environmental Sociology **3 credits**

The sociological perspective is utilized to examine a variety of issues addressing the human-environment interface. In particular, this course examines how social organization and culture both shape and are shaped by the natural environment. The course focuses on issues of sustainability, the rights of the natural world, and environmental justice.

SOC 168 Social Problems **3 credits**

An introduction to the field of sociology through an analysis of social problems in the United States and in the world. Course focus is on topics such as drugs and alcohol abuse, crime and prisons, health and illness, hunger and poverty, resource depletion and pollution, and the effects of globalization.

SOC 197 Special Topics **1-6 credits**

SOC 202 Sociological Theory **3 credits**

A formal introduction to classical sociological theories relevant to the discipline. Students learn about the history of the discipline, identify major sociological theorists and their theories, learn how these theories can be applied to various historical and contemporary social issues, and discover the relationship between theory, research, ideology and every-day life. Prerequisite: SOC 101 with a minimum grade of "C."

SOC 211 Quantitative Research Methods **3 credits**

An introduction for students of the social sciences to the fundamentals of quantitative research analysis. Students design and administer surveys, code data, and analyze results. Students become familiar with descriptive statistics (frequency distributions,

measures of central tendency, and dispersion), inferential statistics (sampling theory, hypothesis testing, normal binomial distributions, confidence intervals, and types of error), as well as techniques for computing correlation. Prerequisites: SOC 101 with a minimum grade of "C"; MATH 105, MATH 131, or MATH 140.

SOC 225 Self and Society **3 credits**

An examination of how the discipline of sociology approaches "micro-level" phenomenon. Emphasis is on the formation of the self, the socialization process, and the importance of language to social interaction. Beginning with the premise that social reality is a social construction which has been created through our interactions with others, the implications of this premise for the version of reality each of us experiences is explored. Prerequisite: SOC 101 with a minimum grade of "C."

SOC 259 Introduction to Criminal Justice **3 credits**

An introduction to the history and contemporary issues of the criminal justice system (law enforcement, courts, and corrections) in the United States. Topics surveyed include the system's history, constitutional limitations, philosophical background, and the system's process. Prerequisite: SOC 101 with a minimum grade of "C."

SOC 297 Special Topics **1-6 credits**

SOC 303 Contemporary Sociological Theory **3 credits**

A formal introduction to sociological theories developed since World War II. Students are able to identify and describe recent sociological theories and apply theory to con- temporary social phenomena as well as their individual experiences. Students recognize the relationship between theory, ideology, and daily life. Prerequisite: SOC 101 with a minimum grade of "C."

SOC 310 Qualitative Research Methods **3 credits**

An examination of qualitative approaches to understanding social life. In particular, the course covers selecting a topic suitable for qualitative investigation, participant observation and in depth interviewing techniques, the ethics and politics associated with doing qualitative research, writing up field notes, formulating topics, reviewing the literature around the topic, the analysis of field notes, and the writing of research reports. Prerequisite: ENG 102 with a grade of "C-" or above; SOC 101 with a minimum grade of "C."

SOC 320 The Family **3 credits**

An analysis of the family as a social group and institution. Students consider the ways in which the family is influenced by demographic changes and by the changes in other social institutions, such as the economy, education, the state and religion. Prerequisite: SOC 101 with a minimum grade of "C."

SOC 321 Sociology of Religion **3 credits**

An analysis of religion as a social institution. Classical and contemporary sociological theories and concepts of religion are analyzed, as is the role of religion as an agent of social control and social change. Contemporary trends are also discussed including the relationship between religion, politics and culture. Prerequisite: SOC 101 with a minimum grade of "C."

SOC 322 Medical Sociology **3 credits**

An examination of the United States Health Care System and comparison of various components of this system with that of others. The allopathic (Western) medical model is also examined. The course emphasizes the mortality and morbidity trends and patterns which exist in the U.S., the problems facing our health care system (high costs, unequal access), and alternative models of health and disease. Prerequisite: SOC 101 with a minimum grade of "C."

SOC 323 Cultural Studies **3 credits**

A foundation in the sociology of culture as well as extensive analysis of selected regional national and/or global (sub) cultures and their environments. Issues covered include the social organization of culture, institutions and narratives, material and non- material culture, and cultural identity and the self. Prerequisite: SOC 101 with a minimum grade of "C."

SOC 340 Social Movements **3 credits**

An introduction to the study of social movements with two goals in mind. First, is to expose students to the beliefs, practices, and consequences of a number of important historical, and contemporary movements. Second, the course familiarizes students with the theoretical perspectives, conceptual issues, focal questions, and empirical research that animate the study of social movements. This includes such issues as movement emergence, movement participation, mobilization dynamics, movement strategies and tactics, and movement outcomes. Prerequisite: SOC 101 or ENVS 100 with a minimum grade of "C."

SOC 349 Law Enforcement **3 credits**

An examination of issues affecting American law enforcement. Students are exposed to the historical underpinnings of the American policing experience, police operations and applications at the local, state, federal, and international levels, law enforcement sub-culture, police structure and organization, ethics, selection and training, and career opportunities. Prerequisite: SOC 259 with a minimum grade of "C."

SOC 350 Deviance **3 credits**

Students examine various forms of nonconformity—criminal and otherwise. To do so, they study the major theoretical perspectives addressing deviance and its control. Students explore how ordinary rituals, agents of social control, and ideology interact to maintain the existing social order. Prerequisite: SOC 101 with a minimum grade of "C."

SOC 351 Juvenile Delinquency **3 credits**

Biological, psychological, and sociological factors in juvenile delinquency are examined, as are modern trends in prevention and treatment. The course also addresses the procedural and substantive aspects of the juvenile justice system. Prerequisite: SOC 101 with a minimum grade of "C."

SOC 355 Drugs and Society **3 credits**

An examination of trends and patterns in American drug use, drug classification schemes, the relationship between drugs and crime, and drug education and prevention strategies. The use of hallucinogenic plants in other cultures is also explored. Prerequisite: SOC 101 with a minimum grade of "C."

SOC 367 Corrections **3 credits**

An in-depth look at corrections in the United States. Topics include history of corrections, jails, prisons, community corrections,

offenders and inmates, women in corrections, juvenile corrections, correctional officers and treatment professionals, an special inmate populations. Prerequisites: SOC 259 with a minimum grade of "C."

SOC 380 Social Inequalities **3 credits**

An examination of major theories and concepts associated with social inequality as well as the causes and consequence of social inequality. The historical and contemporary aspects of social inequality in the United States are explored. Forms of resistance to social inequality are also considered. Prerequisite: SOC 101 with a minimum grade of "C".

SOC 397 Special Topics **1-6 credits**

SOC 399 Internship in Sociology **1-6 credits**

Sociology internships provide Sociology majors of junior and senior status with opportunities to work on sites off campus in the areas of law enforcement and social services. The experience must meet standards set by the University and by the sociology faculty. Up to three hours of internship credit may be counted toward the major. Graded Satisfactory/Unsatisfactory only.

SOC 492 Independent Study **1-6 credits**

Independent studies are available to seniors as a Capstone option. Enrollment is contingent upon developing a proposal with a faculty sponsor and requires a variable credit form. Prerequisite: minimum GPA of 3.50 in Sociology courses or instructor permission.

SOC 497 Special Topics **1-6 credits**

SOC 498 The Capstone Experience **3 credits**

Provides senior Sociology majors with a culminating activity in their senior year. The seminar integrates theory, research, and analytic skills and requires written and oral presentations on approved topics. Prerequisite: SOC 101 with a minimum grade of "C."

SPANISH (SPAN)

Western's Spanish Program allows its majors to study the language, literature, and culture of Spain and Spanish-speaking countries. Graduates of the Spanish Program are expected to have an understanding of and proficiency in speaking, reading, writing, and listening to Spanish; to be acquainted with the phonology of modern Spanish dialects and to explore the sound system; to be able to read, discuss, critique, and appreciate the literary value of Hispanic literature; and to be familiar with and appreciate Hispanic civilization and culture.

The Standard Major prepares students for positions with the federal government or major corporations concerned with international business. They are also prepared for a variety of other positions, such as court interpreters, hotel managers in resort areas, and teachers.

The Secondary Licensure Emphasis qualifies students for the State of Colorado Licensure in Spanish Education.

FACULTY

Associate Professor Verónica Méndez-Maqueo.

DESCRIPTION OF THE PROGRAMS

All Majors require the 15-credit Spanish Core to be completed prior to enrollment in upper-division electives.

Spanish Core

SPAN 254 Intermediate Spanish I	3 cr
SPAN 255 Intermediate Spanish II	3 cr
SPAN 270 Spanish Conversation and Composition	3 cr
SPAN 375 Judicial and Medical Interpreting I	3 cr
SPAN 385 Introduction to Hispanic Literature	3 cr

A maximum of nine credits earned from independent study and/or foreign travel may be applied to the Major. Students who desire foreign language credit for foreign study and/ or exchange programs must have prior approval from the Department of Communication Arts, Languages, and Literature. Spanish credit for foreign study will be granted only to students who participate in formal study abroad programs sponsored by institutions accredited in the United States.

Spanish Major: Standard Program

A minimum of 36 credits is required, including the 15-credit Spanish Core and the following:

SPAN 494 Capstone Experience	3 cr
Six of the following:	
SPAN 340 Spanish Civilization and Culture	3 cr
SPAN 341 Latin American Civilization and Culture	3 cr
SPAN 370 Advanced Spanish Conversation and Composition	3 cr
SPAN 460 Hispanic Literature: Drama	3 cr
SPAN 460 Hispanic Literature: Poetry	3 cr
SPAN 460 Hispanic Literature: Prose	3 cr
SPAN 475 Judicial and Medical Interpreting II	3 cr

K-12 LICENSURE EMPHASIS

A minimum of 36 credits is required including the 15-credit Spanish Core and the following. In addition, students must fulfill the K-12 Licensure requirements described under Education.

SPAN 341 Latin American Civilization and Culture	3 cr
SPAN 370 Advanced Spanish Conversation and Composition	3 cr
SPAN 460 Hispanic Literature: Prose	3 cr
SPAN 475 Judicial and Medical Interpreting II	3 cr
SPAN 494 Capstone Experience	3 cr
Two of the following:	
SPAN 340 Spanish Civilization and Culture	3 cr
SPAN 460 Hispanic Literature: Drama	3 cr
SPAN 460 Hispanic Literature: Poetry	3 cr

Spanish Minor

A minimum of 18 credits beyond SPAN 101 Elementary Spanish I, and SPAN 102 Elementary Spanish II, including the 15-credit Spanish Core and:

One of the following:

SPAN 340 Spanish Civilization and Culture	3 cr
SPAN 341 Latin American Civilization and Culture	3 cr
SPAN 370 Advanced Spanish Conversation and Composition	3 cr
SPAN 460 Hispanic Literature:	3 cr
SPAN 475 Judicial and Medical Interpreting II	3 cr

Capstone Course Requirement. The following course in the Spanish Major fulfills the capstone course requirement: SPAN 494 Capstone Experience.

SPANISH COURSES

SPAN 101 Elementary Spanish I **3 credits**
An introduction to essentials of the Spanish language: comprehension, speaking, reading, and writing. Reserved for students with less than two years of high school Spanish.

SPAN 102 Elementary Spanish II **3 credits**
A continuation of SPAN 101. Prerequisite: SPAN 101 or equivalent.

SPAN 197 Special Topics **1-6 credits**

SPAN 254 Intermediate Spanish I **3 credits**
A continuation of SPAN 102. A grammar review and extensive practice in conversation, reading, and writing. Prerequisite: SPAN 102 or equivalent (two years or more of high school Spanish).

SPAN 255 Intermediate Spanish II **3 credits**
A continuation of SPAN 254. Further practice and development of speaking, reading, and writing skills. Prerequisite: SPAN 254 or equivalent.

SPAN 270 Spanish Conversation and Composition **3 credits**
A course to develop oral proficiency and writing skills in Spanish. Focuses on structure and vocabulary, emphasizing both speaking and listening, as well as basic writing skills within the Spanish language. Prerequisite: SPAN 255 or equivalent.

SPAN 297 Special Topics **1-6 credits**

SPAN 340 Spanish Civilization and Culture **3 credits**
An introduction to the general trends of Spanish civilization and everyday life. Includes Spanish development from prehistoric times to the present. Conducted in Spanish. Prerequisite: SPAN 255 or equivalent.

SPAN 341 Latin American Civilization and Culture **3 credits**
An introduction to the general trends of Latin American civilization, culture and the national character, as expressed in everyday life in the various countries of Latin America. Includes pre-Columbian history to the present. Conducted in Spanish. Prerequisite: SPAN 255 or equivalent.

SPAN 366 Methods of Teaching a Foreign Language **3 credits**
An introduction to past and current methods of teaching a foreign language, as well as to develop an understanding of proficiency and a synthesis of sound language-teaching practices.

SPAN 370 Advanced Spanish Conversation and Composition **3 credits**
A course designed to give students the opportunity to develop their oral proficiency through discussion and presentations. In addition, consideration is given to composition, using tasks that reflect the type of academic work generally asked of Spanish majors and minors—analysis and classification, argumentation, definition, exposition, comparison and contrast, and cause and effect. Prerequisite: SPAN 270.

SPAN 375 Judicial and Medical Interpreting I **3 credits**
A study of specialized Spanish vocabulary in two major areas: medicine and law. Students are exposed to sight, simultaneous and consecutive interpreting modes. Emphasis is placed on reaching 120 words per minute. Prerequisite: SPAN 255.

SPAN 385 Introduction to Hispanic Literature **3 credits**
Students read authentic Hispanic literature concentrating on details such as style, point of view, theme, and symbolism rather than simply reading for comprehension. Students read works by authors from Spain and Latin America with emphasis on works from major literary movements and styles. This course is conducted in Spanish. Prerequisite: SPAN 270.

SPAN 392 Directed Study in Spanish **1-4 credits**
A course of individual research and study about topics in Spanish. Prerequisite: six credits of Spanish beyond SPAN 102.

SPAN 397 Special Topics **1-6 credits**

SPAN 460 Hispanic Literature: **3 credits**
A course to give students the opportunity to read and analyze works by major Hispanic novelists, dramatists, essayists, poets and short story writers. The content of the course varies. This course may be taken for credit more than once. This course is conducted in Spanish. Prerequisite: SPAN 385.

SPAN 475 Judicial and Medical Interpreting II **3 credits**
An advanced study of highly specialized Spanish vocabulary in two major areas: medicine and law. Students are presented with various advanced sight, simultaneous and consecutive interpreting opportunities. Emphasis is placed on reaching 140 words per minute. Prerequisite: SPAN 375.

SPAN 490 Workshop Abroad **1-8 credits**
A series of workshops to study various aspects of contemporary issues in Hispanic cultures abroad. Prerequisite: SPAN 255 or equivalent.

SPAN 492 Independent Study **1-4 credits**
A special study in areas of student interest. May be taken for a maximum of four credits. Prerequisite: 15 credits of Spanish.

SPAN 494 Capstone Experience **3 credits**
A research project written by the Spanish major in an area of Spanish language and culture that is appropriate for the student's undergraduate experience. This course is offered yearly. Prerequisite: 24 credits in Spanish beyond SPAN 101 and SPAN 102.

Western State Colorado University

Graduate Academic Catalog

2015-2016

GENERAL INFORMATION

Purpose

The purpose of graduate studies at Western State Colorado University is to extend to post-graduate learning the high-quality education consistent with the University's role and mission. Graduate study at Western builds on the existing mission of encouraging both breadth and depth of knowledge while promoting scholarly and creative learning. The faculty who are responsible for graduate education at Western are themselves scholars whose responsibilities include guiding graduate students to become experts in their fields of study.

Scope

Western State Colorado University offers graduate-level coursework for continuing education and professional development and degree programs at the master's level as approved by faculty and the Trustees of Western State Colorado University. Such programs are an extension of the University's undergraduate programs and allow Western to better fulfill its important role as a regional education provider.

ADMISSION POLICIES FOR GRADUATE STUDENTS

Students seeking admission to any of Western's graduate programs must formally apply for admission with the Graduate Studies Dean. Formal admission to a graduate degree program is based on multiple sources of evidence and collegial, professional judgment of program faculty about the likelihood of success. The faculty members of each program consider undergraduate grade-point average (recommended 3.0 on a 4.0 scale), graduate grade-point average (minimum 3.000 on a 4.000 scale), prior professional experience, standardized examinations, portfolios, interviews, letters of reference, and other indicators. Specific admission requirements, including application deadlines, vary depending upon the department offering the graduate degree.

Admission for Non-Degree Seeking Students

Any individual holding a baccalaureate degree who does not wish to pursue a master's degree may be permitted to enroll in selected graduate courses when approved by the respective department chairperson and the Graduate Studies Dean.

A non-degree seeking student holding a bachelor's degree may be allowed to complete up to nine credit hours of 600-level graduate coursework at Western, to be determined by individual graduate programs, before admission into a graduate program. These credits, graded B- or higher, may be applied to a graduate degree at Western upon approval by the Chair/Director of the program. The registration for graduate level courses does not constitute or imply admission into a graduate program, as the candidate must meet the program admission requirements. Coursework completed more than five years prior to being admitted into the graduate program shall be evaluated by the major department as to current relevance and applicability to the degree requirements.

Admission of International Students

International students seeking admission must submit an application for admission and official undergraduate and graduate college transcripts (translated into English). Applicants must be graduates of undergraduate programs equivalent to similar programs in the United States. Applicants from countries where English is not a national language must have a score of 550 or better on the Test of English as a Foreign Language (TOEFL) or 213 on the computer-based TOEFL. Applicants must demonstrate by bank affidavit (English translation) that a total sum of $26,349 in U.S. currency is available to cover the costs of each year of anticipated study.

Provisional Admission of Students

An applicant who does not meet the requirements for admission as a regular degree student may be considered for admission to a master's program as a provisional degree student upon the recommendation of the respective department. Individual department representatives may set their own requirements for admitting students provisionally.

Transfer Credits

Departmental representatives shall determine if graduate classes taken from other accredited institutions can be transferred to the respective Western graduate studies programs. Transfer credits must be listed and approved by the major advisor on the degree plan. Credits transferred must meet the following criteria:

- Earned at a regionally-accredited institution
- Numbered at the graduate level and accepted as part of a graduate degree program at the sending institution
- A grade of B- or above (courses with grades such as pass/fail or satisfactory/unsatisfactory are not acceptable).
- The course credit must have been earned within the past five years unless a department specifies otherwise.
- The maximum number of transfer credits to be applied to degree requirements is nine credits.
  Students must request permission to transfer course work and provide official transcripts and course syllabi before or during their first semester of study.

PROGRAM COSTS AND FINANCIAL AID

Program Costs

The costs of graduate programs vary by program:

Master of Arts in Education

The cost of the MA in Education with an Emphasis in Educator Effectiveness is $11,950.

The cost of the principal licensure coursework (the first year of the MA in Education with an Emphasis in Educational Administration) is $11,750.02. The total cost of the MA in Education with an Emphasis in Educational Administration is $17,525.02.

The cost of the teacher licensure coursework (the first year of the MA in Education with an Emphasis in Teacher Leadership, CLD Leadership, K-12 Online Teacher Leadership, and Reading Leadership) is $11,749.98. The total cost of the MA in Education with teacher licensure is $17,909.98.

Master of Arts and Master of Fine Arts in Creative Writing

The cost per credit for M.A. and M.F.A. graduate courses is $700. Program cost per year is $18,900, plus $4,200 for the final summer residency.

Publishing Certificate

Tuition and student fees for the Publishing Certificate cost $6,300 in total.

Master in Environmental Management

The cost of tuition and fees per year is $17,250.

Financial Aid

Western offers financial assistance designed to help bridge the gap between the expected family financial contribution and the cost of attending the university. For need-based financial assistance, the contribution toward college costs expected from the student is calculated according to a federally mandated system. To receive financial aid, a graduate student must be enrolled for at least half-time in the program or a minimum of 4.5 credits during any semester.

Applying for Aid

To apply for need-based financial aid at Western State Colorado University, the student must do the following:

1. Complete the admission process and be fully admitted to the graduate program.
2. Submit a Free Application for Federal Student Aid (FAFSA) at [http://www.fafsa.ed.gov/] to the federal student aid processor.
3. Submit any additional documentation as requested by Western to verify eligibility. Documentation may include the federal income tax return, proof of child support, federal verification form, etc.

*Note: Western's financial aid year is fall and spring. Summer financial aid requires an additional form that is available from the Financial Aid Office beginning March 15.

The Financial Aid Offer

Students qualifying for financial aid receive a financial aid package containing information regarding their eligibility for various kinds of loans. The proportion and type of loan aid varies from student to student and from year to year depending upon the student's eligibility and level of enrollment.

Loans must be repaid. The FAFSA application must be completed to receive consideration for any of the following loans: Federal Direct Unsubsidized Stafford/ Ford Loan Program, and Federal Direct Graduate PLUS Program. Detailed information on loans may be found on the Financial Aid web page.

GRADUATE ACADEMIC POLICIES

Academic success, a goal that Western wants all students to achieve, can be measured in many ways. This section identifies and explains the standards that Western has established as measures of academic success and indicates the policies and procedures that apply to the students who fail to meet the standards. The Provost/Vice President for Academic Affairs, in consultation with the Faculty Academic Policies Committee and the Faculty Senate, is responsible for the development and implementation of these academic standards and policies.

Unit of Credit

Western State Colorado University uses the semester hour as the basic unit of credit. The semester credits assigned to a course are based on the specific learning objectives and the expected outcomes. The University's assigned semester hours are consistent with the federal definition of a credit hour and the Colorado Commission on Higher Education's established minimum class times for credit courses. The minimum expectation for one semester credit is one hour of classroom or direct faculty instruction and a minimum of two hours of out-of-class student work each week for approximately fifteen weeks of seminars and lecture-based classes. An equivalent amount of work is required in laboratories, internships, practica, on-line, studio work, and other academic work leading to the award of credit hours.

Course Numbering System

500-599 Level Graduate Courses: Courses at this level are non-degree oriented and typically intended for continuing education and professional development. Course formats include workshops and seminars and are primarily practice-based.

600-699 Level Graduate Courses: Courses at this level are intended for degree-seeking students. They are more than an extension of the baccalaureate education; they are qualitatively different and, at a minimum, students should be required to undertake original scholarly/creative activity, assume greater responsibility for mastering the subject matter, and develop close working relationships with professors. It is assumed that students taking graduate-level courses have acquired the ability to use language and information sources effectively, and engage in analytical thought and creative processes.

Academic Load

During a 16-week semester a graduate student must take a minimum of nine credits to be considered full-time, and a course load of 15 credits may be taken without special approval. During a 10-week summer session, a student must take a minimum of six credits to be considered full-time, and a course load of nine credits may be taken without special approval. An additional three credits of student teaching, internship, or other on-the-job credit may be taken. A student may enroll in more credits in either session if the student's grade-point average is at least 3.500 from most recent course work and a petition is filed with the signatures of the graduate advisor, department chair/director, and the Graduate Studies Dean.

Registration

Course Descriptions

Course descriptions provide a summary of the course content. If there is a prerequisite that must be met before a student can register for the course, this information is stated in the course description. Prerequisites may include specific courses, class standing, declared major, and other requirements. If there is a co-requisite course in which a student must be registered, this information is also stated in the course description.

Add/Drop

After classes have begun in a 16-week semester, students may add an open class without petition until 5 p.m. on the fourth day of the semester. After the fourth day and until the end of the official drop period, students may add a course only with approval by the instructor. The add deadline for any course that meets for less than 16 weeks is two days. The student is responsible for understanding and communicating with the instructor, understanding course policies, and understanding any consequences of adding a course after the first class meeting.

Students may drop a course during the first 15% of the class meetings. This rule applies for both classes that meet for a full semester and classes that meet in sessions shorter than a full semester. (Note the difference between this rule and "withdrawal" explained below.)

Western State Colorado University faculty reserve the right to drop students from class rolls if they miss the first class meeting. Not all instructors require attendance the first class meeting, but many do. Students are strongly encouraged to attend all their first class meetings. If circumstances such as weather or flight arrangements prevent students from attending the first class session, it is the student's responsibility to contact the instructor of each course to request that their seat in the class be held.

Active Status

To maintain active status, graduate students must register in at least one graduate course per academic year. Students who wish to enroll in classes after an absence of one to three years must complete a Graduate School Application for Readmission form. If active status is not maintained, access to western.edu email account and MyWestern may be compromised. Students returning to Western after an absence of one to three years are given the same priority registration as continuing students when applications for readmissions are received by mid-October for spring registration and mid-March for fall registration. Contact the Extended Studies Office for more information about this process.

Prior to departure from Western all students should check out by contacting applicable departments. Students who have on-campus housing must contact Residence Life. Students with financial aid should contact the Student Financial Services/Financial Aid Office for exit counseling and should not be registered for courses in a future term. Students should discuss departure plans with their academic advisor.

Time Limit for Degree Completion

There is a maximum of five years for completion of a master's degree from the student's initial enrollment. A graduate student who does not complete all degree requirements within the specified period of time may be required to validate past course work. Course validation may be done in one of the following ways: (1) retake the course final examination, (2) take an oral examination over course content, or (3) prepare a paper on the course content. In some cases, students may be required to retake the comprehensive examination (dependent upon the respective department's requirements).

Withdrawal from Individual Courses

After the official add/drop period, a student may only withdraw from a course with approval of the course instructor and the student's academic advisor. Students who obtain these authorizations will receive a grade of "W" (which has no effect on the student's grade-point average; refer to sections on Grades and Grade-Point Average that follow). If two-thirds of the scheduled class time in any given course has been completed, the student is not allowed to withdraw, and a grade for the course (which does affect the student's grade-point average) is recorded. Specific withdrawal deadlines are published on the Office of the Registrar website at http://www.western.edu/registrar. Course instructors may also withdraw a student from a class for reasons such as inadequate academic progress or attendance, academic dishonesty, or disruptive behavior.

Withdrawal from the University

Students who wish to withdraw from the University may do so any time during the semester. Contact the Graduate Studies Dean to initiate an official withdrawal from the University. After the official Add/Drop period, but before the withdrawal deadline, a student wishing to withdraw entirely from the University will be given a grade of "W" for all courses except variable-credit courses. Once two- thirds of the scheduled class time in any given course has been completed, a student wishing to withdraw from the University will be given a "W" or a "WF" grade for each course.

Withdrawal from Variable Credit Courses

After 15 percent of the course has been completed, a student wishing to withdraw from the University during a term when he or she is enrolled in a variable credit course (i.e., internships, practicums, field experiences, independent studies, etc.) must receive the approval of the supervising instructor. If a student obtains this authorization, a grade of "W" or a "WF" may be assigned. The coordination of the specific program can explain guidelines and consequences resulting from dropping or withdrawing from selected courses.

Withdrawal in Absentia

If illness, injury, or other circumstances prohibit a student from being on campus to request withdrawal from the University in person, the student may notify the Graduate Studies Dean.

University Graduation Requirements

Master's degree programs have a minimum requirement of 30 semester credits numbered at 600 and above. Programs may require additional credits, some of which may allow up to six credits (not applied toward the earned undergraduate degree) below the 600 level on the degree plan from the respective department. The maximum number of allowable transfer credits is nine credits.

Residency Requirements

Every candidate for a degree must earn a minimum of 21 credits from Western State Colorado University. This 21 credit minimum must include the final credit earned.

Grades

For the purpose of calculating a student's grade-point average, numerical values are assigned to letter grades on the following scale:

A	= 4.000 grade points	C	= 2.000 grade points
A-	= 3.760 grade points	C-	= 1.670 grade points
B+	= 3.330 grade points	D+	= 1.330 grade points
B	= 3.000 grade points	D	= 1.000 grade points
B-	= 2.670 grade points	D-	= 0.670 grade points
C+	= 2.330 grade points	F	= 0.000 grade points

Grade-Point Average

To obtain grade points earned in a course, multiply the number of credits per course by the number of points for the grade earned in the course. A minimum grade of B in each course applied to a degree program is required. A minimum of a 3.000 grade-point average is required for graduation. Credits transferred from another institution are not calculated in the Western grade-point average.

Probation and Dismissal

When a student's course grade is below a B- in any graduate course, the student and the department must be notified, and the student shall be placed on academic probation. In order to be removed from probation, the student must retake the course to replace a grade lower than a B-. In the semester following placement on probation, the student's grades in each course must be at least a B- for that semester's course work taken or he or she shall be dismissed at the conclusion of that semester. In extenuating circumstances, the student may petition the Academic Policies Committee for an extension of the probationary time period. The dismissal decision is in force unless a temporary extension is approved by the Academic Appeals Committee.

Advising

All graduate students are initially assigned an academic advisor from the department from which they are seeking a degree. The graduate advisor is identified by the department chair. The graduate advisor assists the student in developing a degree plan. The degree plan is filed in the Office of the Registrar.

Degree Plan

Required degree courses, electives, course substitutions, and accepted transfer credits must be approved by the student's advisor, the department chair and/or director, and the Graduate Studies Dean. The degree plan with pertinent signatures must be submitted to the office of the Graduate Studies Dean.

Comprehensive Examinations

When a comprehensive examination is given, the following rules apply:

- Students must be registered when they take the examination.
- The examination is to be given by the student's faculty committee and consistent with the requirements established by the department for the specific graduate program.
- A majority of the committee must approve the examination.
- The examination may be oral, written, or both.
- A student who fails the comprehensive final examination may retake the examination only once (dependent upon the respective department's requirements).

Thesis Plan (Plan I):

Students must earn a minimum of 30 semester credits of graduate work, including four to six thesis credits. Courses must be at or above the 600 level.

Graduate students working toward a master's degree under Plan I earn four to six thesis credits.

A student faculty committee must be established to guide the student's research. This committee must consist of the student's major advisor (who also serves as committee chair), one faculty member from the student's major department, and one faculty member from outside of the department.

The student's faculty committee must approve the final draft of the thesis, which must be filed with the Graduate Studies Dean before graduation. The thesis must comply with specifications outlined in **Guidelines for Master's Theses and Capstone Papers**, which is obtainable from the Graduate Studies Dean, and the student must have received a preliminary thesis format approval from the Graduate Studies Dean. Graduating students are responsible for observing the deadlines published in the schedule of classes for thesis approval. The record of the thesis defense must be approved by the student's faculty committee and the Graduate Studies Dean and filed with the Registrar before graduation.

Non-Thesis Plan (Plan II):

Students must earn a minimum of 32 semester credits of graduate work. Courses must be at or above the 600 level to meet this requirement. Graduate work includes a Graduate Capstone, which the student's advisor will facilitate. Graduate Capstone credits are determined by the specific program requirements. If the Graduate Capstone is not completed at the end of the term in which the student is registered, an In Progress (IP) grade or a Failing (F) grade may be reported.

Graduation Audit and Participation in Commencement

The Office of the Registrar performs graduate degree audits and certifies graduate requirements, and the Graduate Studies Dean authorizes students on the graduation list. Requests for exceptions and special consideration are reviewed by the Academic Policies Committee, and recommendations are made to the Graduate Studies Dean. Students are required to file a Graduation Application during the first two weeks of the semester in which they expect to complete all degree requirements. In order to participate in commencement a student must be in good standing, must have six or fewer credits left to complete graduation requirements, and must be registered for those credits the following term; or have only a capstone; or internship to complete and be registered for it the next term it is offered.

Academic Integrity

As members of the academic community, students are expected to recognize and uphold standards of intellectual and academic integrity. The University assumes, as a basic and minimum standard of conduct in academic matters, that students will be honest and that they will submit for credit only the products of their own efforts. Both the ideals of scholarship and the need for practices that are fair require that all dishonest work be rejected as a basis for academic credit. They also require that students refrain from any and all forms of dishonorable conduct in the course of their academic work. Dishonest work may include, but is not limited to, the following infractions:

Plagiarism. Presenting another person's work as one's own, including paraphrasing or summarizing of the works of another person without acknowledgment and the submitting of another student's work as one's own is considered plagiarism. Plagiarism frequently involves a failure to acknowledge in the text, notes, or footnotes the quotation of paragraphs, sentences, or even a few phrases written or spoken by someone else.

Cheating on Examination. Giving or receiving unauthorized help before, during, or after an examination is considered cheating. Examples of unauthorized help include the use of notes, texts, or "crib sheets" during an examination (unless specifically approved by the instructor).

Unauthorized Collaboration. Submission for academic credit of a work product, or a part thereof, represented as being one's own,

which has been developed in substantial collaboration with assistance from another person or source, is a violation of academic honesty. It is also a violation of academic honesty to knowingly provide such assistance. Collaborative work specifically authorized by an instructor is allowed.

Falsification. It is a violation of academic honesty to misrepresent material or fabricate information in an academic exercise or assignment (e.g., false or misleading citation of sources or the falsification of the results of experiments or of computer data).

Multiple Submissions. It is a violation of academic honesty to submit substantial portions of the same work for credit more than once without the explicit consent of the instructor(s) to whom the material is submitted for additional credit.

Consequences of Violations. Violations of academic integrity may result in the following: a grade of "F" or a "zero for the assignment, an "F" for the course, withdrawal from the course, or suspension or expulsion from the University. Serious violations of academic integrity are reported to the Office of Academic Affairs.

Academic Due Process for Students

It is the objective of these procedures to provide for the prompt and fair resolution of the types of problems described herein which students may experience at Western.

Definitions

Complaint. An informal claim by an affected student that a faculty member or an academic administrator has violated, misinterpreted, or improperly exercised his/her
professional duties.

Complainant. An affected student who makes a complaint.

Grievance. A written allegation by an affected student that a faculty member or an academic administrator has violated, misinterpreted, or improperly exercised his/her professional duties. The grievance should include the possibility of a remedy.

Grievant. An affected student who files a grievance.

Respondent(s). The faculty member(s) and/or academic administrator(s) identified by the affected student as causing or contributing to the complaint or grievance.

Grievance Committee. A committee composed of one faculty member selected by the grievant, one faculty member selected by the respondent, and three faculty members selected by the Provost/Vice President for Academic Affairs (or assignees).

Time Limits. When a number of days are specified herein, they shall be understood to exclude Saturdays, Sundays, holidays, University vacation days, and other days when the University is not in session and holding classes.

Academic Administrator. Professional personnel of the University, other than teaching faculty, who are in positions to make academic decisions affecting students, including but not limited to, department chairs, Associate Vice President for Academic Affairs, Vice President for Academic Affairs, and the President.

Informal Complaint Procedure

The complainant shall discuss the problem with the respondent(s). If the problem is not mutually resolved at this time, the complainant shall confer with the immediate supervisor(s) of the respondent(s). (This usually will be the Chair(s) of the Department(s) to which the respondent(s) is assigned.) If satisfactory resolution is still not achieved, the complainant must confer with the Vice President for Academic Affairs.

Formal Grievance Procedure

If the complaint is not suitably resolved, the student has the right to file a grievance with the Vice President for Academic Affairs within six months of the time that the grievant could or should have known of the action which is the basis of the problem. This written allegation shall indicate what has already been done to resolve the complaint. Preservation of relevant documents and of precise records of actions taken is advantageous. The Grievance Committee shall be formed under the supervision of the Vice President for Academic Affairs, and a hearing shall be scheduled within 15 days after that officer receives the written grievance from the grievant. The Grievance Committee shall hear testimony from the grievant, the respondent, and whomever else it deems appropriate. Within 15 days after completion of the hearing(s), the Grievance Committee shall submit its findings to the Vice President for Academic Affairs for implementation as for academic affairs for implementation as deemed appropriate by that officer. A copy of the finding of the committee and of the implementing decision of the Vice President for Academic Affairs shall be given to the grievant and the respondent. The grievant may withdraw the grievance at any point in the proceedings by doing so in writing to the Vice President for Academic Affairs. The Vice President for Academic Affairs may grant an extension of the time limit for good cause.

If the grievance has not been resolved satisfactorily after the above procedures have been completed, the grievant is advised that he/she may appeal to the President of Western State Colorado University, and ultimately, to the Board of Trustees.

MASTER OF FINE ARTS IN CREATIVE WRITING

The Master of Fine Arts in Creative Writing at Western uses a low-residency format that requires students to engage in studies in two ways:

1) on-campus intensive seminars and workshops for two weeks during three consecutive summers, and
2) a plan of non-residency study requiring four academic semesters, during each of which students work one-to-one with writing faculty mentors and members of their peer cohort of students. The M.F.A. offers students three concentration:
    - Genre Fiction
    - Poetry with an Emphasis on Versecraft, and
    - Screenwriting for Film and Television.

The MFA program insists on a high degree of commitment and excellence from candidates, all of whom must maintain a 3.000 course average to complete the program. A minimum grade of B- in each course applied to a degree program is required. Summer residency courses within concentrations are front-loaded – that is, these courses require students to prepare for the intensive residency experience by completing pre-assigned reading lists as well as preparing advanced assignments to maximize the time for discussion and qualitative analysis during the course of studies on campus.

In the first and second summer residencies, candidates will also complete one credit each summer of CRWR 600, learning or updating online tools mastery, attending faculty and student readings, and meeting with non-residency mentors. Third-summer candidates will earn one credit attending and participating in critiques and readings for cohorts attending their first and second summers. Students also attend and participate in Writing the Rockies, a summer creative writing conference hosted on campus during each residency. Students can expect to spend a minimum of 25-30 hours per week to complete writing assignments, for which mentors will provide weekly feedback using online tools. Students will also participate weekly in threaded synchronous and asynchronous online voice and discussion boards during each term with other students and mentors. Students will earn 12 credits each semester for this work (six credits for each mentored course topic).

FACULTY

Professors Christine Jespersen and Mark Todd; Associate Professor Jack F. Lucido;
Assistant Professor and Program and Poetry Concentration Director David Rothman;
Visiting Professor and Genre Fiction Concentration Director Russell Davis;
Visiting Professor and Screenwriting Concentration Director Mayank Gupta;
Visiting Professors of Genre Fiction Stacia Deutsch, Candace Nadon, Michaela Roessner-Herman;
Visiting Professor of Poetry Ernest Hilbert; Visiting Professor of Screenwriting Bob Shayne.

DESCRIPTION OF THE PROGRAMS

Genre Fiction

The concentration in Genre Fiction includes instruction in writing for such forms as science fiction/fantasy, the mystery, romance, and other forms of mainstream commercial fiction. Study includes short and long written forms, the business aspects of writing and publishing in the current market, and teaching pedagogy. Students may also elect to study two of these concentrations by increasing the duration of their program to six semesters and a fourth summer residency.

The Popular Genre Fiction/Nonfiction Concentration requires the following 60 credits:

CRWR 600 Summer Orientation (*taken three times*)	1 cr
CRWR 601 Fundamentals of Writing Genre Fiction I	2 cr
CRWR 602 Fundamentals of Writing Genre Fiction II	2 cr
CRWR 604 Career Planning for Genre Writers	2 cr
CRWR 608 Genre Writing I – Romance and Mystery Fiction	6 cr
CRWR 609 Genre Studies I – Romance and Mystery Fiction	6 cr
CRWR 618 Genre Studies II – Western Speculative and Young Adult Fiction	6 cr
CRWR 619 Genre Writing II – Western Speculative and Young Adult Fiction	6 cr
CRWR 620 Short Forms Genre Fiction Writing	6 cr
CRWR 621 Business Fundamentals for Genre Writers	6 cr
CRWR 684 Teaching and Pedagogy	6 cr
One of the following two during second Fall term:	
CRWR 646 Narrative Poetry	6 cr
CRWR 665 Screenwriting Genre	6 cr
And:	
CRWR 694 Capstone	3 cr

Genre Fiction as a Second Area of Emphasis

Students pursuing this concentration as a second area of emphasis must earn 30 credits within the concentration as follows:

CRWR 600 Summer Orientation	1 cr
CRWR 601 Fundamentals of Writing Genre Fiction I	2 cr
CRWR 608 Genre Writing I – Romance and Mystery Fiction	6 cr
CRWR 609 Genre Studies I – Romance and Mystery Fiction	6 cr
CRWR 618 Genre Studies II – Western Speculative and Young Adult Fiction	6 cr

CRWR 619 Genre Writing II – Western Speculative and Young Adult Fiction	6 cr
CRWR 694 Capstone	3 cr

Poetry with a Focus on Versecraft

The concentration in Poetry with a Focus on Versecraft requires that students achieve demonstrable mastery of a wide range of poetic forms and techniques along with acquiring historical and analytical knowledge about them. Students who complete the program will also be required to demonstrate their readiness to participate fully in the literary world through public speaking and relevant prose (book reviews, metrical analysis, historical investigation, etc.). This concentration requires passing a comprehensive exam on versecraft and poetics as well as sufficient reading competency in a foreign language, aided by a dictionary, to translate foreign-language poetry into English.

The Poetry with a Focus in Versecraft Concentration requires the following 60 credits:

CRWR 600 Summer Orientation *(taken three times)*	1 cr
CRWR 631 Scansion Immersion	2 cr
CRWR 632 Public Performance	2 cr
CRWR 633 Poetry and Music	2 cr
CRWR 636 Metrical Traditions and Versification I	6 cr
CRWR 638 History of English Language/Studies in Translation	6 cr
CRWR 641 Metrical Traditions and Versification II	6 cr
CRWR 643 Historical Foundations of English Prosody	6 cr
CRWR 651 Advanced Studies in Forms and Genres	6 cr
CRWR 653 Poetry Book Reviewing/Poetry, Literacy, Pedagogy	6 cr
One of the following two during second Fall term:	
CRWR 646 Verse Narrative	6 cr
CRWR 647 Verse Satire/Verse Drama	6 cr
One of the following two during second Fall term:	
CRWR 608 Craft and Practice I	6 cr
CRWR 665 Screenwriting Genre	6 cr
And:	
CRWR 694 Capstone	3 cr

Poetry as a Second Area of Emphasis

Students pursuing this concentration as a second area of emphasis must earn 30 credits within the concentration as follows:

CRWR 600 Summer Orientation	1 cr
CRWR 636 Metrical Traditions and Versification I	6 cr
CRWR 646 Narrative Poetry, or CRWR 647 Dramatic Poetry/Verse Satire	6 cr
CRWR 694 Capstone	3 cr
Supporting courses in consultation with advisor	12 cr
One of the following:	
CRWR 631 Scansion Immersion	2 cr
CRWR 632 Public Performance	2 cr
CRWR 633 Poetry and Music	2 cr

Students may count CRWR 646 if taken already to fulfill the out-of- concentration course required by the primary area of emphasis.

Screenwriting for Feature Film and Television

The concentration in Screenwriting for Feature Film and Television includes instruction in the history and analysis of classical and contemporary screenwriting texts and the resulting films. The program further includes instruction in writing the visual narrative, three- and four-act structure, character development, thematic development, conflict, genre, story arc, and dialogue. The program emphasizes not only the feature-length screenplay but also television writing as well as screenwriting contests, festivals, and opportunities for marketing the M.F.A. students' work. A Master's Thesis Project in the form of a 100-page feature-length screenplay must be completed as a part of the degree requirements.

The Screenwriting Concentration requires the following 60 credits:

CRWR 600 Summer Orientation *(taken three times)*	1 cr
CRWR 661 Film History and Analysis; the Visual Narrative	2 cr
CRWR 662 Story, Conflict, Character, and Genre in Screenwriting	2 cr
CRWR 663 Screenwriting Competition, Representation, the "Option"	2 cr
CRWR 665 Screenwriting Genre	6 cr
CRWR 668 Television Drama and Situation Comedy	6 cr
CRWR 671 Writing the First Feature-Length Screenplay	6 cr
CRWR 675 Writing the TV Pilot	6 cr
CRWR 678 Adaptation	6 cr
CRWR 690 Screenwriting Master's Capstone Project I	6 cr
CRWR 691 Screenwriting Master's Capstone Project II	6 cr
One of the following two during second Fall term:	

CRWR 608 Craft and Practice I	6 cr
CRWR 646 Narrative Poetry	6 cr
And:	
CRWR 694 Capstone	3 cr

Screenwriting as a Second Area of Emphasis

Students pursuing this concentration as a second area of emphasis must earn 30 credits within the concentration as follows:

CRWR 600 Summer Orientation	1 cr
CRWR 665 Screenwriting Genre	6 cr
CRWR 668 Television Drama and Situation Comedy	6 cr
CRWR 694 Capstone	3 cr
Supporting courses in consultation with advisor	12 cr
One of the following:	
CRWR 661 Film History and Analysis; the Visual Narrative	2 cr
CRWR 662 Story, Conflict, Character, and Genre in Screenwriting	2 cr
CRWR 663 Screenwriting Competition, Representation, the "Option"	2 cr

Students may count CRWR 665 if taken already to fulfill the out-of- concentration course required by the primary area of emphasis.

MASTER OF ARTS IN CREATIVE WRITING

Program Information

Western's low-residency MA in Creative Writing focuses on both the craft of creative writing and the pedagogy for the teaching of creative writing. Students select one of three emphases: Genre Fiction, Poetry with an Emphasis on Versecraft, or Screenwriting for Film and Television.

On-campus residencies occur the last two weeks of July, high in the Colorado Rockies, and the program takes thirteen months to complete as a full-time student.

The low-residency component of the program involves two online semesters of coursework that use a combination of online writing submissions and critiques as well as regular real-time discussions with writer-mentors and peer students.

During each of the two required summer intensives on Western's Colorado campus, students network within an inspiring community of peers as well as attend student and faculty readings, workshops on craft and literature, and master classes.

Each emphasis requires comprehensive examinations at the conclusion of coursework.

Emphasis in Genre Fiction

The emphasis in Genre Fiction includes instruction in writing for such forms as science fiction/fantasy, the mystery, romance, other forms of mainstream commercial fiction. Study includes short and long written forms, as well as strategies and techniques for the effective teaching of creative writing.

Total Credits for the M.A. in Popular Genre Fiction/Nonfiction
Two summer residencies @3 hours/summer = 6 credits
Two academic semesters @12 hours/term = 24 credits
Total Credits: 30

FIRST TWO-WEEK SUMMER SESSION:
CRWR 600 – Summer Orientation (1 credit, to be repeated with different emphasis)
CRWR 601 – Patterns and Paradigms for Genres (2 credits)

FIRST NON-RESIDENCY SEMESTER
CRWR 608 – Genre Writing I – Romance and Mystery Fiction (6 credits)
CRWR 609 – Genre Studies I – Romance and Mystery Fiction (6 credits)

SECOND NON-RESIDENCY SEMESTER
One of the following two electives:
CRWR 618 Genre Studies II – Western Speculative and Young Adult Fiction (6 credits)
CRWR 619 Genre Writing II – Western, Speculative, and Young Adult Fiction (6 credits)
Plus
CRWR 684 –Teaching and Pedagogy (6 credits)

SECOND TWO-WEEK SUMMER SESSION:
CRWR 600 – Summer Orientation (1 credit, to be repeated with different emphasis)
CRWR 605 – Writing Pedagogy Strategies (2 credits)

SECOND SUMMER
Comprehensive Exams

Emphasis in Poetry with a Focus on Versecraft

The emphasis in Poetry with a Focus on Versecraft requires that students achieve demonstrable mastery of a wide range of poetic forms and techniques along with acquiring historical and analytical knowledge about them. Students also learn to apply strategies and techniques for the effective teaching of creative writing.

Total Credits for the M.A. in Poetry with a Focus on Versecraft
Two summer residencies @3 hours/summer = 6 credits
Four academic semesters @12 hours/term = 24 credits
Total Credits: 30

FIRST TWO-WEEK SUMMER SESSION:
CRWR 600 – Summer Orientation (1 credit, to be repeated with different emphasis twice)
CRWR 631 – Scansion Immersion (2 credits)

FIRST NON-RESIDENCY SEMESTER
CRWR 636 – Metrical Traditions and Versification I (6 credits)
CRWR 638 – History of English Language/Studies in Translation (6 credits)

SECOND NON-RESIDENCY SEMESTER
CRWR 684 –Teaching and Pedagogy (6 credits)
One of the following electives:

- CRWR 641 – Metrical Traditions and Versification II (6 credits)
- CRWR 643 – Historical Foundations of English Prosody (6 credits)

SECOND TWO-WEEK SUMMER SESSION:
CRWR 600 – Summer Orientation (1 credit, to be repeated with different emphasis)
CRWR 605 – Writing Pedagogy Strategies (2 credits)

SECOND SUMMER
Comprehensive Exams

Emphasis in Screenwriting for Feature Film and Television
The emphasis in Screenwriting for Feature Film and Television includes instruction in the history and analysis of classical and contemporary screenwriting texts and the resulting films. The program further includes instruction in writing the visual narrative, three- and four-act structure, character development, thematic development, conflict, genre, story arc, and dialogue. For both the feature-length screenplay and television writing. Students also learn to apply strategies and techniques for the effective teaching of creative writing.

Total Credits for the M.A. in Screenwriting
Two summer residencies @3 hours/summer = 6 credits
Two academic semesters @12 hours/term = 24 credits
Total Credits: 30

FIRST TWO-WEEK SUMMER SESSION:
CRWR 600 – Summer Orientation (1 credit, to be repeated with different emphasis)
CRWR 661 – Film History and Analysis; the Visual Narrative (2 credits)

FIRST NON-RESIDENCY SEMESTER
CRWR 665 – Screenwriting Genre (6 credits)
CRWR 668 – Television Drama and Situation Comedy (6 credits)

SECOND NON-RESIDENCY SEMESTER
One of the following three electives:

- CRWR 671 – Writing the First Feature-Length Screenplay (6 credits)
- CRWR 675 – Writing the TV Pilot (6 credits)
- CRWR 678 – Adaptation (6 credits)

CRWR 684 –Teaching and Pedagogy (6 credits)

SECOND TWO-WEEK SUMMER SESSION:
CRWR 600 – Summer Orientation (1 credit, to be repeated with different emphasis)
CRWR 605 – Writing Pedagogy Strategies (2 credits)

SECOND SUMMER
Comprehensive Exams

CREATIVE WRITING COURSES

CRWR 600 Summer Orientation **1 credit**
Focus on learning mastery of online tools, attending faculty and student readings, and meeting with non-residency mentors during first summer; focus on attending presentations and participating in workshop sessions during second summer; and focus on presenting student thesis as well as attending and participating in other readings during third summer. Must be repeated three times for credit. Prerequisite: Admission to the program.

CRWR 601 Fundamentals of Writing Genre Fiction I **2 credits**
The primary foundation and introduction for the genre fiction track, covering a wide variety of topics including: proper manuscript format, understanding of basic principles of fiction (such as plot and dialogue), the Monomyth, archetypal characters, and voice. Students complete a short story during the course and critique each other's work in a group setting. This course also lays the groundwork for students to work efficiently during the online portions of the program as well as within their own writing process. Prerequisite: Admission to the program.

CRWR 602 Fundamentals of Writing Genre Fiction II **2 credits**
Begins the process of students planning their theses, using instructor-provided tools on world building, novel outlining and planning techniques, and story arc considerations for longer work. At the end of this course, students are prepared to submit their thesis outline and synopsis to their adviser and move forward during the following year to write it for completion the next spring. Prerequisite: Admission to the program.

CRWR 604 Career Planning for Genre Writers **2 credits**
Assists students in preparing a detailed career plan covering the 12 to 24 month period after graduation, including writing, submission,

and networking plans. On completion, students have a clear roadmap to follow in the years ahead. In addition, students prepare to give a public thesis reading during the residency. Prerequisite: Admission to the program.

CRWR 605 Writing Pedagogy Strategies **2 credits**

An opportunity to develop lesson plans, sample lessons, and grading rubrics for a course in writing. Instruction includes strategies for creative writing classes as well as English composition courses, including a guided discussion on pedagogy theory and practice with daily questions on points of interest, suggested readings, and the opportunity for teaching writers to discuss challenges and insights for the practice of teaching. Prerequisite: Admission to the program.

CRWR 608 Genre Writing I – Romance and Mystery Fiction **6 credits**

The primary genre writing course for the first semester of the program. Students complete exercises, excerpts, and shorter works in the primary subgenres of romance and mystery fiction, including romantic suspense, historical romance, detective fiction, and thrillers. Prerequisite: Admission to the program.

CRWR 609 Genre Studies I – Romance and Mystery Fiction **6 credits**

The primary genre reading course for the first semester of the program. Students study a wide variety of subgenres, including romantic suspense, historical romance, detective fiction, and thrillers, among others, to build a detailed understanding of the specific tropes and hallmarks of each subgenre and how to apply them to their own work. Prerequisite: Admission to the program.

CRWR 610 Genre Fiction Writing and Reading Survey **6 credits**

A broad genre fiction reading and writing survey course for Out of Concentration students, surveying romance, mystery, speculative fiction, westerns, and young adult category work. Students focus primarily on understanding genre tropes and writing exercises that illuminate them. Prerequisite: Admission to the program.

CRWR 618 Genre Studies II – Western, Speculative, and Young Adult Fiction **6 credits**

The primary genre reading course for the second semester of the program. Students study a wide variety of subgenres, including westerns, science fiction, epic fantasy, supernatural, and middle grade works, among others, to build a detailed understanding of the specific tropes and hallmarks of each subgenre and how to apply them to their own work. Prerequisite: Admission to the program.

CRWR 619 Genre Writing II – Western, Speculative, and Young Adult Fiction **6 credits**

The primary genre writing course for the second semester of the program. Students complete exercises, excerpts, and shorter works in the primary subgenres of westerns, speculative fiction, and young adult category fiction, including science fiction, epic fantasy, supernatural, and middle grade works. Prerequisite: Admission to the program.

CRWR 620 Short Forms Genre Fiction Writing **6 credits**

Provides students with an opportunity to focus strictly on writing in the shorter forms of genre fiction and gives them an immediately marketable portfolio of materials. Instructors cover craft concerns in flash fiction, short-short, short story, and novelette. Prerequisite: Admission to the program.

CRWR 621 Business Fundamentals for Genre Writers **6 credits**

Provides students a fundamental understanding of the business concerns for writers, including verbal/elevator pitching, query letters, proposal packets, contracts, dealing with editors and agents, and royalty statements. Students are required to complete a master proposal packet, which includes a query letter, synopsis, outline, and the thesis manuscript (if completed, partial if not). Prerequisite: Admission to the program.

CRWR 622 Genre Thesis Preparation **6 credits**

Focus on guiding students through the process of preparing and completing a working draft of the capstone thesis in a genre of the student's choice. Completed working draft to be submitted to the assigned thesis advisor no later than the course's end. Prerequisite: Admission to the program.

CRWR 631 Scansion Immersion **2 credits**

Focus on an intensive review of prosody – how to make meter and rhythm work in the poetic line as well as how to discern that structure in the works of others. Prerequisite: Admission to the program.

CRWR 632 Public Performance **2 credits**

Focus on the quintessence of public speaking, particularly as it applies to the performance of poetry, delivery of lectures, and participation in panels, understanding of the craft of using their voices and their physical presence to deliver creative, critical and pedagogical work orally to the public, and how to participate in conversations with the greatest possible skill and grace. Prerequisite: Admission to the program.

CRWR 633 Poetry and Music **2 credits**

Focus on exploring some of the complex relations between these two arts, from theoretical discussion to the practical aspects of writing everything from song lyrics to choral odes to opera libretti. Prerequisite: Admission to the program.

CRWR 636 Metrical Traditions & Versification I **6 credits**

Focus on tracing the development of the metrical tradition in English poetry from the beginning to the present. Students read poems in all the major forms (Anglo-Saxon Strong Stress Meter, the ballad, classical imitations, blank verse, the sonnet, iambic tetrameter, etc.) along with historical and theoretical commentary. Students also model such forms and scan their own work and that of others. Students will also trace the development of theories of versification and prosody in English. Students read a wide range of works, many of them by poets, in which they describe their craft and that of others, and they compare theories of and approaches to metrical poetry. In this course students are expected to produce a wide range of short essays on various traditions of versification, along with at least one substantial research paper. Prerequisite: Admission to the program.

CRWR 638 History of the English Language/Poetry Translation **6 credits**

Focus on a two-pronged study, first of the historical development and evolution of English, and second, work to understand translating poetry, studying and comparing translations, reading theories of translation and attempting translations. Prerequisites: Proof of second-year, or its equivalent, of reading competency in a foreign language, and admission to the program.

CRWR 641 Metrical Traditions & Versification II **6 credits**
Focus on emphasizing advanced topics in metrical composition, e.g. stanza forms, longer forms and sequences, narrative forms, nonce forms (including free verse forms). Students not only practice the forms, but read and scan them along with delving into the history, criticism and theory. The course also selects several major traditions in verse theory and explores them in depth, e.g., linguistic theories of verse; structuralist theories; relations between verse and music; attempt to imitate classical forms in modern languages; etc. Prerequisite: Admission to the program.

CRWR 643 Historical Foundations of English Prosody **6 credits**
Focus on an exploration of the theory and practice of rhythm and rhyme, including all variations, their sources and their traditions in consideration of aesthetic, linguistic, and anthropological theories. Prerequisite: Admission to the program.

CRWR 646 Narrative Poetry **6 credits**
Focus on examination, analysis, study, and writing in the narrative genres and modes of poetry, from the ballad to the epic and novel in verse. Prerequisite: Admission to the program.

CRWR 647 Dramatic Poetry and Satiric Verse **6 credits**
Focus on examination, analysis, discussion, and writing in all the modes of comic verse, including all the modes of satire (Menippean, Horatian, parodic), to verse-based comic approaches such as light verse, doggerel, children's verse, and more. Additionally, an exploration of dramatic techniques of verse from ancient Greece through the Renaissance, and to modern writers such as T. S. Eliot and up to the present. Prerequisite: Admission to the program.

CRWR 651 Advanced Studies in Forms and Genres **6 credits**
Focus on a study of significant forms, group of forms, or poetic genres, based on student and faculty mentor interest, with students reading a wide range of examples along with criticism and theory, and also composing their own work in these forms and genres. Topics include the following: The Sonnet and Sonnet Sequences, French and Italian Forms (ballade, villanelle, sestina, rondeau, terza rima, etc.), Classical Forms (Latin and Greek), The Ode, Blank Verse, Elegy and Pastoral , Non-European Forms (haiku, ghazal, tanka, Welsh forms, etc.), Free Verse Forms (Whitmanian versicles, syllabics, loose iambics, nonce forms, etc.). Prerequisite: Admission to the program.

CRWR 653 Poetry Book Reviewing/Poetry, Literacy, Pedagogy **6 credits**
Focus on close analysis of the best reviews and criticism of the past and present, and practice writing such pieces themselves. Also a wide range of techniques and materials available to teachers of poetry to communicate much of that history. Prerequisite: Admission to the program.

CRWR 661 Film History and Analysis; the Visual Narrative **2 credits**
Focus on examination, analysis, and discussion of classic and contemporary films from a screenwriting, story, and character development perspective as well as analyses of theme and motif. Students engage in writing activities and exercises to develop a visual narrative style. All such writing goes towards creating material to fuel the mentoring process in upcoming semesters. The main theme here is: when possible show the story element; don't have a character say it. Finally the prevailing three- and four-act screenplay structures will be explored. Prerequisite: Admission to the program.

CRWR 662 Story, Conflict, Character, and Genre in Screenwriting **2 credits**
Focus on workshopping of short screenplays and projects along with exploration of story arc, elements of conflict, character development and arc, with an emphasis on film genre choices and styles. Includes proposals for upcoming mentoring semesters feature-length screenplays, plus an opportunity to practice pitches. Prerequisite: Admission to the program.

CRWR 663 Screenwriting Competition, Representation, the "Option" **2 credits**
Focus on mock or actual "pitch" sessions of the thesis screenplay. Screenwriting contests researched and entered. Writers Guild guidelines and application explored. Agents, options to produce, and independent film potential also explored. Prerequisite: Admission to the program.

CRWR 665 Screenwriting Genre **6 credits**
Focus on challenging students to write filmic stories in three distinct genre categories, forcing a growth and flexibility to create meaning across a spectrum of setting, time, and circumstance. Dialogue is permitted but is de-emphasized in favor of a more visual narrative. Prerequisite: Admission to the program.

CRWR 668 Television Drama and Situation Comedy **6 credits**
Focus on a thorough proposal for both the drama and sitcom, researched and written. The result will be a complete "pitch" portfolio including a "spec" episode teleplay completed for (both or either) a television drama (and/or) a situation comedy. Prerequisite: Admission to the program.

CRWR 671 Writing the First Feature-Length Screenplay **6 credits**
Focus on a thorough review of the existing works in the style and genre of the proposed piece, and a thorough treatment is written. Students generate character biographies and a complete story outline. The production is "pitched" to fellow students along with the mentor. A first draft is written and critiqued. Prerequisite: Admission to the program.

CRWR 675 Writing the TV Pilot **6 credits**
Focus on choosing and writing an original TV pilot for either a 1-hour drama series, or a half-hour sitcom. In addition to the pilot script, this course requires the students to pitch the idea, come up with marketing materials – i.e. treatment for the series, outline of the pilot, a series "bible," and loglines for at least 4-5 future episodes. Prerequisite: Admission to the program.

CRWR 678 Adaptation **6 credits**
Focus on taking preexisting source material (books, newspaper articles, videogames, graphic novels etc.) and learning how to begin adapting such into a screenplay. Students will examine various forms of adaptation, write a research paper, and write the first act of their own feature adaptation piece. Prerequisite: Admission to the program.

CRWR 684 Teaching and Pedagogy **6 credits**
A guided discussion on pedagogy theory and practice with weekly questions on points of interest, suggested readings, and the

opportunity for writing teachers and aspiring writing teachers to discuss challenges and insights about the practice of teaching. Prerequisite: Admission to the Program.

CRWR 690 Screenwriting Master's Capstone Project I **6 credits**

Focus on a feature-length screenplay, intended for Hollywood or independent production, proposed including a thorough review of the existing works, treatment, character biographies, and generation of a complete story outline. A first draft of approximately 120 pages written and critiqued. Prerequisite: Admission to the program.

CRWR 691 Screenwriting Master's Capstone Project II **6 credits**

Focus on completion of the screenplay. Several drafts written and developed with the mentor. Following industry preferences, the screenplay should target approximately 100 pages. Prerequisite: Admission to the program.

CRWR 692 Independent Study **1-6 credits**

Focus on working with a faculty mentor to research, develop, and structure a student's particular areas of interest into a written work. May be repeated for up to 12 credits. Prerequisite: Admission to the program.

CRWR 694 Capstone **3 credits**

Culmination of the student's education at Western. In consultation with his or her adviser, the student completes a single work of genre fiction OR a collection of shorter genre fiction works (such as short stories or novellas) of publishable quality, suitable for public reading, and for thesis binding. Prerequisite: Admission to the program.

CRWR 697 Special Topics **6 credits**

Focus on studies of a particular topic of interest to students in the MFA program to be announced each time the course is offered. Prerequisite: Admission to the program.

CERTIFICATE IN PUBLISHING

Through our 13-month course of study, writers become savvy about the publishing industry.

The Certificate in Publishing program offers students the opportunity to learn about the publishing industry through hands-on experience. Students enrolled will produce, from start to finish, a volume of Manifest West, the literary anthology series of Western Press Books. Students have weekly editorial board meetings to review and discuss submissions, then make the final selections and copyedit and proofread the anthology. Throughout the program, students work with experts in the publishing industry to gain insight into this ever-evolving field.

During this process, students also learn how to critically edit their own writing, and they regularly workshop writing from peers to prepare it for submission to magazines and presses. Graduates of the Certificate in Publishing Program are prepared to enter the publishing field as agents, editors, or start their own small presses.

FACULTY

Certificate Program Director Caleb J. Seeling.

The Program

Come to Western's campus in Gunnison, high in the Colorado Rockies, for two weeks during two consecutive summers in late July. Study the publishing industry, workshop your writing, and learn how to present work to editors and agents. Participate during the fall and spring terms in an online editorial board to plan and prepare a book for publication through Western's press. Learn about publishing house operations, including acquisitions, editorial, design, marketing and sales, as well as record-keeping and fulfillment.

Admission Requirements

The applicant wishing to enroll in the Certificate of Publishing Program must complete the following:

- An application for admission to certificate study.
- A $50 non-refundable processing fee.
- An 800 to 1,000 word personal statement describing writing experience and interest in publishing.
- A writing sample of 15-20 pages prose (double-spaced); or 5-7 poems; or a combination of 2-3 poems and 7-10 pages of prose.
- An official transcript of a baccalaureate degree, with a recommended minimum 3.0 GPA for writing-related courses. The baccalaureate-granting institution must send the transcript directly to the Western State Colorado University Office of Extended Studies Graduate Office.

Send personal statement, writing sample and transcript to:

Certificate in Publishing
Western State Colorado University
Extended Studies Graduate Office
600 N. Adams
Taylor Hall 303
Gunnison, CO 81231
FAX: (970) 943-7068

Program Costs

Tuition costs $350 per credit, or a total of $6,300.00 for the entire 13-month program. Additional costs include class texts as well as two-week summer residency expenses such as transportation to and from Gunnison, on-site accommodations, and meals.

Program Requirements

The Certificate in Publishing is a set of courses totaling 18 credits designed to demystify the practices and expectations of the publishing industry, and to give participating students the chance to engage in the process of creating a book for publication as a part of the institution's Western Press Books. Students take four 3-credit practicum courses over 13 months, including two residential summer intensive terms and two non-resident academic terms. In addition, students take six 1-credit courses online to learn theoretical concepts; the content of these six credits is closely correlated to practicum courses. Students may also take an elective internship as part of the certificate programming.

The Certificate in Publishing requires a minimum of 18 credits. *Students take the following courses in the indicated sequence:*

First Summer Residency:	
CRWR 520 Summer Intensive I	3 cr
Fall Non-Residency:	
CRWR 521 Editorial Practicum I	3 cr
CRWR 522 Editorial Skills	1 cr
CRWR 523 Acquisitions	1 cr
CRWR 524 Business Models for Press Houses	1 cr
Spring Non-Residency:	
CRWR 525 Editorial Practicum II	3 cr
CRWR 526 Design and Layout	1 cr
CRWR 527 Marketing and Sales	1 cr

CRWR 528 Back Office and Fulfillment	1 cr
Second Summer Residency:	
CRWR 530 Summer Intensive II	3 cr

The Curriculum

The course of studies includes summer face-to-face classes, a series of integrated self- paced modules, and synchronous discussions in an online environment. See the list of specific courses here:

CRWR 520 Summer Intensive I **3 credits**
Focuses on writing workshops that teach students how to research, edit, and hone their work, and submit it for publication. Familiarizes students with aesthetics of different literary magazines, and the aesthetic of the book the course prepares for production. Teaches introductory skills and orientation for online work for the subsequent year of study. Graded Satisfactory/Unsatisfactory only. Prerequisite: Acceptance into the publishing program.

CRWR 521 Editorial Practicum I **3 credits**
Involves students in an acquisitions editorial staff that reads and evaluates submissions for publication in the book project for the year. Students review submissions ahead of time and e-mail comments to acquisitions editor on whether work should be considered by entire board, then participate in online discussions every other week. Students also meet online three times to discuss materials from learning modules, and how that information relates to book project and their duties as editors and publishers. Graded Satisfactory/Unsatisfactory only. Prerequisite: CRWR 520. Co-requisites: CRWR 522, CRWR 523, CRWR 524.

CRWR 522 Editorial Skills **1 credit**
Focuses on these topics: identifying potential authors and conducting author outreach; market analysis; working with agents and book packagers; negotiating the author contract; and working in editorial review groups – who participates and why. Graded Satisfactory/Unsatisfactory only. Prerequisite: CRWR 520. Co-requisites: CRWR 521, CRWR 523, CRWR 524.

CRWR 523 Acquisitions **1 credit**
Teaches these topics: what an editor does (and does not do); what "house style" is and how books conform; steps from developmental edit to copyedit to proofread; and appropriate interaction with authors. Graded Satisfactory/Unsatisfactory only. Prerequisite: CRWR 520. Co-requisites: CRWR 521, CRWR 522, CRWR 524.

CRWR 524 Business Models for Press Houses **1 credit**
Familiarizes students with traditional publishing house models such as nonprofit, for- profit, academic press, and trade press, as well as the emerging online electronic delivery models of publishing. Graded Satisfactory/Unsatisfactory only. Prerequisite: CRWR 520. Co-requisites: CRWR 521, CRWR 522, CRWR 523.

CRWR 525 Editorial Practicum II **3 credits**
Involves students in an acquisitions editorial staff that will select, proof, and ready submissions for publication of the book project for the year. Students participate in online discussions every week, meeting as an editorial board to select submissions for publication in the book project. Students finalize selections, proof work, and ready book for publication. The class also meets online three times to discuss materials from learning modules, and how that information relates to book project and their duties as editors and publishers. Graded Satisfactory/Unsatisfactory only. Prerequisite: CRWR 521. Co-requisites: CRWR 526, CRWR 527, CRWR 528.

CRWR 526 Design and Layout **1 credit**
Provides students with an understanding of such design and layout consideration as typography, use of graphics, cover design, interior book layout, creation of an index, interaction with printers, as well as alternative considerations for electronic and e-reader delivery. Graded Satisfactory/Unsatisfactory only. Prerequisite: CRWR 521. Co- requisites: CRWR 525, CRWR 527, CRWR 528.

CRWR 527 Marketing and Sales **1 credit**
Familiarizes student with the topics of 1) the role of the author in marketing and selling a book; 2) the marketing done prior to book publication and what happens after release; 3) effective public relations; 4) sales model-direct, bookstores/retail, hybrid distribution; and electronic promotion, marketing, and delivery; 5) selling books in-house by team, by distribution, and by commissioned reps; 6) tracking and evaluating sales. Graded Satisfactory/Unsatisfactory only. Prerequisite: CRWR 521. Co-requisites: CRWR 525, CRWR 526, CRWR 528.

CRWR 528 Back Office and Fulfillment **1 credit**
Covers accounting and inventory issues, customer service, warehousing and shipping of physical book inventory, as well as electronic delivery systems. Graded Satisfactory/ Unsatisfactory only. Prerequisite: CRWR 521. Co-requisites: CRWR 525, CRWR 526, CRWR 527.

CRWR 530 Summer Intensive II **3 credits**
Focuses on final preparation of the product as well as formulating and launching a marketing plan for distribution. Graded Satisfactory/Unsatisfactory only. Prerequisite: CRWR 525.

CRWR 597 Special Topics **1-3 credits**
Studies of a particular topic of interest to students of the Publishing Certificate program to be announced each time the course is offered. Graded Satisfactory/ Unsatisfactory only. Prerequisite: instructor permission.

CRWR 599 Internship in Publishing **1-6 credits**
Provides an opportunity to work as an intern for a publishing house or press outside the university. Graded Satisfactory/Unsatisfactory. Prerequisite: instructor permission.

MASTER OF ARTS IN EDUCATION

The Master of Arts in Education degree program combines online learning with practical and applied learning in the K-12 classroom. The master's candidate must earn and successfully complete 30-43 semester credits of graduate course work, specific to the emphasis chosen. A teacher or principal licensure or an added endorsement credential is included in some emphases. Either a graduate capstone or final comprehensive examinations in the form of professional portfolios are required for graduation. A summer on-campus or online program orientation must be completed before coursework is begun. The candidate will earn a Master of Arts in Education and specialize in one of the following emphases: K-12 Online Teacher Leadership, Reading Leadership, Teaching Leadership, Educational Administration, Culturally and Linguistically Diverse Leadership, or Educator Effectiveness.

- A candidate intending to pursue the Master of Arts in Education with emphasis in K-12 Online Teacher Leadership, Reading Leadership, or Teacher Leadership will complete one of the following licensure or added endorsement programs as part of the MA degree: Elementary, K-12/Secondary, Secondary English, or Special Education Generalist.
- A candidate intending to pursue the Master of Arts in Education with emphasis in Educational Administration will complete the Principal Licensure program as part of the MA degree.
- A candidate intending to pursue the Master of Arts in Education with emphasis in Culturally and Linguistically Diverse Education will complete the Culturally and Linguistically Diverse added endorsement program as part of the MA degree.
- A candidate intending to pursue the Master of Arts in Education with emphasis in Educator Effectiveness is required to hold an initial or professional teacher license as a prerequisite for admission and may be eligible to earn an additional licensure area or endorsement depending on course sequences chosen.

Upon acceptance to the program, an advisor will be assigned to assist the applicant in developing a degree plan, which includes a comprehensive exam or a capstone.

DESCRIPTION OF THE PROGRAMS

Teacher Licensure Areas

Students seeking the MA in Education with emphasis in Teacher Leadership, Reading Leadership, or K-12 Online Teacher Leadership must complete 27 credits of coursework in their first year of the MA Program. Students may choose to seek a Colorado Initial License or an added Colorado Endorsement, or to pursue further investigations in their current licensure area. Licensure areas include Elementary, K-12 (Art, Foreign Language, Music, and Physical Education), Secondary (Business, Mathematics, Science, and Social Studies), Secondary English, and Special Education.

Elementary Education Licensure

EDUC 600 Foundations of Literacy Development	3 cr
EDUC 601 Methods and Strategies of Effective Reading Instruction	3 cr
EDUC 602 Literacy Assessment Informed Instruction	3 cr
EDUC 604 Learning Environments	3 cr
EDUC 605 Curriculum Development and Assessment	3 cr
EDUC 608 Methods and Strategies of Effective Writing Instruction	3 cr
EDUC 613 Methods and Strategies of Effective Mathematics Instruction	3 cr
EDUC 619 Elementary Student Teaching *(must be taken twice)*	3 cr

Secondary or K-12 Licensure

EDUC 603 Content Area Learning	3 cr
EDUC 604 Learning Environments	3 cr
EDUC 605 Curriculum Development and Assessment	3 cr
EDUC 606 Reading and Writing in the Content Area	3 cr
EDUC 607 Rethinking Learning Through 21st Century Skills	3 cr
EDUC 620 Engaging Diverse Learners	3 cr
EDUC 624 Managing to Differentiate	
Appropriate Student Teaching Course	
EDUC 609 Secondary Student Teaching *(must be taken twice)*	3 cr
EDUC 610 K-12 Student Teaching *(must be taken twice)*	3 cr

Secondary English Licensure

EDUC 601 Methods and Strategies of Effective Reading Instruction	3 cr
EDUC 602 Literacy Assessment Informed Instruction	3 cr
EDUC 603 Content Area Learning	3 cr
EDUC 604 Learning Environments	3 cr
EDUC 605 Curriculum Development and Assessment	3 cr
EDUC 607 Rethinking Learning Through 21st Century Skills	3 cr
EDUC 608 Methods and Strategies of Effective Writing Instruction	3 cr
EDUC 609 Secondary Student Teaching *(must be taken twice)*	3 cr

Special Education Generalist Licensure

EDUC 600 Foundations of Literacy Development	3 cr
EDUC 601 Methods and Strategies of Effective Reading Instruction	3 cr
EDUC 602 Literacy Assessment Informed Instruction	3 cr
EDUC 611 Strategies & Techniques for Teaching Students with Support Needs	3 cr
EDUC 612 Behavioral Analysis & Intervention	3 cr
EDUC 613 Methods and Strategies of Effective Mathematics Instruction	3 cr
EDUC 614 Collaborating for Students with Support Needs	3 cr
EDUC 615 Special Education Student Teaching *(must be taken twice)*	3 cr

Master of Arts in Education with emphasis in Educator Effectiveness

The MA in Education emphasis in Educator Effectiveness delivers a curriculum that provides a customized and relevant program of study based upon the candidate's specific needs as measured by Colorado's Teacher Quality Standards for performance. Candidates may complete the MA in one academic year by completing fifteen credits per semester. Programs of study may be made up from five, 3-credit courses or the equivalent by inserting 1-6 credit offerings during fall and spring semesters only, so that the candidate may choose to spread out their program to complete the 30 credits over more than one year, within the five year maximum. Courses are limited to the fall and spring semesters due to the fact that coursework is designed to be completed and applied within a K-12 teaching setting for maximum internalization and improvement. Candidates may begin or end the program in either fall or spring semesters. Upon acceptance into the program, candidates will work with a profile identifier and academic advisor to register for the most applicable sequence of courses which will help meet specific goals established from the candidate's professional growth plan.

In order to earn the MA in Education with emphasis in Educator Effectiveness, the candidate must successfully complete 30 graduate credits of 600-level education course work. Final comprehensive exams will require an extensive portfolio of evidence from multiple measures to establish the rate and degree of improvement in performance. These may include the candidate's annual effectiveness ratings (pre-program and post-program) as reported by an evaluating administrator, evidence of academic achievement and growth of the candidate's K-12 students taught during the course of the program, artifacts, assessments, and further evidence of performance and growth. The portfolios will be due and evaluated to coincide with the end of the candidate's final semester.

Candidate will complete 30 credits from the following:

EDUC 600 Foundations of Literacy Development	3 cr
EDUC 601 Methods and Strategies of Effective Reading Instruction	3 cr
EDUC 602 Literacy Assessment Informed Instruction	3 cr
EDUC 605 Curriculum Development and Assessment	3 cr
EDUC 606 Reading and Writing in the Content Area	3 cr
EDUC 607 Rethinking Learning Through 21st Century Skills	3 cr
EDUC 608 Methods and Strategies of Effective Writing Instruction	3 cr
EDUC 611 Strategies & Techniques for Teaching Students with Support Needs	3 cr
EDUC 612 Behavioral Analysis & Intervention	3 cr
EDUC 613 Methods and Strategies of Effective Mathematics Instruction	3 cr
EDUC 614 Collaborating for Students with Support Needs	3 cr
EDUC 616 Language Acquisition for Linguistically Diverse Students	3 cr
EDUC 617 Cognitive Academic Language Proficiency in the Content Area	3 cr
EDUC 620 Engaging Diverse Learners	3 cr
EDUC 621 Creating Effective Online Learning Environments	3 cr
EDUC 622 Using Data to Plan for Online Learning and Targeted Interventions	3 cr
EDUC 623 Designing and Delivering Effective Online Instruction	3 cr
EDUC 624 Managing to Differentiate	3 cr
EDUC 625 Relevant Data Analysis to Inform Instruction	3 cr
EDUC 674 Parent and Community Involvement	3 cr
EDUC 681 Instructional Program Evaluation	3 cr
EDUC 682 Shaping School Culture	3 cr
EDUC 684 Materials and Motivation for Reading	2 cr
EDUC 685 Assessing, Evaluating, and Instructing at-risk & Struggling Readers	3 cr
EDUC 686 Literacy Coaching and Mentoring	2 cr
EDUC 687 School-Wide Comprehensive Literacy Program Development	2 cr
EDUC 688 Reading Teacher Internship	3 cr
EDUC 689 Reading Specialist Internship	3 cr
EDUC 692 Issues and Trends in Leadership Seminar	1 cr
EDUC 694 School Law for Teachers	3 cr
EDUC 695 Grant Writing in Education	2 cr
EDUC 697 Special Topics in Education	1-6 cr
EDUC 699 Research Problems	1-6 cr

If seeking to add a Colorado endorsement to an existing license, prescribed courses and department approval are needed.

Master of Arts in Education with emphasis in K-12 Online Teacher Leadership

K-12 Online Teacher Leadership is defined as the work of an individual (an online-teacher leader) teaching online in a virtual school and/or in a blended K-12 learning environment who knows federal and state policies related to online and blended teaching and learning; has advanced knowledge of the development, implementation, and evaluation of quality online teaching and instructional design; and can work effectively with other online or blended instructional staff to meet the targeted learning needs of all students. The K-12 online teacher leader provides professional guidance and expertise to virtual or brick and mortar schools on effective curriculum, instruction, and assessment programs in relation to online and blended learning.

In order to earn the MA in Education with emphasis in K-12 Online Teacher Leadership, the candidate must successfully complete 43 graduate credits of education course work in conjunction with in-classroom/school practical experience. Already licensed teachers have the option of adding an endorsement in one of the licensure areas above during their first year of study. Successful completion of the K-12 Online Teacher Leadership emphasis will result in earning the MA degree.

Completion of the Emphasis in K-12 Online Teacher Leadership

EDUC 621 Creating Effective Online Learning Environments	3 cr
EDUC 622 Using Data to Plan for Online Learning and Targeted Interventions	3 cr
EDUC 623 Designing and Delivering Effective Online Instruction	3 cr
EDUC 680 Research and Critical Inquiry for Leaders	4 cr
EDUC 693 Capstone	3 cr

Master of Arts in Education with emphasis in Reading Leadership

Reading Leadership is defined as the work of an individual (a reading-leader) situated in the classroom or in a school or district-level position who has advanced knowledge of federal and state policies related to literacy; has deep understanding of the development, implementation, and evaluation of scientifically-based reading programs; and can work effectively with other instructional staff to meet the literacy needs of all students. The reading leader provides professional guidance and expertise to classroom teachers, school and/or district literacy curriculum, instruction, and assessment programs; and develops and conducts in-service programs related to literacy.

In order to earn the MA in Education with emphasis in Reading Leadership, the candidate must successfully complete 43 graduate credits of education course work in conjunction with in-classroom/school practical experience. Already licensed teachers have the option of adding an endorsement in the licensure areas listed above during their first year of study, and will have the opportunity to add Reading-specific endorsements as they complete their MA as outlined below. Successful completion of the Reading Leadership emphasis will result in earning the MA degree.

Completion of the emphasis in Reading Leadership

EDUC 680 Research and Critical Inquiry for Leaders	4 cr
EDUC 684 Materials and Motivation for Reading	2 cr
EDUC 685 Assessing, Evaluating, and Instructing at-risk & Struggling Readers	3 cr
EDUC 686 Literacy Coaching and Mentoring	2 cr
EDUC 687 School-Wide Comprehensive Literacy Program Development	2 cr
EDUC 693 Capstone	3 cr
Optional courses required in the Reading Leadership emphasis to add Colorado endorsements in Reading Teacher and/or Reading Specialist	
EDUC 688 Reading Teacher Internship	3 cr
EDUC 689 Reading Specialist Internship	3 cr

Master of Arts in Education with emphasis in Teacher Leadership

Teacher Leadership is defined as the work of an individual (a teacher-leader) within a school who is regarded as an excellent educator; is well respected by peers; is recognized for his or her leadership capacity; holds a lifelong learning orientation; and has been identified to facilitate, advocate, and advance school reform and improvement of student learning. This work is typically carried out through informal and formal venues and processes; for example, with teachers in their classrooms, and district level task forces, committee, and/or membership in district level professional development projects.

In order to earn the MA in Education with emphasis in Teacher Leadership, the candidate must successfully complete 43 graduate credits of education course work in conjunction with in-classroom/school practical experience. Already licensed teachers have the option of adding an endorsement in the licensure areas listed above during their first year of study. Successful completion of the Teacher Leadership emphasis will result in earning the MA degree.

Completion of the emphasis in Teacher Leadership

EDUC 680 Research and Critical Inquiry for Leaders	4 cr
EDUC 681 Instructional Program Evaluation	3 cr
EDUC 682 Shaping School Culture	3 cr
EDUC 693 Capstone	3 cr
Three credits from the following:	
EDUC 684 Materials and Motivation for Reading	2 cr
EDUC 692 Issues and Trends in Leadership Seminar	1 cr
EDUC 694 School Law for Teachers	3 cr
EDUC 695 Grant Writing in Education	2 cr

Master of Arts in Education with emphasis in Culturally and Linguistically Diverse Leadership

Culturally and Linguistically Diverse (CLD) Leadership is defined as the work of an individual (a CLD Interventionist or CLD Teacher Leader) who serves as a liaison between various constituents accountable for meeting the needs of CLD learners in the school and

community settings. This individual is aware of state, national and local cultural norms, legalities, and policies that impact student learning and the acquisition of English language proficiency. The CLD leader has the ability to guide and support stakeholders associated with serving CLD learners to sustained high levels of productivity, collaboration, and achievement.

In order to earn the MA in Education with emphasis in CLD Leadership, the candidate must successfully complete 43 graduate credits of education course work in conjunction with in-classroom/school practical experience. The candidate must be a licensed teacher and will be eligible to add a CLD endorsement at the conclusion of the first year of MA course work.

First year CLD endorsement course work requires 27 credits:

EDUC 600 Foundations of Literacy Development	3 cr
EDUC 601 Methods and Strategies of Effective Reading Instruction	3 cr
EDUC 602 Literacy Assessment Informed Instruction	3 cr
EDUC 605 Curriculum Development and Assessment	3 cr
EDUC 616 Language Acquisition for Linguistically Diverse Students	3 cr
EDUC 617 Cognitive Academic Language Proficiency in the Content Area	3 cr
EDUC 618 Linguistically Diverse Student Teaching (*must be taken twice)*	3 cr
EDUC 620 Engaging Diverse Learners	3 cr

Completion of the emphasis in Culturally and Linguistically Diverse Leadership requires 16 credits:

EDUC 674 Parent and Community Involvement	3 cr
EDUC 680 Research and Critical Inquiry for Leaders	4 cr
EDUC 682 Shaping School Culture	3 cr
EDUC 693 Capstone	3 cr
EDUC 694 School Law for Teachers	3 cr

Master of Arts in Education with emphasis in Educational Administration

Educational administrator leadership is defined as the work of an individual (a school-based administrator) serving in an administrative capacity at the school level. This individual is aware of local, state, and federal laws and policies that affect student learning and school management, understands the needs of students and school staff, and has the ability to lead a school to sustained high levels of productivity, collaboration, and achievement.

In order to earn the M.A. degree, the candidate must successfully complete two years of principal education course work and at least one concurrent year-long contractual or internship experience in administration. The Master of Arts in Education with emphasis in Educational Administration requires 40 credits. First-year course work requires 25 credits. At the conclusion of the first year the candidate is eligible to become licensed as a principal. Successful completion of the second year will result in earning the M.A. degree.

First year Principal Licensure course work requires 25 credits:

EDUC 670 Introduction to Leadership	4 cr
EDUC 672 Personnel Selection and Development	3 cr
EDUC 673 School Safety and Facilities Management	3 cr
EDUC 674 Parent and Community Involvement	3 cr
EDUC 675 Student Learning and Accountability	3 cr
EDUC 678 Administrator Internship I	3 cr
EDUC 679 Administrator Internship II	3 cr
EDUC 683 Legal and Ethical Issues in Schools	3 cr

Completion of emphasis in Educational Administration requires 15 credits:

EDUC 680 Research and Critical Inquiry for Leaders	4 cr
EDUC 681 Instructional Program Evaluation	3 cr
EDUC 682 Shaping School Culture	3 cr
EDUC 693 Capstone	3 cr
EDUC 695 Grant Writing in Education	2 cr

K-12 Online Teacher Series

The following three courses may be taken in series to provide the student with a sequential learning experience of nine credits, in which the student will become prepared to teach K-12 Online and Blended classes in the virtual classroom. These courses are offered as professional development only and may not be transferred into the MA in Education. Upon successful completion of the nine credit series, participants will earn a Certificate of Completion from the Office of Extended Studies.

EDUC 535 Engaging the K 12 Online Learner	3 cr
EDUC 536 Assessing the K 12 Online Learner	3 cr
EDUC 537 Field Based Application of Online Instruction	3 cr

EDUCATION COURSES

EDUC 600 Foundations of Literacy Development **3 credits**

Provide in-depth understanding of the reading acquisition process and current issues in reading research related to preliterate and emergent readers through observation and analysis of reading and written language development. Prerequisite: Admission to M.A. degree in Education Program.

EDUC 601 Methods and Strategies of Effective Reading Instruction **3 credits**

Provide in-depth understanding and application of scientifically-based methods of teaching reading comprehension vocabulary, and

fluency. Prerequisite: Admission to M.A. degree in Education Program.

EDUC 602 Literacy Assessment Informed Instruction **3 credits**
Screen, diagnose, and monitor student progress in reading and writing to inform instruction and build home-school partnerships that promote reading and writing. Prerequisite: Admission to M.A. degree in Education Program.

EDUC 603 Content Area Learning **3 credits**
Apply concepts, methods, and practices related to curriculum, assessment of learning, and teaching in content areas. Prerequisite: Admission to M.A. in Education Program.

EDUC 604 Learning Environments **3 credits**
Recognize needs for a successful classroom environment and apply strategies to support learning. Prerequisite: Admission to M.A. degree in Education Program.

EDUC 605 Curriculum Development and Assessment **3 credits**
Study and apply standards-based curriculum and assessment practices. Prerequisite: Admission to M.A. degree in Education Program.

EDUC 606 Reading and Writing in the Content Area **3 credits**
Analyze, evaluate, and apply methods for developing effective reading and writing strategies that improve student academic achievement in the content area. Prerequisite: Admission to M.A. degree in Education Program.

EDUC 607 Enhancing Student Learning with Digital Technology **3 credits**
Use technology meaningfully to enhance learning in the content area and broaden students' information literacy. Prerequisite: Admission to M.A. degree in Education Program.

EDUC 608 Methods and Strategies of Effective Writing Instruction **3 credits**
Provide in-depth understanding and application of research based methods of teaching writing as they apply to cognitive processes and socio-cultural context for diverse students. Prerequisite: Admission to M.A. degree in Education Program.

EDUC 609 Secondary Student Teaching **3 credits**
Work in a secondary school setting over the course of the year, in collaboration with mentor teachers. This course can be repeated twice for credit. Prerequisite: Admission to M.A. degree in Education Program.

EDUC 610 K-12 Student Teaching **3 credits**
Work in a K-12 school setting over the course of the year, in collaboration with mentor teachers. This course can be repeated twice for credit. Prerequisite: Admission to M.A. degree in Education Program.

EDUC 611 Strategies and Techniques for Teaching Students with Support Needs **3 credits**
Address critical issues, content, and pedagogy needed by special education professionals. Apply these theories to the daily activities of the teacher. Prerequisite: Admission to M.A. degree in Education Program.

EDUC 612 Behavioral Analysis and Intervention **3 credits**
Use critical thinking and problem solving skills to study and apply current behavioral research and school law regarding the education of students with emotional/behavioral disabilities. Prerequisite: Admission to M.A. degree in Education Program.

EDUC 613 Methods and Strategies of Effective Mathematics Instruction **3 credits**
Examine and apply research-based teaching strategies that promote mathematics learning. Prerequisite: Admission to M.A. degree in Education Program.

EDUC 614 Collaborating for Students with Support Needs **3 credits**
Use data and collaboration process to develop Individual Educational Plans, and provide support needs and technologies for students with disabilities. Prerequisite: Admission to M.A. degree in Education Program.

EDUC 615 Special Education Student Teaching **3 credits**
Work in a K-12 school setting with students with disabilities over the course of the year, in collaboration with mentor teachers. This course can be repeated twice for credit. Prerequisite: Admission to M.A. degree in Education Program.

EDUC 616 Language Acquisition for Linguistically Diverse Students **3 credits**
Develop and apply understanding of language acquisition and awareness of the historical, legal, social and educational background surrounding linguistically diverse education. Prerequisite: Admission to M.A. degree in Education Program.

EDUC 617 Cognitive Academic Language Proficiency in the Content Area **3 credits**
Differentiate social and cognitive academic language and use research to develop cognitive academic language for English Language Learners. Prerequisite: Admission to M.A. degree in Education Program.

EDUC 618 Linguistically Diverse Student Teaching **3 credits**
Work in a K-12 school setting with linguistically diverse students over the course of the year, in collaboration with mentor teachers. This course can be repeated twice for credit. Prerequisite: Admission to M.A. degree in Education Program.

EDUC 619 Elementary Student Teaching **3 credits**
Work in an elementary school setting over the course of the year, in collaboration with mentor teachers. This course can be repeated twice for credit. Prerequisite: Admission to M.A. degree in Education Program.

EDUC 620 Engaging Diverse Learners **3 credits**
A study and application of research-based instruction to engage diverse learners. Focus is on creating learning experiences to maximize student engagement and achievement, while evaluating and reflecting on teaching practices.

EDUC 621 Creating Effective Online Learning Environments **3 credits**
An inquiry into how K-12 educators can best develop relevant and engaging blended and online instructional contexts to meet the needs of all K-12 learners. Focus is on exploration of tools, resources and emerging technologies to determine how to build and manage learning environments which maximize student achievement. Prerequisite: Admission to M.A. degree in Education Program.

EDUC 622 Using Data to Plan for Online Learning and Targeted Interventions **3 credits**
A study of best practices in creating, implementing, and using assessments in the online environment. Focus is on analyzing real-time data and findings from assessments to make instructional decisions and to plan targeted interventions to ensure student success.

Prerequisite: Admissions to M.A. degree in Education Program.

EDUC 623 Designing and Delivering Effective Online Instruction **3 credits**

Online field-based experience in design, delivery, and evaluation of standards-based instruction in an appropriate K-12 setting. A collaborative approach will be fostered among students, teachers, and school-level administrators to support existing or emerging online or blended instructional needs. Prerequisite: Admission to M.A. degree in Education Program.

EDUC 624 Managing to Differentiate **3 credits**

This course provides a study of cognitive development as it impacts different learners' ability to access academic content. Participants will build a foundation of understanding from which they will develop skills, strategies and resources that they can then apply in their teaching to address the complex challenges of meeting the diverse learning needs of all students. Prerequisite: Admission to M.A. degree in Education Program.

EDUC 625 Relevant Data Analysis to Inform Instruction **3 credits**

Identify and utilize all levels of data to inform instructional decisions. Daily measures of student performance are analyzed along with summative assessments to develop relevant plans for instruction that may include interventions and differentiation. Explore resources to assist in tracking of student progress and develop evidence of effectiveness relative to Teacher Quality Standards. Prerequisite: Admission to the M.A. degree in Education Program.

EDUC 670 Introduction to School Leadership **4 credits**

Provide an overview of educational leadership principles, including theories of leadership, foundational concepts of leading a school, qualities of effective leaders, and the process of building a positive, collaborative school culture. Prerequisite: Admission to the M.A. degree in Education Program.

EDUC 672 Personnel Selection and Development **3 credits**

Understand and evaluate the process of working with school-related personnel, including recruiting and hiring practices, developing meaningful induction and mentoring programs, managing teacher and staff evaluations, and providing needs-based professional development for all staff. Prerequisite: Admission to the M.A. degree in Education Program.

EDUC 673 School Safety and Facilities Management **3 credits**

Identify and explore the components of school plant and safety management, including school-wide student discipline policies and practices, crisis and emergency planning and responses, and managing various funding sources associated with operating a school. Prerequisite: Admission to the M.A. degree in Education Program.

EDUC 674 Parent and Community Involvement **3 credits**

Investigate various strategies for building relationships with all members of the school community, including identifying and understanding diversity in the surrounding community, establishing partnerships with area businesses and organizations, and working effectively with local media outlets. Prerequisite: Admission to the M.A. degree in Education Program.

EDUC 675 Student Learning and Accountability **3 credits**

Examine the responsibilities of managing curriculum, instruction, and assessment in schools, including evaluation of curriculum and instruction practices to maximize learning for all students, analysis of data from local and statewide assessments to drive instructional decisions for school improvement, and development of strategies to support a range of diverse student learning needs. Prerequisite: Admission to the M.A. degree in Education Program.

EDUC 678 Administrator Internship I **3 credits**

Complete a supervised internship or work full/part time as a school-based administrator. Demonstrate competency on Colorado principal licensure standards through structured, reflective tasks and leadership-based internship experiences. Prerequisite: Admission to the M.A. degree in Education Program.

EDUC 679 Administrator Internship II **3 credits**

Complete a supervised internship or work full/part time as a school-based administrator. Demonstrate competency on Colorado principal licensure standards through structured, reflective tasks and leadership-based internship experiences. Prerequisite: Admission to the M.A. degree in Education Program and successful completion of EDUC 678 Administrator Internship I.

EDUC 680 Research and Critical Inquiry for Leaders **4 credits**

Examine, analyze, and synthesize research literature in relation to emerging trends in education. Explore concepts pertaining to quantitative and qualitative research methods and the synergistic relationship between research, theory, and practice. Develop problem posing/solving, information literacy, and critical thinking. Prerequisite: Admission to M.A. degree in Education Program.

EDUC 681 Instructional Program Evaluation **3 credits**

Investigate trends in curriculum and instruction while understanding their relationship to student data and performance. Evaluate teaching and assessment strategies in a school-wide context, as they affect student learning. Prerequisite: Admission to M.A. degree in Education Program.

EDUC 682 Shaping School Culture **3 credits**

Explore issues related to communication and collaboration within a school culture. Examine and apply critical analysis and creativity related to educational group dynamics that advocate for all students, staff, and stakeholders within a school community. Prerequisite: Admission to the M.A. Degree in Education Program.

EDUC 683 Legal and Ethical Issues in Education **3 credits**

Explore legal and ethical issues related to equity, diversity, and accessibility in schools, including examining cases and case law affecting school-based practices, identifying the legal and ethical responsibilities of school employees, and understanding the rights and responsibilities of the members in the school community. Prerequisite: Admission to the M.A. degree in Education Program.

EDUC 684 Materials and Motivation for Reading **2 credits**

Select and evaluate materials, develop independent readers, involve the community, and establish and manage the literacy environment. Prerequisite: Admission to M.A. degree in Education Program.

EDUC 685 Assessing, Evaluating, and Instructing At-risk and Struggling Readers **3 credits**
Develop in-depth understanding of scientifically based reading research and instruction for at risk and struggling readers. Provide the tools necessary to diagnose, evaluate and teach struggling readers. Assignments will include the development of intervention programs and the implementation of progress-monitoring reading assessments. Prerequisite: Admission to M.A. degree in Education Program.

EDUC 686 Literacy Coaching and Mentoring **2 credits**
Examine roles and functions of literacy coaching and mentoring to provide professional development for literacy in the school setting. Prerequisite: Admission to M.A. degree in Education Program.

EDUC 687 School-Wide Comprehensive Literacy Program Development **2 credits**
Prepare educators for school-wide comprehensive literacy program development and delivery. Prerequisite: Admission to M.A. degree in Education Program.

EDUC 688 Reading Teacher Internship **3 credits**
Complete supervised practicum(s) or internship(s) as a reading teacher at the appropriate grade level(s) for Colorado Department of Education Reading Teacher graduate endorsement. This course can be repeated twice for credit. Prerequisite: Admission to M.A. degree in Education Program.

EDUC 689 Reading Specialist Internship **3 credits**
Complete supervised practicum(s) or internship(s) as a reading specialist at the appropriate grade level(s) for Colorado Department of Education Reading Specialist graduate endorsement. This course can be repeated twice for credit. Prerequisite: Admission to M.A. degree in Education Program.

EDUC 692 Issues and Trends in Leadership Seminar **1 credit**
The role of professional literature and experience in the development of leadership capacity that advocates for improvements of education. Prerequisite: Admission to
M.A. degree in Education Program.

EDUC 693 Capstone **3 credits**
Interpreting, planning, conducting, and reporting research results in the field of education. The student must be enrolled in EDUC 693 when utilizing Western State Colorado University Graduate Faculty support in conducting research. This course can be repeated for credit and is required the final semester of the M.A. degree in Education Program.

EDUC 694 School Law for Teachers **3 credits**
Examine laws and state/national policies affecting schools. Demonstrate an understanding of the rights and responsibilities of teachers and students. Explore the differences between legal and ethical issues in education. Prerequisite: Admission to the M.A. degree in Education Program.

EDUC 695 Grant Writing in Education **2 credits**
Explore and apply the characteristics of effective grant writing for education-specific programs and initiatives. Identify potential funding agencies and analyze school needs to determine potential grant opportunities. Prerequisite: Admission to the M.A. degree in Education Program.

EDUC 697 Special Topics in Education **1-6 credits**
Prerequisite: Admission to M.A. degree in Education Program.

EDUC 698 Independent Study **1-6 credits**
Work individually with a professor to design and complete a self-paced course of study. Prerequisite: Admission to M.A. degree in Education Program.

EDUC 699 Research Problems **1-6 credits**
Prerequisite: Admission to M.A. degree in Education Program.

PROFESSIONAL DEVELOPMENT FOR EDUCATORS & PRINCIPALS

The following Education course offerings are provided through the Office of Extended Studies. The 500-level credits earned do not transfer into a Western MA in Education degree. The rigor, audience and purpose of these courses are distinct from courses offered through the Graduate degree program and have a different pricing structure.

EDUC 597 Special Topics in Education **1-6 credits**

K-12 Online Teacher Series

The following three courses may be taken in series to provide the student with a sequential learning experience of nine credits, in which the student will become prepared to teach K-12 Online and Blended classes in the virtual classroom. These courses are offered as professional development only and may not be transferred into the MA in Education. Upon successful completion of the nine credit series, participants will earn a Certificate of Completion from the Office of Extended Studies.

EDUC 535 Engaging the K-12 Online Learner	3 cr
EDUC 536 Assessing the K-12 Online Learner	3 cr
EDUC 537 Field Based Application of Online Instruction	3 cr

EDUC 535 Engaging the K-12 Online Learner **3 credits**

A study of methods and strategies to engage the online K-12 learner. Educators study how to transition from traditional face-to-face classrooms to online settings. Focus is primarily on the key principles of effective online instruction and the power of the learner-centered approach to ensure success for the online teacher and learner. Prerequisite: Teaching license.

EDUC 536 Assessing the K-12 Online Learner **3 credits**

A study of methods and strategies to engage the online K-12 learner. Educators study the principles of effective online assessment and specific online tools and strategies. Focus is on using assessment results to differentiate instruction and support the K-12 online learner. Prerequisite: Teaching license and EDUC 535.

EDUC 537 Field-Based Application of Online Instruction **3 credits**

Application of effective online teaching to an appropriate K-12 student population. Prerequisite: Teaching license and EDUC 535 & EDUC 536.

MASTER IN ENVIRONMENTAL MANAGEMENT

The Master in Environmental Management (MEM) is a professional terminal degree, specifically focused on the content understanding and methods necessary to managing environmental organizations, public lands agencies, and communities towards sustainable solutions. The program emphasizes entrepreneurial and systems-thinking approaches to environmental issues associated with increasing climate disturbances, natural resource demands, and socio-economic insecurity. The MEM offers a "hybrid" learning environment for full-residency students rooted in the learning laboratories of the Gunnison Country, combined with a low-residency option for select environmental professionals from all over the world.

Program Goals:

- Improving student understanding of environmental systems and services, of the human impact on those systems, and of the array of sustainable and resilient solutions to those impacts.
- Developing students' capacities for interdisciplinary critical thinking, entrepreneurial innovation, and collaborative environmental problem-solving with diverse stakeholders.
- Enhancing career opportunities in environmentally related disciplines.

Student Outcomes

Students will be able to:

- Understand the complex interactions among human, climate, and ecological systems.
- Access and evaluate information about environmental issues.
- Critically assess the fundamental elements of environmental problems.
- Develop and apply diverse management and adaptation strategies to solve environmental problems.
- Effectively communicate the complexity of environmental problems as well as appropriate solutions to diverse audiences.
- Collaborate with and build partnerships among diverse stakeholders in order to complete major environmental projects.

Program Prerequisites

- BA or BS degree is required before attending the first Summer in MEM Program.
- Minimum Prerequisites must be completed by end of first MEM Fall term:
    - college-level statistics course.
    - two college-level natural or environmental science courses (BIOL, GEOL, ENVS, PHYS, CHEM, SCI), at least one course with lab or field component.
    - two college-level social science courses.
- Integrative Land Management Recommended Prerequisites
    - one upper-level Ecology course
    - one GIS course
- Sustainable and Resilient Communities Recommended Prerequisites
    - one course in Economics (Micro or Macro preferred)
    - Financial Accounting
- Faculty Mentor may recommend further coursework or certifications for students to complete before Master's Portfolio is due in Spring II, depending upon student career ambitions and professional career standards. Student will be notified of this as part of the admissions offer.
- Admissions Criteria: a holistic package balancing academic excellence with environmental leadership experience encouraged. Admissions packages will include: academic transcripts showing a recommended 3.0 undergraduate GPA or above in relevant courses; a portfolio outlining environmental employment, leadership and volunteer experience; a statement of purpose describing the student's intellectual and professional interests in environmental management; and three letters of recommendation from professors or supervisors in related fields.

DESCRIPTION OF THE PROGRAMS

Master in Environmental Management

A minimum of 46 credits is required for the MEM degree. The 20-credit Core, plus one 3 credit elective in the first year, earns a Graduate Certificate in Environmental Management. Students who earn the MEM do not also earn a Graduate Certificate after the first year.

All MEM students must complete the 20-credit Core.

Core Courses:

ENVS 601 Introduction to Environmental Management	5 cr
ENVS 605: Applied Environmental Science	3 cr
ENVS 608: Environmental Politics and Policy	3 cr
ENVS 611: Integrative Skills for Environmental Management	3 cr
ENVS 612: Quantitative Skills for Environmental Management	3 cr
ENVS 615: Science of Climate Mitigation and Adaptation	3 cr

Sustainable & Resilient Communities Emphasis (beyond required Core courses)

One of the following:

ENVS 630 Triple Bottom Line Strategies	3 cr
ENVS 636 Environmental Organizational Development	3 cr

Nine credits of:

ENVS 620 Topics in Sustainable and Resilient Communities	3 cr

Masters Project Requirement:

ENVS 690 Master's Project Development	5 cr
ENVS 694 Master's Project and Portfolio	9 cr
Students must take 3 cr of ENVS 694 Fall II and 6 cr of ENVS 694 Spring II	

Integrative Land Management Emphasis (beyond required Core courses)

One of the following:

ENVS 640 Climate Adaptation for Integrative Land Management	3 cr
ENVS 646 Public Lands Management	3 cr

Nine credits of:

ENVS 625 Topics in Integrative Land Management	3 cr

Masters Project Requirement:

ENVS 690 Master's Project Development	5 cr
ENVS 694 Master's Project and Portfolio	9 cr
Students must take 3 cr of ENVS 694 Fall II and 6 cr of ENVS 694 Spring II.	

ENVIRONMENTAL MANAGEMENT COURSES

ENVS 601 Introduction to Environmental Management **5 credits**

An introduction to the MEM program, to bioregional and resilient approaches to environmental management, and to the environmental stakeholders, problems, solutions, and learning laboratories of the Gunnison Valley. Requires two-week residency in Gunnison during culmination of course. Prerequisites: Admission to the MEM Program.

ENVS 605 Science of Environmental Management **3 credits**

Provides a rigorous and hands-on overview of the principles and methods of environmental science. Students gain practical experience with a range of laboratory, field, and analytical approaches, with a focus on current environmental research in the Gunnison Basin. Topics include water quality, riparian condition, rangeland monitoring, forest health, threatened and endangered species, air quality, conservation, and ecological restoration. Students develop skills in scientific literature searches, writing monitoring protocols, ensuring quality data collection, statistical analysis, interpretation of results, written and oral communication, and peer review. Prerequisites: ENVS 601.

ENVS 608 Environmental Politics and Policy **3 credits**

Analysis of the key interactions between environmental policy and management, focusing on environmental decision-making within an array of policy contexts. Emphasis is on important federal policies such as the Clean Water Act and NEPA, with additional attention to relevant state and local policies. Prerequisites: ENVS 601.

ENVS 611 Integrative Skills in Environmental Management **3 credits**

Course focuses on developing and managing environmental projects and organizations. Students develop a thorough understanding of integrative assessment, adaptive management, and triple bottom line strategies. Students apply these approaches to the development of professional skills such as organizational development, conflict management, and environmental communication. Prerequisites: ENVS 601.

ENVS 612 Quantitative Skills in Environmental Management **3 credits**

An overview of a range of quantitative analytical methods and statistical approaches essential to environmental management careers in both Integrative Land Management and Sustainable and Resilient Communities. Topics covered include descriptive and inferential statistics, geographic information systems, cost-benefit analysis, and graphic presentation of results. Course empowers students to organize, analyze, and graphically present environmental data. Prerequisites: ENVS 601 and an undergraduate-level course in statistics.

ENVS 615 Science of Climate Mitigation and Adaptation **3 credits**

An investigation of the science of climate change, with an emphasis on mitigation and adaptation strategies for careers in environmental management. Students will develop an understanding of the principles of atmospheric and earth sciences that form the scientific basis of climate change and survey the large body of evidence of anthropogenic warming. Topics include greenhouse gas emissions, climate forcings and feedbacks, observed and projected climate changes, effects on ecological and human systems, and the opportunities and challenges of a diverse suite of strategies for climate change mitigation and adaptation at the local, regional, and planetary scale. Prerequisites: ENVS 605; two undergraduate courses in natural or environmental sciences, one of which must be upper-level with lab/field component.

ENVS 616 Environmental Organization Development and Management **3 credits**

An introduction to developing and managing environmental organizations, including managing change within and beyond organizations to maximize the effectiveness of environmental solutions. Course discusses competitively advantageous strategies and practices organizations adopt to write successful grants, grow revenues, cut costs, and redesign projects and processes. Management examples

will include sustainable innovation, creativity, and entrepreneurship in private, government, and nonprofit sectors from around the world. Students learn leadership skills that foster a culture of innovation, creativity, and entrepreneurship within an organization, utilizing principles from a variety of thinking methods including systems, design, and group thinking. Prerequisites: ENVS 605; ENVS 608; ENVS 611; ENVS 612.

ENVS 618 Public Lands Management **3 credits**

An exploration of the current and traditional approaches to public land and resource management. A regional focus on the Western U.S. is integrated with comparative examples from other regions and countries to enhance and broaden student perspectives. Course examines the history and future management implications of public lands agencies and policies, such as the National Parks, National Forests, Bureau of Land Management, NEPA and multi-use mandates. Special focus will be given to the management skills necessary in leading public lands agencies on the regional level. Prerequisites: ENVS 605; ENVS 608; ENVS 611; ENVS 612.

ENVS 620 Studies in Sustainable and Resilient Communities **3 credits**

An examination of selected topics covering the content understanding, analytical skills, and management approaches vital to cultivating sustainable and resilient communities. Topics include subjects such as Climate Change Mitigation and Adaptation, Sustainable Food Systems, Sustainable Energy Futures, Sustainable Economic Development, Movements in Community Resilience, and Frameworks in Sustainability. This course is repeatable, since students are required to take this course three times, as long as the topic changes. Prerequisites: ENVS 616.

ENVS 625 Studies in Integrative Land Management **3 credits**

An examination of selected topics covering the content understanding, analytical skills, and management approaches vital to integrative land management. Topics include subjects such as Watershed Coalition Development; Forest Ecology and Management; Rangeland Ecology and Management; Wildlife Ecology and Management; The History and Future of Energy on Public Lands; Public/Private Conservation Partnerships; Managing the Urban/Wildland Interface; and Conservation Advocacy. This course is repeatable, since students are required to take this course three times, but cannot repeat the same topic. Prerequisites: ENVS 618.

ENVS 690 MEM Project Development **5 credits**

An introduction to the Master's Project. Course examines environmental project design strategies, successful environmental solutions, and organizations/community stakeholder groups seeking environmental management assistance from MEM students in the Master's Project. Students design, plan, management project to an active environmental organization, green business, land agency, or community stakeholder group. Requires students and coordinate second year Master's Project with faculty mentors and community stakeholders. Requires two-weeks residency in Gunnison during culmination of course. Prerequisites: MEM Core.

ENVS 694 Master's Project and Portfolio **3-6 credits**

Students design and apply a specific research and environmental to develop a lens and goal for environmental management; identify a project that enables the student to manifest his/her environmental management goal; research global best practices for similar projects; complete the project over 10 months; write up, present, and defend the results for the faculty mentor and MEM community; and complete an environmental career portfolio. Course spans Fall (3 credits) and Spring (6 credits) of the second year, and requires 9 total hours. This is a repeatable course for variable credit. Prerequisites: ENVS 690.

MASTER OF SCIENCE HIGH ALTITUDE EXERCISE PHYSIOLOGY

The Master of Science in High Altitude Exercise Physiology (HAEP) program is designed to examine how the human body functions physiologically, both acutely and chronically, in extreme environments (including, but not limited to, high altitude, heat, cold, and low humidity) during exercise in healthy and diseased populations. The HAEP program is a 36 credit, two year, residential program that culminates in a research-based thesis project. Students that complete the HAEP program will be prepared for careers in academia, research, or clinical practice, as well as further study in the discipline.

FACULTY

Assistant Professors Christina Buchanan and Lance Dalleck;
Lecturers Angela Dalleck and Ryan Weatherwax

Program Goals

- To enhance student understanding of human physiology – at rest and during exercise, in healthy and diseased populations – in extreme environments, including hyper- and hypobarometric conditions, heat, cold, pollution and zero gravity.
- To prepare students for original research under supervision of the ESS-HAEP faculty.
- To prepare students to share their research as presentations, publications or both.
- To prepare students for careers in academia, research or clinical practice, as well as for further study in the discipline.

STUDENT OUTCOMES

Research — HAEP Graduates will understand Exercise Science research methods and demonstrate the ability to recognize and employ various study designs. They will:

- Be adept at retrieving and analyzing information relevant to Exercise Science.
- Demonstrate knowledge of the background and principle research in their specialization.
- Demonstrate the ability to critically evaluate scientific literature and apply the scientific method to exercise sciences, by actively engaging in the research process with critical analysis and research.
- Demonstrate the ability to situate their own research within the broader context of the Exercise Science field.

Communication and Writing — HAEP graduates will master oral and written skills to present and publish their research in peer-reviewed venues.

Application/Outreach — HAEP graduates will be able to translate research into practice, developing evidence-based exercise prescriptions for individuals with performance goals – particularly those at risk, including special populations – who seek to perform in extreme environments, such as altitude, cold and stressful heat.

Critical Thinking — HAEP Graduates will effectively use information obtained through traditional and non-traditional sources to solve problems related to academic or professional practice.

Technology — HAEP Graduates will use technology to complete tasks within the Exercise Science profession. This includes proficiency with exercise testing equipment and relevant computer skills.

PROGRAM REQUIREMENTS

A minimum of 36 credits is required for the HAEP MS degree. A 24 credit core (including 6 thesis credits) and at least 12 other HAEP credits are taken over the course of two years.

Core Courses:

ESS 600: Advanced Statistics	3 cr
ESS 601: Quantitative Research Methods	3 cr
ESS 605: Exercise and Sport Science Testing and Instrumentation – Lab	3 cr
ESS 606: Exercise and Sport Science Testing and Instrumentation – Field	3 cr
ESS 640: Environmental Exercise Physiology I	3 cr
ESS 650: HAEP Seminar – Thesis Proposal Development	3 cr
ESS 695: Thesis	6 cr
At least 12 credits from the following:	
ESS 630 Clinical Exercise Physiology	3 cr
ESS 641 Environmental Exercise Physiology II	3 cr
ESS 660 Health Promotion	3 cr
ESS 675 Clinical Exercise Programming	3 cr
ESS 685 Cardiopulmonary Physiology	3 cr
ESS 692 Independent Study	1-3 cr
ESS 698 Practicum/Internship	1-6 cr

HIGH ALTITUDE EXERCISE PHYSIOLOGY COURSE DESCRIPTIONS

ESS 600 Advanced Statistics **3 credits**
Statistical tools for scientific research, including parametric and non-parametric methods for ANOVA and group comparisons, simple linear and multiple linear regression. Emphasis placed on the use of dedicated statistical software.

ESS 601 Quantitative Research Methods **3 credits**
Research design and methodology in environmental exercise physiology.

ESS 605 Exercise and Sport Science Testing and Instrumentation – Lab **3 credits**
Techniques of in-lab exercise testing and result interpretation in healthy and/or diseased populations.

ESS 606 Exercise and Sport Science Testing and Instrumentation – Field **3 credits**
Techniques of field-based exercise testing and result interpretation in healthy and/or diseased populations.

ESS 630 Clinical Exercise Physiology **3 credits**
Physiological study of acute and chronic responses to exercise in diseased populations.

ESS 640 Environmental Exercise Physiology I **3 credits**
Principles of exercise physiology in extreme environmental conditions including extreme temperatures, hyper- and hypobarometric pressure, air pollution, sleep deprivation, and zero gravity. Healthy and diseased populations are studied.

ESS 641 Environmental Physiology II **3 credits**
Advanced research and principles of exercise physiology in extreme environmental conditions including extreme temperatures, hyper- and hypobarometric pressure, air pollution, sleep deprivation, and zero gravity. Healthy and diseased populations are studied. Prerequisite: Environmental Physiology I.

ESS 650 EEP Seminar – Thesis Proposal Development **3 credits**
Current topics and issues in exercise and sport science and environmental exercise physiology. Seminar topics change each semester. Emphasis may be placed on thesis proposal development and submission of the proposal to Western's Human Research Committee.

ESS 660 Health Promotion **3 credits**
Development of skills in health promotion program design, implementation and evaluation. Specific emphasis may be placed on healthy and diseased populations in extreme environments.

ESS 675 Clinical Exercise Programming **3 credits**
Role of exercise/physical activity in the prevention, pathophysiology and treatment of chronic diseases.

ESS 685 Cardiopulmonary Physiology **3 credits**
A foundation course that covers 1) the structure and function of the cardiopulmonary systems; 2) exercise-related physiological changes of the cardiopulmonary system and their applications to exercise training; and 3) pathophysiological changes secondary to cardiopulmonary dysfunction and their effects on function.

ESS 692 Independent Study **1-3 credits**
Advanced study for students with specialized interest in a particular area of environmental exercise physiology. Prerequisite: advisor permission.

ESS 695 Thesis **6 credits**
Independent research project, supervised by academic advisor.

ESS 698 Practicum/Internship **1-6 credits**
An opportunity for in-depth work at a site in the area of academic concentration. The experiences must meet standards of the department and the University. Prerequisite: advisor permission.

PERSONNEL (As of May 1, 2015)

Faculty

Kevin D. Alexander (2000) Professor of Biology. B.A., University of Texas at Austin; Ph.D., University of North Texas.
Melanie Armstrong (2015) Assistant Professor of Environment and Sustainability. B.A., Brigham Young University; M.A. Ohio University; Ph.D., University of New Mexico.
Matthew Aronson (2013) Assistant Professor of Sociology. B.A., University of Montana; M.A., Ph.D., Colorado State University.
Christopher Benedetti (2013) Assistant Professor of Educational Leadership. B.S., Florida State University; M.S., Barry University; Ph.D., Nova Southeastern University.
Robert H. Barrett (1993) Professor of Music; Chair, Department of Music. B.M., Brigham Young University; M.M., University of North Texas; D.M.A., University of Oklahoma–Norman.
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