



WSCU

Western State Colorado University

Learning, elevated.

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For further information, phone or write:

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Western State Colorado University

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August 2012

Published by Western State Colorado University,

Gunnison, Colorado 81231



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.

TABLE OF CONTENTS

President's Message	1
General Information	2
Institutional Mission	2
Institutional Accreditation	2
Governance	2
History of Western	3
Leslie J. Savage Library	4
The Western State Colorado University Foundation	4
List of Degree Programs	6
Student Bill of Rights	7
Assessment of Academic Programs and Services	7
Academic Calendar for 2012-2013	8
Admissions Policies & Procedures	9
Criteria for Admission of First-time Freshmen	9
Criteria for Admission of Transfer Students and Students Seeking an Additional Bachelor's Degree	9
Admission of International Students	10
Students Seeking an Additional Degree.....	10
Non-degree Admission	10
Special High School Student Admission	10
Deferral Policy for Offers of Admission	11
Readmission of Former Students.....	11
Transfer Credit, AP Credit, CLEP, Other Credit.....	11
Resolution of Transfer Disputes Among Colorado Institutions	13
Tuition and Fees	14
Tuition	14
Mandatory Fees.....	14
Room and Board Costs	14
Residence Life Requirement	15
Student Injury and Sickness Insurance	15
Payment of Charges	15
Refund of Charges	16
Colorado Residency	16
Financial Assistance	17
Applying for Aid	17
Programs Available	17
Student Programs and Services	18
Co-curricular Programs	18
Education and Career-related Services.....	19
Recreational and Athletic Programs.....	21
Special Services	22
Student Handbook	22
Academic Policies	23
Unit of Credit	23
Course Numbering System	23
Student Classification by Class Level	23
Academic Load	24
Registration.....	24
Class Attendance and Participation	25
Variable Credit Courses.....	25

Internships	26
Withdrawal from Individual Courses	27
Withdrawal from University	27
Academic Leave of Absence.....	27
Grades and Grade Point Average.....	28
Academic Standing	29
Graduation Requirements	32
Academic Integrity	34
Academic Due Process for Students	35
General Education.....	37
Academic Programs	41
Accounting (ACC)	41
Anthropology (ANTH).....	47
Art (ART)	50
Biology (BIOL).....	64
Business Administration (BUAD)	73
Chemistry (CHEM)	85
Communication and Theatre (COTH).....	91
Computer Information Science (CIS)	100
Economics (ECON)	106
Education (EDUC).....	111
English (ENG)	119
Environmental Studies (ENVS)	128
Exercise and Sport Science (ESS)	134
French (FREN).....	145
Geography (GEOG)	147
Geology (GEOL)	149
Headwaters Regional Studies (HWTR).....	156
History (HIST).....	157
Honors Program (HNRS).....	163
Interdisciplinary Studies / Liberal Arts (IDLA)	168
Mathematics (MATH)	170
Music (MUS)	177
Philosophy (PHIL)	190
Physics (PHYS).....	193
Politics and Government (POLS)	196
Psychology (PSY)	203
Recreation and Outdoor Education (ROE).....	209
Science (SCI)	216
Sociology (SOC).....	217
Spanish (SPAN)	223
Personnel	227
Faculty	227
Administration	232
Emeritus Faculty and Staff	236
Index	242



PRESIDENT'S MESSAGE

To our students:

I am pleased to have this opportunity to address all Western State Colorado University students and those who are considering enrolling at our University. Western is a proud institution with a history of service dating back more than a century. All of us are delighted to welcome you to another academic year, and we wish you success. The University's faculty and staff will make every effort to help you be successful and will encourage you to achieve at your highest level. The information in this *Catalog* will help in that effort.

This publication describes the University's courses and academic degree programs and, in addition, spells out the requirements that you must complete to earn your university degree. It is important that you understand these requirements.

Our students represent nearly every state in the nation, several foreign countries, and every region in Colorado. This geographic diversity contributes to a dynamic learning environment and provides opportunities for you to develop lasting friendships with people from throughout the world.

While you will face many challenges during your time at Western, you should remember that help is available from your professors, staff members, and other students.

Western's faculty members are dedicated to undergraduate education and are committed to helping you meet the challenges that lie ahead. These men and women have earned their graduate degrees from many of the finest universities in the country and have come to Western because of their belief in the importance of undergraduate education.

Western is dedicated to standards of learning and excellence that will stretch you intellectually and creatively. You will be challenged to establish a new and broader sense of community. You will be introduced to an array of recreational opportunities in the Gunnison Valley that are both challenging and stimulating. As you meet those challenges, both in and out of the classroom, you are realizing your potential. We are here to support and guide your efforts.

Welcome to another great year at Western.

A handwritten signature in black ink that reads "Jay Helman". The signature is fluid and cursive, with a long horizontal flourish extending to the right.

Jay W. Helman
President, Western State Colorado University

GENERAL INFORMATION

Institutional Mission

Western State College of Colorado 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 College 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;
Teacher Education Accreditation Council

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 information 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 on video and DVD, the collection includes access to over 70,000 electronic books and over 50 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 gifts made over a period of years through pledges. 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 State Colorado University, Inc., 909 Escalante Drive, P.O. Box 1264, Gunnison, CO 81230.



List of Undergraduate Degree Programs

Western State Colorado University offers the Bachelor of Arts (BA) degree in the following programs:

- Accounting
- Anthropology
- Art
- Biology
- Business Administration
- Chemistry
- Communication and Theatre
- Computer Information Science
- Economics
- English
- Environmental Studies
- Exercise and Sport Science
- Geology
- History
- Interdisciplinary Studies / Liberal Arts
- Mathematics
- Music
- Politics and Government
- Psychology
- Recreation and Outdoor Education
- Sociology
- Spanish

The Bachelor of Fine Arts (BFA) degree is offered in:

- Art

Teacher Licensure is available in:

- 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 2012-2013

Summer Session 2012

May 7	Classes begin
May 28	Memorial Day - no classes
July 4	Independence Day - no classes
August 3	End of Summer Session

Fall Semester 2012

Aug. 28	Classes begin
Sept. 3	Labor Day - no classes
Oct. 19	Mid-Fall break
Nov. 19-23	Thanksgiving break
Dec. 18-21	Final Exams

Spring Semester 2013

Jan. 14	Classes begin
Jan. 21	Martin Luther King Jr. Day - no classes
Feb. 18	Presidents' Day - no classes
March 18-22	Spring break
May 7-10	Final Exams
May 11	Spring Commencement (10:00 a.m.)

See the University web page for additional information, updates, and future calendars.
All calendars are subject to change.

ADMISSIONS POLICIES AND PROCEDURES

Applicants are evaluated on the basis of their previous academic performance, general background, standardized test scores, and personal attributes. Written personal statements, interviews, and recommendations from teachers, counselors, and others attesting to the applicant's leadership and academic talents are also considered.

All credentials submitted to the Admissions Office become the property of Western State Colorado University and will not be returned.

Each applicant must submit a non-refundable application fee and complete the appropriate admission application form.

Criteria for Admission of First-time Freshmen

All freshmen applicants must have their high school submit official transcripts directly to the Admissions Office. Applicants from non-accredited high schools and home-schooled students are considered on a case-by-case basis. Applicants who 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.

Freshman applicants should have completed the following secondary school units: (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.

Applicants with the best chance for admission will have a high school cumulative grade-point average of 2.5 or better ($A = 4.0$) and rank in the upper two-thirds of their high school graduating classes. Applicants will have scored 19 or higher on the American College Test (ACT) or 900 or higher on the math and critical reading sections of the Scholastic Achievement Test (SAT). Western does not require the writing portion of either the ACT or the SAT.

Freshman applicants are required to submit either the ACT or the SAT scores. Applicants should request that the Student Profile Reports be sent to Western State Colorado University (profile codes: ACT-0536, SAT-4946).

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.

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 for admission and official high school and/or college transcripts. All official academic records (transcripts) and/or diplomas of secondary and post secondary education must be submitted directly to the Admissions Office by the institutions attended.

These documents must bear official signatures in ink of the appropriate school official, such as the registrar, and bear the school's official seal. If previous schools will not mail original documents to Western, exact copies that have been certified as such by the appropriate officials should be sent. All documents appearing in another language must be accompanied by official English translations.

Applicants must be graduates of high school 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), or a minimum score of 213 on the TOEFL computer-based test, or a minimum score of 79 on the TOEFL Internet-based Test (BT).

Applicants must demonstrate by bank affidavit (English translation) that an adequate sum of money in U.S. currency is available to cover the costs of each year of anticipated study. Refer to the Western State Colorado University web site, www.western.edu, for the current required amount.

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.

Special High School Student Admission

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 an unclassified 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 mitigating 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, unless they have been granted a formal Academic Leave of Absence. 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 Registration Services for a readmission application.

Transfer Credit, AP Credit, CLEP, Other Credit

Credit for Advanced Placement

Outstanding high school seniors may accelerate their academic progress by taking one or more subjects which are taught at the university level. Western allows 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, and for students who have completed the IB diploma program, grants credit based on performance on individual IB exams. Western will grant a minimum of 24 semester credits of course equivalencies toward the student's general education or graduation requirements as long as all IB exam scores are 4 or greater. Students who have completed the IB diploma program and have earned a score below a 4 on any of the individual subject exams may earn fewer than 24 semester credits of course equivalencies. Official IB scores must be sent to the Admissions Office from the International Baccalaureate Organization.

Credit for Transfer from Two-Year Colleges

Western will accept courses for which grades of "C-" or better have been earned from accredited two-year colleges. The maximum that Western will accept toward a bachelor's degree is 60 semester credits.

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 accepted in transfer from two-year institutions can only be counted as lower-division credit. This applies even if the course equivalency is for an upper-division course at Western.

Transfer credit accepted on a provisional basis from a college that 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 average.

Credit for Transfer from Four-Year Institutions

Western will accept courses for which grades of "C-" or better have been earned from accredited four-year colleges or universities. The maximum that Western will accept toward a bachelor's degree is 90 semester credits.

Credits accepted in transfer that are comparable to those offered at Western or are State Guaranteed General Education Transfer Courses may apply toward satisfying requirements of the General Education Program and requirements of the major and minor programs. Courses not equivalent to specific courses at Western or those excluded from acceptance toward any of Western's program requirements may or may not be accepted as electives. Exceptions to evaluations of transfer credit by Registration Services may be requested by the appropriate academic department.

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 average.

Credit for Transfer from Non-traditional Programs

Western will 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.

Credits accepted in transfer that are comparable to those offered at Western will apply toward satisfying requirements of the General Education Program and requirements of major and minor programs. Courses not equivalent to specific courses at Western or those excluded from acceptance toward any of Western's program requirements may or may not be accepted as electives. Exceptions to evaluations of transfer credit by Registration Services

may be requested by the appropriate academic department.

Western will not grant credit for “life experience,” that is, credit for experience gained from “work-related” activities.

Credit for College Level Examination Program (CLEP)

Western will award credit for both the general and subject CLEP exams. Students may be awarded a maximum of 18 semester credits as a result of completing the general CLEP examinations. This credit may only be used to satisfy General Education requirements at Western.

In awarding credit on the basis of subject examinations, Western follows (approximately) the recommendations of the American Council on Education. This means that credit is awarded on the basis of a scaled score of 50, with the exception of the Level 2 foreign language exams.

For a list of subjects and courses awarded CLEP credit, contact Registration Services. Total credit generally permitted under CLEP and other programs leading to credit by examination for any one student is limited to 40 semester credits. Exceptional cases may be appealed.

Students granted CLEP credits from another institution must submit an official CLEP Score Report to Western for credit to be awarded.

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. Registration Services is responsible for the appeals process.

The appeal must be filed in writing to Registration Services of Western State Colorado University within 15 calendar days of receipt 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 2012-2013. These costs are subject to change. Costs are presented here for information only.

Tuition (estimated)

Full-time Students

Tuition for:	16-Week Semester	Academic Year
Resident Tuition		
Total Tuition	\$3,244	\$6,488
College Opportunity Fund Stipend	(\$ 930)	(\$1,860)
Cost to Student	\$2,314	\$4,628
Non-Resident Tuition		
	\$7,248	\$14,496

*Part-time Students

Tuition for part-time students is based on a per-credit charge. The estimated rates for 2012-2013 are \$193 per credit for resident students (after application of the College Opportunity Fund Stipend) and \$706 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 2012-2013 is \$822. Mandatory fees are prorated for part-time students.

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 2012-2013:

Room Costs for:	16-Week Semester	Academic Year
Double-Mears, Escalante, Ute Complex	\$2,350	\$4,700
Two bedroom, unfurnished- Chipeta Apartments	\$2,850	\$5,700
Two bedroom, unfurnished- Pinnacles Apartments	\$3,000	\$6,000

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	\$2,184	\$4,368
Mountaineer Plan	\$1,994	\$3,988
Crimson Plan	\$1,761	\$3,522

Residence Life Requirement

A housing application, meal application, and a housing contract will be mailed shortly after acceptance to Western. All first and second-year students are required to live in on-campus housing and purchase a meal plan unless excused by the Director of Residence Life 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. Housing and roommate assignments will be mailed in late June. This mailing will include room assignment, campus phone number, roommate's name and address, and information with suggestions on what to bring and how to make the living experience on campus the best it can be.

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.

Student Injury and Sickness Insurance

All students enrolled at Western are encouraged to have health insurance. The University offers a supplemental health insurance plan that students should seriously consider.

Total health insurance costs for the 2012-2013 academic year and additional information on the supplemental health insurance plan are available on the Human Resources webpage <http://www.western.edu/hr/>

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 \$100 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 course 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, tuition and fees are refunded according to the following schedule for a 16-week semester:

100% refund	through the end of the official drop period
50% refund	for the period between 15% and 25% of the semester
25% refund	for the period between 25% and 50% of the semester
0% refund	for the period after 50% of the semester

Please refer to the class schedule 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 class schedule 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 ASSISTANCE

Western offers financial assistance designed to help bridge the gap between the expected family financial contribution and the cost of attending university. All students admitted are encouraged to apply for financial assistance. 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 grant, need-based grant for Colorado residents, and student employment programs.

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 program 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*.

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), cable television station (WSC-TV), and an annual magazine (*Western Pathfinder Magazine*).

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), CCMENC (Music Club), Chemistry Club, English Club (Wordhorde), Politics Club, Psychology Club, Sociology Club and Sustainability Coalition (Environmental Studies).

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 the College Center.

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 student's 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. 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 College 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 and theatre 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 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.

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 a faculty advisor from the Faculty Advisory Corps to assist with course selection, registration, and understanding academic policies and procedures. During the

freshman year, students are urged to select an advisor in their area of academic interest. Students who do not have an advisor will be assigned one prior to registration for the following semester. Any student who needs registration information or advising services may contact the Academic Resource Center for assistance or referrals.

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

- **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.

- **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.

- **Turning Point.** Turning Point is an individual program offered to at-risk students to help them improve academic performance.

- **Career Services.** Career Services provides information to students related to career choices and job-search skills. The Career and Academic Advisor provides support through résumé and cover letter review, workshops, listing of internships and jobs, and the Career, Job, and Internship Fair.

Computing, Media, and Telecommunications. Computing, Media and Telecommunication Services provide technological support to all constituents of the campus community. This includes computing resources, 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. Access to local and national resources is accomplished via a local area network in addition to a high-speed Internet connection. All students are given e-mail accounts, allowing them to correspond with professors, friends, and family. Administrative functions such as university applications, class registration, payment of fees, financial aid inquiries, and online course grades may be accomplished using the University's online web-based system. Using a variety of computer laboratories, students have easy and convenient access to local and

national resources through state-of-the-art computer systems. Students living in the residence halls have full access to these resources from the comfort of their rooms using a direct connection in each room or through wireless access.

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 through partner schools.

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 and the LEAD Office includes the following:

- **International Student Services.** A variety of services are available to international students, such as immigration assistance, orientation, advising on personal and academic matters, employment information, international club membership, and opportunities to participate in numerous cultural and social activities.
- **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.
- **Peer Advising.** Through educational programming and one-to-one academic assistance, academic peer advisors help students make a successful transition to university life.
- **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.
- **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 Office of Student Affairs administers many nationally coordinated exams, including the ACT, GRE Subject and General Tests, LSAT, PLACE, PRAXIS Series, and SAT. The Academic Resource Center administers CLEP and correspondence exams by appointment.

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 basketball, 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 hock-

ey, disc golf, and ultimate frisbee.

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

Wilderness Pursuits. Wilderness Pursuits (WP) is a co-curricular, professionally managed outings 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, the Weekend of Welcome, 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.
- **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 daycare 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 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.

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.

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 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, on-line, studio work, and other academic work leading toward to 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. Students taking 19 to 21 credits in a 16-week semester are assessed a tuition surcharge for each credit over 18 credits.

Students who have a cumulative grade-point average of 3.000 or better may petition to take an overload in a given semester. The petition must be signed by the student's academic advisor and the 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. The completed petition must be submitted to Registration Services.

During a 10-week summer session, 6 credits is considered full time. A student may enroll in 12 credits without special approval. No more than 9 credits may be taken in a 5-week part-of-term. Students with a cumulative grade-point average of 3.000 or better may petition to take 13 to 15 credits. The petition must be signed by the student's academic advisor and the 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. The completed petition must be submitted to Registration Services.

No student may take more than 15 credits in the summer session.

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 in the *Class Schedule*.

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 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 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 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

Both 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 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 Registration Services office. 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 experience 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 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 in the *Course Schedule* booklets for each semester.

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 University

Students who wish to withdraw from the University may do so any time during the semester. 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.

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.

Academic Leave of Absence

The Academic Leave of Absence policy is designed to allow students who plan to be absent from Western to continue their studies without completing an application for readmission (see Readmission of Former Students in the Admissions Policies and Procedures section of this *Catalog*). In addition, students returning from an approved Academic Leave of Absence will be given the same priority at registration as continuing students. Academic Leaves of Absence are granted for one semester or one year to continuing, degree-seeking students in good academic standing. Information regarding Academic Leaves of Absence and application materials is available in Registration Services.

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-	=	3.670 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)

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)	= 6.990 grade points
Course #3 - Grade earned=C	(3 cr) X (2.000 pts)	= 6.000 grade points
Course #4 - Grade earned=B-	(3 cr) X (2.670 pts)	= 8.010 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 Registration Services.

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 3.700 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. 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 Registration Services 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.

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, b) at least eight credits in the minor, and c) the final credit earned.

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 Western.

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.A. and a B.F.A., a student must complete the requirements of both degrees and complete a minimum of 150 credits. All degrees, majors, emphases, and minors desired must be declared on the “Application for the Bachelor Degree” card.

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 grade-point average in all work completed at Western, with 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” card with Registration Services 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 Registration Services when all requirements are completed and file a new “Application for the Bachelor Degree” card.

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 term; or have only a capstone, or internship to complete and be registered for it the next term it is offered. 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 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 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.

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 the basis 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*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).

COTH 202 Academic Writing and Inquiry3 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*3 cr

MATH 131 Mathematics for the Social Sciences*3 cr

MATH 140 College Algebra*3 cr

MATH 141 Precalculus4 cr

*Colorado State Guaranteed General Education Transfer Course

MATH 151 Calculus I *4 cr

MATH 209 Mathematics for Elementary School Teachers I	3 cr
MATH 213 Probability and Statistics*	3 cr

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*	3 cr
ECON 201 Macroeconomics*	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
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 250 History of the Middle East*	3 cr
HIST 254 A History of Africa	3 cr
HIST 260 Introduction to Latin American History	3 cr
POLS 117 Introduction to Political Ideas*	3 cr
POLS 180 Introduction to American Politics*	3 cr
PSY 100 General Psychology*	3 cr
SOC 101 Introduction to Sociology	3 cr
SOC 168 Social Problems	3 cr

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.

*Colorado State Guaranteed General Education Transfer Course

Eight credits are required from the courses listed below:

BIOL 120	Studies in Biology*	3 cr
BIOL 130	Environmental Biology*	3 cr
BIOL 135	Environmental Biology Laboratory*	1 cr
BIOL 150	Biological Principles (with laboratory)*	4 cr
BIOL 151	Diversity and Patterns of Life (with laboratory)	4 cr
BIOL 200	Environmental and Public Health*	3 cr
CHEM 100	Contemporary Chemistry*	3 cr
CHEM 101	Introduction to Inorganic Chemistry*	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
GEOL 101	Physical Geology*	3 cr
GEOL 105	Physical Geology Laboratory*	1 cr
PHYS 110	Solar System Astronomy*	3 cr
PHYS 120	Meteorology*	3 cr
PHYS 125	Energy and the Environment*	3 cr
PHYS 140	Introductory Physics (with laboratory)*	4 cr
PHYS 170	Principles of Physics I (with laboratory)*	4 cr
PHYS 171	Principles of Physics II (with laboratory)*	4 cr
PHYS 200	General Physics I (with laboratory)*	4 cr
PHYS 201	General Physics II (with laboratory)	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

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. English, French, and Spanish are counted as one discipline for General Education purposes.

ART 105	Introduction to Art*	3 cr
ART 106	Studio Art for the Non-Artist	3 cr
COTH 119	Theatre and Media Aesthetics	3 cr
COTH 151	Mass Media in America	3 cr
COTH 215	Development of the Theatre I	3 cr
COTH 216	Development of the Theatre II	3 cr

*Colorado State Guaranteed General Education Transfer Course

ENG 150	Introduction to Literature	3 cr
ENG 205	Introduction to Creative Writing	3 cr
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 250	Critical Approaches to Literature	3 cr
ENG 254	Formula Fiction	3 cr
ENG 255	Ancient World Literature*	3 cr
ENG 270	Folklore	3 cr
FREN 256	French Literature in Translation	3 cr
MUS 100	Fundamentals of Music*	3 cr
MUS 140	Introduction to Music*	3 cr
MUS 240	Perspectives in Music	3 cr
PHIL 101	Introduction to Philosophy*	3 cr

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 web site: <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 determined 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.

*Colorado State Guaranteed General Education Transfer Course.

ACADEMIC PROGRAMS

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 will be effective as of July 1, 2015; Colorado CPA candidates will be allowed to sit for the CPA examination after they have completed 120 credits but will need to complete 150 credits before being licensed. Students should consult with an Accounting faculty advisor to develop an appropriate academic program if they plan on seeking licensure.

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. Students may not pair a Standard Accounting Major with a Business Minor.

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 Accounting I, ACC 302 Intermediate Accounting II, ACC 320 Advanced Management Accounting, and ACC 350 Income Tax.

While Western furnishes sufficient personal computer resources for its student body, the Accounting faculty at Western strongly recommend that all Accounting majors have their own personal computers, preferably a laptop, by the time they enroll in ACC 301 Intermediate Accounting I.

FACULTY

Professors Monica D. Newman and Scott G. Newman;
Lecturer Mary J. Hudson.

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
<i>One of the following:</i>	
MATH 140 College Algebra.....	3 cr
MATH 141 Precalculus.....	3 cr
MATH 151 Calculus I.....	4 cr
<i>One of the following:</i>	
ECON 216 Statistics for Business and Economics	3 cr
MATH 213 Probability and Statistics.....	3 cr
<i>One of the following:</i>	
BUAD 220 Computer Applications in Business	3 cr
CIS 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 Theory, Analysis, and 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 Theory, Analysis, and 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 Theory, Analysis, and 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 information disseminated by modern U.S. corporations. Theoretical and practical criticisms 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 nonroutine 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 CIS 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 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 Theory, Analysis, and Ethics **3 credits**

Investigates the theories upon which accounting measurement and valuation are based. Requires the student to apply, integrate, and critically analyze all aspects of financial accounting procedures and reporting. Students are expected to make significant written and oral contributions to the class. Accounting ethics and professional responsibilities are also covered. Each student is expected to leave the class with his or her own perspective of accounting's place in society and its prospects for the future. 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 the Anthropology field school offered every summer session. 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, 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

Moncrief Chair in Anthropology and Professor Mark Stiger;

Professor 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
<i>Two of the following field and laboratory courses</i>	
ANTH 322 Analysis of Material Culture (with laboratory)	4 cr
ANTH 467 Ethnography Field School	4 cr
ANTH 469 Archaeology Field School	4 cr
<i>(ANTH 467 and 469 may be repeated for eight credits):</i>	

Anthropology Minor

A minimum of 18 credits, including:

ANTH 107 Introduction to General Anthropology	3 cr
Anthropology Electives	7 cr
<i>(ANTH 467 and ANTH 469 may be repeated for eight credits):</i>	
<i>Two of the following:</i>	
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.
- 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 college 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
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3. submit a portfolio of recent art work with 20 labeled prints and/or images on CD;
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;
 Assistant Professors S. Chase Hutchison and Casey C. Krawczyk;
 Lecturers Tina Butterfield and 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 the 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
ART 319 Intermediate Drawing.....	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 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
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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
ART 383 Intermediate Airbrush	3 cr

It is recommended that students majoring in the Art Education Licensure Emphasis include COTH 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 325 Women Artists	3 cr
ART 422 Native American Art of North America	3 cr

Spring offerings

ART 321 American Art: Colonial to Modern	3 cr
ART 421 Art of Mesoamerica and the Andean Region of South America	3 cr
ART 424 Modern Art History, Aesthetics, Theory, and Criticism	3 cr

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 help 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, airbrush, 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 383 Intermediate Airbrush	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 483 Advanced Airbrush I	3 cr
ART 484 Advanced Airbrush II	3 cr
ART 485 Advanced Airbrush 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
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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
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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
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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
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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
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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
<i>One of the following:</i>	
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 3 credits

Designed to encourage exhibition and convocation attendance as a means of learning about art history, professional artists, artistic practice, portfolio review, and topics of interest to artists. Students qualify for a "satisfactory" grade by attending all of the posted events in each semester. Graded Satisfactory/Unsatisfactory only.

ART 105 Introduction to Art 3 credits

An introduction to the visual arts with an emphasis on the influence of art works on present-day living and thinking. A specific focus is announced each time the course is offered. Some examples include architecture, Native American art, non-western art, women in art, crafts, and European art. (Course may be taken only once for credit and does not count toward the Art major or minor.)

ART 106 Studio Art for the Non-Artist 3 credits

Provides the student a "hands-on" experience in various studio activities: drawing, design, and painting. The theories and processes of art are discussed on a nonprofessional level. (Does not count toward the Art major or minor.)

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 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 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 technique 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, woodcut, etching, and the collagraph. Emphasis is on the traditional approaches in printmaking. 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 contributions 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 383 Intermediate Airbrush 3 credits

An exploration of the expressive possibilities of individual airbrush direction. Students collaborate with the instructor to plan a suitable and particular direction of study. Prerequisite: ART 283.

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 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 483 Advanced Airbrush I **3 credits**

An advanced exploration of the expressive possibilities of individual airbrush direction. Students collaborate with the instructor to plan a suitable and particular direction of study. Prerequisite: ART 383.

ART 484 Advanced Airbrush II **3 credits**

An advanced exploration of the expressive possibilities of individual airbrush direction. Students collaborate with the instructor to plan a suitable and particular direction of study. Prerequisite: ART 483.

ART 485 Advanced Airbrush III **3 credits**

An advanced exploration of the expressive possibilities of individual airbrush direction. Students collaborate with the instructor to plan a suitable and particular direction of study. Prerequisite: ART 484.

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 broad training in the life sciences, which can lead to a variety of careers. Because biology careers span a broad spectrum, five different emphases are offered: cell and molecular biology, environmental biology and ecology, general biology, pre-allied health, and 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 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.

Many Biology 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.

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

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 allows students to major in Biology while pursuing an education rich in the liberal arts. This emphasis is appropriate for a student seeking licensure as an elementary teacher (grades K-6).

The Pre-Allied Health Emphasis is designed for students planning to enter professional programs in allied health such as chiropractic, dentistry, epidemiology, medical technology, medicine, nursing, optometry, pharmacy, physical therapy, podiatry, public health, and physician's assistant programs.

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 Professor Cassandra L. Osborne;

Assistant Professors Shan M. Hays;

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 67 credits, including the 18-credit Biology Nucleus, 15 additional credits in Biology, and 34 credits of supporting courses.

Required Biology courses:

BIOL 313 Cell and Genetics Laboratory	2 cr
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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
SCI 202 Scientific Writing	3 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
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PHYS 171 Principles of Physics II.....	4 cr
<i>or both:</i>	
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 61 credits, including the 18-credit Biology Nucleus, 17 additional credits in Biology and 26 credits of supporting courses.

Required Biology Courses:

BIOL 302 Ecology Laboratory and Recitation.....	2 cr
<i>Two of the following systems and applications courses:</i>	
BIOL 362 Evolutionary Biology: Theory and Application	3 cr
BIOL 430 Wildlife Ecology and Management (with laboratory)	4 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
<i>Two of the following organismal courses:</i>	
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
<i>At least two credits of Capstone Experience courses:</i>	
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
SCI 202 Scientific Writing	3 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 54 credits including the 18-credit Biology Nucleus, 14 credits of 300- and 400-level Biology electives, and 22 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 Introduction to Organic Chemistry and Biochemistry	3 cr
CHEM 234 Introductory Organic Chemistry and Biochemistry Laboratory	1 cr
MATH 213 Probability and Statistics	3 cr
PHYS 140 Introductory Physics (with laboratory).....	4 cr
SCI 202 Scientific Writing	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 57 credits including the 18-credit Biology Nucleus, 17 additional biology credits, and 22 credits of supporting courses. Appropriate chemistry and physics courses should be selected in consultation with an advisor.

Required Biology courses:

BIOL 300 Basic Nutrition.....	3 cr
BIOL 342 Microbiology.....	4 cr
BIOL 372 Human Anatomy & Physiology I (with laboratory)	4 cr
BIOL 373 Human Anatomy & Physiology II (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
SCI 202 Scientific Writing	3 cr

SECONDARY LICENSURE EMPHASIS

The Secondary Licensure Emphasis requires a minimum of 62 credits including the 18-credit Biology Nucleus, eight additional credits in Biology, and 36 credits in supporting courses. Students must fulfill the requirements for the Secondary Licensure Option (described under 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. 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 Biochemistry3 cr

CHEM 234 Introductory Organic Chemistry and Biochemistry Laboratory1 cr

GEOL 101 Physical Geology3 cr

GEOL 105 Physical Geology Laboratory1 cr

GEOL 201 Historical Geology (with laboratory)4 cr

MATH 213 Probability and Statistics.....3 cr

PHYS 110 Solar System Astronomy3 cr

PHYS 120 Meteorology.....3 cr

PHYS 140 Introductory Physics (with laboratory)4 cr

SCI 202 Scientific Writing.....3 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.

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.

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, biogeochemical cycling, population growth, biodiversity, basic cell biology, genetics and evolution. Prerequisite or corequisite: BIOL 130.

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.

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.

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: COTH 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 COTH 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 and SCI 202.

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 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 adaptations 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 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.
- 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 and SCI 202; 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, backpacking, 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 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 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, MATH 213, and SCI 202.

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, MATH 213, and SCI 202.

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 outside 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 a Mathematics course equivalent to MATH 232 Applied Calculus for the Managerial and Social Sciences.

To graduate all business administration majors must have a grade-point average of 2.500 or above in all courses required in the major.

FACULTY

Professors Cynthia L. Drexel, Michaela C. Driver, Roger L. Hudson, Kevin A. Nelson, and Michael Vieregge;
 Assistant Professor Christopher W. Greene;
 Lecturers Menon Billingsley, Jeffrey Dykes, and Mary Hudson.

DESCRIPTION OF THE PROGRAMS

All Business Administration majors must complete the Base Curriculum, which requires a minimum of 18 credits. Each course in the Base Curriculum must be completed with a minimum grade of "C," except the mathematics course requirement which must be completed with a minimum grade of "C-." 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
<i>One of the following mathematics courses:</i>	
MATH 140 College Algebra.....	3 cr
MATH 141 Precalculus	3 cr
MATH 151 Calculus I	4 cr
<i>One of the following:</i>	
BUAD 220 Computer Applications in Business	3 cr
CIS 120 Information Management and Analysis	3 cr
<i>One of the following:</i>	
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
<i>One of the following:</i>	
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 Entrepreneurship and Business Planning	3 cr
BUAD 491 Strategic Management	3 cr
ECON 201 Macroeconomics	3 cr
<i>Three of the following electives:</i>	
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
CIS 160	Introduction to Web Design	3 cr
COTH 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

A minimum of 57 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 315	Business Law	3 cr
BUAD 375	Entrepreneurship and Business Planning	3 cr
BUAD 494	Entrepreneurial Analysis and Consulting	3 cr

One of the following:

BUAD 335	Marketing Communications.....	3 cr
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BUAD 345 Consumer Behavior.....	3 cr
<i>Three of the following electives:</i>	
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
<i>Three credits of the following:</i>	
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
<i>Three of the following, based on proficiency:</i>	
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 who wish to major in the Professional Land and Resource Management (PLRM) emphasis in Business Administration must be formally admitted to the program. For admission, a student must complete and submit an application for admission and meet the following requirements:

1. completion of the 18-credit Base Curriculum and BUAD 210, BUAD 270, and BUAD 309; and
2. possess a GPA of 2.750 or higher. Students who started their academic studies at Western must have an overall GPA of 2.750 or higher. Students who are transfer students must have an overall GPA of 2.750 or higher for all credits taken at Western (12 credits minimum). Students who have a GPA of less than 2.750 may attain formal admittance through a probationary process by completing their first 12 credits of PLRM emphasis area courses with an average GPA of 2.750 or higher.

A minimum of 70 credits is required, including the 18-credit Base Curriculum, the 15-credit Business Administration Nucleus, and the following courses:

BUAD 305 Fundamentals of Professional Land and Resource Management	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.

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
<i>One of the following:</i>	
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
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BUAD 210 Legal Environment of Business.....	3 cr
BUAD 270 Principles of Marketing.....	3 cr
BUAD 309 Business Communication	3 cr
<i>One of the following:</i>	
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 150 Introduction to Hospitality **3 credits**

An introduction to hospitality management, including historical developmental patterns, 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 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 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 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 COTH 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 305 Fundamentals of Professional Land and Resource Management

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

1 credit

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 CIS 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 COTH 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 international marketplace. Cultural, political, and geographic differences are analyzed in order to develop market strategies for global markets. Prerequisite: BUAD 309 or COTH 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 COTH 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 Entrepreneurship and Business Planning** **3 credits**
 Provides the future entrepreneur with the skills and insights necessary to minimize risks associated with the undertaking of a new business venture. The primary focus is for each student to prepare a complete business plan for a proposed business enterprise. Prerequisites: completion of Base Curriculum; BUAD 270; BUAD 333 or BUAD 350; BUAD 360; 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 Entrepreneurial Analysis and Consulting

3 credits

An investigation of emerging problems and issues relevant to small businesses. This is accomplished through two techniques: 1) studying current business journal articles, and 2) working with a local small-business owner to solve a specific problem facing his or her business. Prerequisite: completion of Base Curriculum; 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;
Assistant Professor Jason E. Mullins;
Lecturers Jarral W. Ryter and Zachary Via.

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
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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.

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.

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.

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.

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, 2012-2013. 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, 2012-2013. 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 thermodynamics, 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, 2012-2013. 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 AND THEATRE (COTH)

All acts of communication and self-expression are performative – meaning that they empower and transform when carried out. 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 Organizational Communication, Film Studies, and 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 and Theatre 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 and Theatre may select one of the two standard emphases, or one of the two comprehensive emphases. A six-course core Communication and Theatre nucleus provides students with a liberal arts foundation supplemented by the more specific courses within each emphasis.

The Organizational Communication Emphasis is a study of applied communication in complex organizations, and is designed for the student wanting to understand the systematic flow of information in such structures. Graduates in the Organizational 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, multidisciplinary, 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 and social work, and other related fields.

The Communication Emphasis is designed for students desiring a more general, interdisciplinary approach to the fields within communication and theatre, providing the student the freedom to craft a more flexible standard major by choosing courses from all of the emphases offered.

Admission to the Program: All degree-seeking students who wish to major in Communication and Theatre must be formally admitted to the program. For admission, a student must:

1. have demonstrated a minimum competency by completing COTH 202 Academic Writing and Inquiry, COTH 219 Visual Communication, and COTH 222 Analysis and Interpretation in Communication, each with a grade of “C” or above;
2. have completed a letter of application, admission form and portfolio (guidelines available from the departmental administrative assistant); and
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 Michael R. Brooks, Paul A. Edwards, and Terence S. Schliesman;
Associate Professors Jack Lucido and Karin A. Waidley;
Assistant Professor Anthony Miccoli;
Senior Lecturer Courtney P. Fullmer.

DESCRIPTION OF THE PROGRAMS

The 18-credit Communication and Theatre Nucleus is required for all Communication and Theatre Majors.

Communication and Theatre Nucleus

COTH 219 Visual Communication	3 cr
COTH 222 Analysis and Interpretation in Communication	3 cr
COTH 304 Human Communication	3 cr
COTH 370 Philosophy and Theory of Communication	3 cr
COTH 478 Symbol in Communication	3 cr
COTH 484 Communication and Theatre Seminar	3 cr

Communication and Theatre Major: Standard Program

COMMUNICATION EMPHASIS

A minimum of 36 credits is required including the 18-credit Communication and Theatre Nucleus, nine credits of upper-division Communication and Theatre electives and the following:

COTH 271 Small Group Communication.....	3 cr
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One of the following:

COTH 215 Development of Theatre I.....	3 cr
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COTH 216 Development of Theatre II	3 cr
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One of the following:

COTH 241 Media Writing	3 cr
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COTH 264 Introduction to Production and Theory.....	3 cr
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ORGANIZATIONAL COMMUNICATION EMPHASIS

A minimum of 39 credits is required including the 18-credit Communication and Theatre Nucleus and the following:

COTH 241	Media Writing	3 cr
COTH 271	Small Group Communication.....	3 cr
COTH 323	Media/Arts Management	3 cr
COTH 371	Argument and Conflict Management	3 cr
COTH 374	Public Relations Communication	3 cr
COTH 376	Organizational Communication	3 cr
<i>One of the following:</i>		
COTH 372	Issues Management	3 cr
COTH 474	Campaign Planning in Advertising and Public Information.....	3 cr

Communication and Theatre Major: Comprehensive Program

FILM STUDIES EMPHASIS

A minimum of 48 credits is required including the 18-credit Communication and Theatre Nucleus and the following:

COTH 231	Technical Production I	3 cr
COTH 235	Fundamentals of Acting	3 cr
COTH 241	Media Writing.....	3 cr
COTH 264	Introduction to Production and Theory.....	3 cr
COTH 306	Scriptwriting.....	3 cr
COTH 352	Advanced Cinema Studies.....	3 cr

Four of the following:

COTH 323	Media/Arts Management	3 cr
COTH 330	Technical Production II.....	3 cr
COTH 389	Media Production: Narrative.....	3 cr
COTH 390	Media Production: Documentary	3 cr
COTH 406	Advanced Screen Writing and Producing.....	3 cr
COTH 490	Advanced Media Production.....	3 cr

THEATRE AND PERFORMANCE STUDIES EMPHASIS

A minimum of 54 credits is required including the 18-credit Communication and Theatre Nucleus, six credits of upper-division Communication and Theatre electives, and the following:

COTH 215	Development of Theatre I.....	3 cr
COTH 216	Development of Theatre II	3 cr
COTH 231	Technical Production I.....	3 cr
COTH 235	Fundamentals of Acting.....	3 cr
COTH 306	Scriptwriting.....	3 cr
COTH 310	Introduction to Performance Studies	3 cr
COTH 317	Studies in the History of Performance Traditions	3 cr
COTH 323	Media/Arts Management	3 cr
COTH 423	Presentational Aesthetics	3 cr

One of the following:

COTH 324	Advanced Acting.....	3 cr
COTH 327	Performers for Social Change.....	3 cr
COTH 330	Technical Production II.....	3 cr
COTH 431	Integrated Design for Media and Performance.....	3 cr

Communication and Theatre Minor

A minimum of 21 credits is required for a Communication and Theatre Minor. Students are advised to consult with their faculty advisor before deciding upon an appropriate concentration to meet their specific needs.

Communication Concentration

Required courses include:

COTH 219 Visual Communication	3 cr
COTH 222 Analysis and Interpretation in Communication	3 cr
COTH 271 Small Group Communication.....	3 cr
COTH 304 Human Communication	3 cr
COTH 376 Organizational Communication	3 cr
Communication and Theatre upper-division electives.....	6 cr

Film Concentration

Required courses include:

COTH 219 Visual Communication	3 cr
COTH 222 Analysis and Interpretation in Communication	3 cr
COTH 241 Media Writing	3 cr
COTH 264 Introduction to Production and Theory.....	3 cr
COTH 306 Scriptwriting.....	3 cr
<i>One of the following:</i>	
COTH 389 Media Production: Narrative.....	3 cr
COTH 390 Media Production: Documentary	3 cr
<i>One of the following:</i>	
COTH 351 Mass Media in Society	3 cr
COTH 352 Advanced Cinema Studies	3 cr

Theatre Concentration

Required courses include:

COTH 219 Visual Communication	3 cr
COTH 222 Analysis and Interpretation in Communication	3 cr
COTH 231 Technical Production I.....	3 cr
COTH 235 Fundamentals of Acting.....	3 cr
COTH 310 Introduction to Performance Studies	3 cr
<i>One of the following:</i>	
COTH 215 Development of Theatre I.....	3 cr
COTH 216 Development of Theatre II	3 cr
<i>One of the following:</i>	
COTH 324 Advanced Acting.....	3 cr
COTH 327 Performers for Social Change.....	3 cr
COTH 330 Technical Production II.....	3 cr
COTH 431 Integrated Design for Media and Performance.....	3 cr

Capstone Course Requirement. The following course in the Communication and Theatre Major fulfills the capstone course requirement: COTH 484 Communication and Theatre Seminar.

COMMUNICATION AND THEATRE COURSES

COTH 119 Theatre and Media Aesthetics**3 credits**

An analysis of theatre and media (film and/or television) from an artistic perspective. Through historical and practical points of view, students gain a greater appreciation of theatre and other media forms. Form, function, symbolism, and genre are applied to specific plays, films, and/or video productions. The productions analyzed vary from term to term.

COTH 151 Mass Media in America**3 credits**

An examination of the media-related industries in America (broadcasting, journalism, advertising, public relations and online communications), how they work, and the issues related to those industries that affect contemporary public discourse.

COTH 197 Special Topics**1-6 credits****COTH 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-."

COTH 215 Development of Theatre I**3 credits**

Students survey the history and evolution of theatre production and dramatic literature from the Aedon Passion Play to the death of Queen Elizabeth I. Plays are studied and analyzed within literary, performance and cultural contexts.

COTH 216 Development of Theatre II**3 credits**

A survey of the history and evolution of theatre production and dramatic literature from the Jacobean era to the present time. Plays are studied and analyzed within literary, performance and cultural contexts.

COTH 219 Visual Communication**3 credits**

A study of the processes and techniques of visual communication as they apply to theatre, television, and film. The course covers such topics as communication aesthetics, elements of design, visual organizational principles, and tools and techniques of the various media. Prerequisite: ENG 102 with a minimum grade of "C-."

COTH 222 Analysis and Interpretation in Communication**3 credits**

Students are exposed to the transfer of a written text into aesthetic performance in the theatrical or electronic medium. Discussion and group study are combined with development of performance and analytical skills. Prerequisite: ENG 102 with a minimum grade of "C-."

COTH 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.

COTH 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.

COTH 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-."

COTH 261 Broadcast Media Production**1-6 credits**

For experienced students working with faculty supervision in the University radio station or television facilities. Students improve their specialty skills while working with the practical applications of the media.

COTH 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.

COTH 271 Small Group Communication**3 credits**

The theory and practice of communication within small groups. Key concepts, such as leadership, consensus, and effectiveness, are integrated into laboratory discussions.

COTH 297 Special Topics**1-6 credits****COTH 298 Practicum****1-4 credits**

Entry-level supervised experiences in theatre, organizational communication and journalism/mass media. Prerequisite: instructor permission.

COTH 304 Human Communication**3 credits**

A comprehensive examination of the underpinnings of human communicative behavior. Theories, concepts, and practices are applied to everyday settings, with specific focus on dyads, communication relationships, and cross-cultural situations. Prerequisite: successful completion of COTH 202 and the general education essential skills mathematics requirement.

COTH 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. Prerequisites: COTH 219 and COTH 222, or ENG 205, with a minimum grade of "C."

COTH 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.

COTH 317 Studies in the History of Performance Traditions**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.

COTH 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.

COTH 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: COTH 235.

COTH 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.

COTH 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: COTH 231 or instructor permission.

COTH 343 Persuasive and Expressive Writing on Public Issues **3 credits**

A writing course that draws upon the analysis and practice of both editorials and features as interpretive responses to issue-related topics in print and electronic media. Prerequisite: COTH 241 or instructor permission.

COTH 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: COTH 219, or instructor permission.

COTH 351 Mass Media in Society **3 credits**

An examination of newspaper, magazine, radio, television and cable operations from an organizational perspective. Topics covered include departmental functions and duties, programming, formats, promotions, regulations and finances. Prerequisite: Junior standing.

COTH 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.

COTH 362 Audio Programming and Production **3 credits**

Designed for the intermediate student to gain insight into the audio component of media. The focus is on the listener and various audio audiences. Concentration is on the use of audio in radio. Additional applications are discussed for video production, computer applications, and audio streaming.

COTH 370 Philosophy and Theory of Communication **3 credits**

An introduction to the major philosophical and theoretical approaches to understanding human communications. Prerequisites: COTH 304 and admission to the Communication and Theatre Major; or instructor permission.

COTH 371 Argument and Conflict Management **3 credits**

An exploration of various conceptions and types of conflict and the role of argumentation in managing and/or resolving conflict. The study examines 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. Specific areas covered include formal debate, negotiation, arbitration, and the legal system.

COTH 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.

COTH 374 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.

COTH 376 Organizational Communication **3 credits**

A study of communication patterns within organizations, utilizing general-systems theory. Includes the history of contemporary organization theory, the study of conflict management, and communication flow within organizations through lectures, discussions, and case studies and analysis.

COTH 378 Peer Leadership **2 credits**

A course providing students theoretical foundations, practical knowledge and skills development for leadership with specific on-campus programming. Prerequisite: instructor permission.

COTH 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: COTH 264 with a minimum grade of "C."

COTH 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: COTH 264 with a minimum grade of "C."

COTH 392 Independent Study in Communication and Theatre **1-6 credits**

A detailed study in a specific area of communication and theatre, emphasizing individualized approaches toward development of creativity and scholarship. Prerequisites: junior or senior status and 10 credits in Communication and Theatre.

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

COTH 398 Practicum **1-4 credits**

Supervised applications and experiences in communication and theatre. 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: COTH 241, COTH 261, or COTH 298.

COTH 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: COTH 306 with a minimum grade of “C”.

COTH 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: COTH 231, COTH 235, COTH 310 and minimum junior standing; or instructor permission.

COTH 431 Integrated Design for Media and Performance 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: COTH 231 or instructor permission.

COTH 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: COTH 374.

COTH 478 Symbol in Communication 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: COTH 304 and admission to Communication and Theatre program; or instructor permission.

COTH 484 Communication and Theatre Seminar 3 credits

A capstone course requiring intensive study and completion of a semester project in one of the following areas: theatre, mass media, community journalism, or organizational communication. Emphasis is on individual and group research and problem solving. Prerequisites: senior standing and completion of COTH 304.

COTH 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: COTH 389 or COTH 390 with a minimum grade of “C.”

COTH 497 Special Topics 1-6 credits

COTH 499 Internship in Communication and Theatre 1-12 credits

Prerequisite: instructor permission.

COMPUTER INFORMATION SCIENCE (CIS)

The Computer Information 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 Information 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 CIS 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 Information Science Majors require the 33-credit Computer Information Science Core.

CIS Core

CIS 150 Computers in Society	3 cr
CIS 190 Computer Science I.....	3 cr
CIS 191 Computer Science II	3 cr
CIS 195 Database Management Systems	3 cr
CIS 250 Web Applications Development I.....	3 cr
CIS 280 Data Structures.....	3 cr
CIS 310 Visual Programming.....	3 cr
CIS 320 Programming Languages	3 cr
CIS 350 Web Applications Development II.....	3 cr
CIS 410 Systems Analysis and Design	3 cr
<i>One of the following:</i>	
CIS 480 Computer Information Science Application Project	3 cr
CIS 499 Internship in Computer Information Science.....	3 cr

Computer Information Science Major: Standard Program

A minimum of 36 credits is required, including the 33-credit Computer Information Science Core and the following:

MATH 140 College Algebra.....	3 cr
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Computer Information Science Major: Comprehensive Program

A minimum of 49 credits is required, including the 33-credit Computer Information Science Core and the following:

CIS 235 Computer Networks.....	3 cr
CIS 300 Introduction to Computer Architecture	3 cr
CIS 412 Software Engineering.....	3 cr
MATH 151 Calculus I	4 cr
<i>One of the following:</i>	
CIS 275 Scientific Programming, Modeling, and Simulation	3 cr
MATH 200 Discrete Mathematics	3 cr
MATH 213 Probability and Statistics	3 cr

Computer Information Science Minor

A minimum of 18 credits is required, including six credits of Computer Information Science electives, at least three of which must be upper-division, and the following:

CIS 190 Computer Science I.....	3 cr
CIS 191 Computer Science II	3 cr
CIS 250 Web Applications Development I	3 cr
<i>One of the following:</i>	
CIS 280 Data Structures	3 cr
CIS 310 Visual Programming	3 cr
CIS 350 Web Application Development II	3 cr

CIS 120 and CIS 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 Information Science coordinator.

Capstone Course Requirement. The following courses fulfill the capstone course requirement in the Computer Information Science Major: CIS 499 Internship in Computer Information Science, or CIS 480 Application Project (Information Science Emphasis).

COMPUTER INFORMATION SCIENCE COURSES

CIS 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.

CIS 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.

CIS 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 web

page 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 Information Science Major or Minor.

CIS 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.

CIS 191 Computer Science II

3 credits

A continuation of CIS 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: CIS 190 with a minimum grade of "C-."

CIS 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: CIS 190 with a minimum grade of "C-"; prerequisite or corequisite: CIS 191.

CIS 197 Special Topics

1-6 credits

CIS 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: CIS 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.

CIS 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: CIS 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.

CIS 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: CIS 190 and MATH 151 with a minimum grade of "C-."

CIS 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: CIS 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.

CIS 297 Special Topics**1-6 credits****CIS 300 Introduction to Computer Architecture with Assembly Language** **3 credits**

An introduction to computer organization using assembly-language programming. Topics include numeral systems, byte instructions, branching, indexing, computer arithmetic, subroutines, logical operators, and I/O. The fundamental concepts and terminology associated with computer hardware systems are also covered. The physical and electronic components of a computer, including processing units, memory units, and input/output devices are surveyed. Prerequisite: CIS 280 with a minimum grade of “C-.”

CIS 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: CIS 191 with a minimum grade of “C-.”

CIS 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: CIS 280 with a minimum grade of “C-.”

CIS 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: CIS 300 with a minimum grade of “C-.”

CIS 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: CIS 250 with a minimum grade of “C-.”

CIS 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: CIS 275 or CIS 280 with a minimum grade of “C-”; and MATH 151.

CIS 391 Computer Information 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: CIS 191 with a minimum grade of “C-.”

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

CIS 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: CIS 310 with a minimum grade of “C-.”

CIS 412 Software Engineering **3 credits**

An introduction to the fundamental principles of software engineering. Formal software 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: CIS 410 with a minimum grade of “C-.”

CIS 430 Computer Graphics **3 credits**

A presentation of the design and use of computer-graphics systems (hardware and software) and construction of two- and three-dimensional graphics. Applications of computer graphics in business, industry, education, and communications are emphasized. Prerequisite: CIS 280 with a minimum grade of “C-.”

CIS 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: CIS 280 with a minimum grade of “C-.”

CIS 480 Computer Information 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 CIS faculty and students. Prerequisite: 24 credits of CIS course work, including 12 upper-division credits.

CIS 490 Workshop in Computer Information 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 Information Science Minor.

CIS 492 Independent Study in Computer Information Science 1-3 credits

A singular investigation into a unique problem agreed upon by the student and the advisor. Independent Studies (CIS 192, CIS 292, CIS 392, and CIS 492) may be repeated for a total of up to 12 credits.

CIS 497 Special Topics 1-6 credits**CIS 499 Internship in Computer Information 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 Information 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 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
<i>One of the following:</i>	
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
<i>One of the following:</i>	
ECON 317 Economics and Public Policy (recommended)	3 cr
Economics upper-division elective	3 cr
<i>One of the following:</i>	
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
<i>One of the following:</i>	
ECON 301 Intermediate Macroeconomics	3 cr
ECON 302 Intermediate Microeconomics	3 cr
<i>Nine credits from the following:</i>	
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.

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; MATH

140, 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 macroeconomic 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 Teacher Education Program at Western State Colorado University is accredited by the Colorado Department of Education, and the Colorado Commission on Higher Education. The Teacher Education Program 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 Teacher Education Program is committed to creating a community of teachers who are competent in their subject matter, pedagogical content knowledge, pedagogical knowledge, and teaching skills. By developing a professional knowledge base and researching and reflecting on the connection between theory and experience, students realize that pedagogical decisions educators make hold implications 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

Professor Nella B. Anderson;

Assistant Professors Laura A. Tuthill and James M. Woytek;

Lecturers Brooke M. Hanks, Gaye Jenkins, Amy Okafor, and Cori Woytek.

TEACHER EDUCATION PROGRAM

The Teacher Education Program is a licensure program in the State of Colorado that prepares students to function as professionals in a variety of educational settings. The Teacher Education Program offers elementary, secondary, and K-12 endorsement options.

Students pursuing Elementary licensure must major in Interdisciplinary Studies/Liberal Arts.

Students pursuing Secondary licensure may choose from the following majors: Biology, Chemistry, Economics, English, Geology, Politics and Government, History, or Mathematics.

Students pursuing K-12 licensure may choose from the following majors: Art, Exercise and Sport Science, Music, or Spanish.

Admission to the Teacher Education Program. Students seeking admission to the Teacher Education Program for initial teacher licensure in the state of Colorado must meet the following requirements:

1. Admission Career Counseling. Prior to, while enrolled in, or after the basic level education course, students must meet with an education faculty member to discuss licensure and career options.
2. Completion of EDUC 000 Education Gateway Course with a satisfactory grade.
3. Each teacher education candidate must pass a basic skills competency exam in the areas of reading, writing, and mathematics prior to taking EDUC 340. There will be an assessment fee for taking the competency assessment.

4. Fingerprints. Students must submit the completed fingerprint form or provide documentation verifying that fingerprints are on file with the Colorado Department of Education and have completed the FBI clearance. Students submitting the fingerprint form will be required to pay a processing fee.
5. Completion of all course work within the academic major. Students must complete all course work required within the academic major prior to beginning the education courses and the internship or have content and education advisor permission.
6. Completion of EDUC 340 Brain-based Learning Motivation and Achievement.
7. A grade of “C-” or above in all courses required in the academic major and all Education courses.
8. GPA. Students must have an overall GPA of 2.750 or above.
9. State Licensure Exam. Students must pass the appropriate State Licensure Exam(s) for their content area prior to beginning the one year of education course work and internship.
10. Submission of an Application for the Year-Long Internship, which includes attendance at all planning meetings and seminars.

Elementary Licensure

A student seeking licensure as an elementary teacher (grades K-6) must complete the Interdisciplinary Studies/Liberal Arts academic major, all other university requirements, and the Elementary Licensure requirements. Students pursuing the Elementary Licensure option must meet all of the requirements for admission to the Teacher Education Program.

Students must complete all course work required within the academic major prior to beginning the year of education course work and complementary internship or have documented content and education advisor permission.

The internship experience begins each fall, and students may be placed in more than one K-6 classroom for one full year. Students have in-state or out-of-state placement options. The year-long internship experience begins each August with EDUC 404 Creating Positive Learning Environments, taught five days on the Western campus. After completing this course, students will follow the K-6 school year calendar for the school in which they have accepted placement, not the Western State Colorado University calendar (i.e., begin the year on the day that new teachers report to work, take K-6 school holidays, participate in K-6 school professional opportunities, end the last day that teachers are required to report for work for the school year, etc). This schedule extends from approximately the first of August through the first part of June.

Master mentor teachers are selected carefully to ensure that Western interns have strong role models. The potential mentor teacher will self-assess his or her knowledge of the standards and standard elements. Students accepting internship placements are expected to successfully complete the year-long internship. Students who do not successfully complete the internship will be withdrawn from the Teacher Education Program and must appeal to the Selection and Retention Committee for readmittance.

The other education courses in the program are offered online throughout the year. The internship is in K-6 classrooms a minimum of 24 hours per week with experienced mentor teachers. During this year-long internship, the intern is applying and extending the

pedagogical knowledge that he or she is learning in the Education courses.

To be recommended for elementary licensure, the student intern must perform at “3, Proficiency” level in all relevant standard/standard elements in the elementary (K-6) classroom and earn a score of “3, Proficiency” on each standard element in the licensure electronic work sample. Student interns 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. “3, Proficiency” is the level expected of well prepared, first-year teachers.

The Elementary Licensure Program requires 30 credits of education course work:

EDUC 000 Education Gateway Course	0 cr
EDUC 340 Brain-based Learning Motivation and Achievement	3 cr
EDUC 400 Foundations for 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 408 Teaching Writing with the Brain in Mind	3 cr
EDUC 413 Mathematical Investigations	3 cr
EDUC 459 Elementary Student Teaching.....	1-6 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 Secondary/K-12 Licensure requirements. The secondary academic major may be: Biology, Chemistry, Economics, English, Geology, Politics and Government, History, or Mathematics. The K-12 academic major may be: Art, Exercise and Sport Science, Music, or Spanish. Students pursuing the secondary or K-12 Licensure option must meet all of the requirements for admission to the Teacher Education Program.

Students must complete all course work required within the academic major prior to beginning the year of education course work and complementary internship or have content advisor and education advisor permission. For students taking content courses during the year of education course work and complementary internship, the Teacher Education Internship Coordinator is responsible for meeting with content area faculty members to ensure that all requirements and expectations are met during this year. The internship experience begins each fall, and students are placed in more than one K-12 classroom for one full year. Students have in-state or out-of-state placement options. The year-long internship experience begins each August with EDUC 480 Curriculum, Assessment, Technologies, and Pedagogies, a five-day course taught on the Western campus. After completing this course, students follow the K-12 school year calendar for the school in which they have been placed, not the Western State Colorado University calendar (i.e., begin the year on the day that new teachers report to work, take K-12 school holidays, participate in K-12 school professional opportunities, end the last day that teachers are required to report for work for the school year, etc). This schedule extends from approximately the first of August through the first part of June.

Master mentor teachers are selected carefully to ensure that Western interns have strong

role models. The potential mentor teachers self-assess their knowledge of the standards and standard elements. The principal of the host school completes a checklist documenting criteria for selection of mentor teachers before a student is placed at the host school. Upon receiving an internship placement and prior to accepting the placement, a student is expected to arrange for, and have an interview with, the mentor teachers and observe in their classrooms. Students accepting an internship placement will be expected to successfully complete the year-long internship. Students who do not successfully complete the internship will be withdrawn from the Teacher Education Program and must appeal to the Selection and Retention Committee for readmittance.

The other education courses in the program are offered online throughout the year. The internship is in K-12 classrooms and requires a minimum of 24 hours per week with experienced mentor teachers in the same content area in which the intern is seeking licensure. During this year-long internship, the intern is applying and extending the pedagogical knowledge that he or she is learning in the Education courses.

To be recommended for secondary or K-12 licensure in a content area, the student/intern must perform at “3, Proficiency” level in all relevant standard/standard elements in the secondary or K-12 classroom and earn a score of “3, Proficiency” on each standard element in the licensure electronic work sample. The student-intern must demonstrate the ability to apply each standard and standard element in a secondary or K-12 classroom setting, assess secondary or K-12 student learning, and evaluate his/her own teaching performance. “3, Proficiency” is the level expected of well-prepared, first-year teachers.

The Secondary (with the exception of students seeking Secondary English Licensure) and K-12 Licensure Program requires 27 credits of education course work:

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 408 Teaching Writing with the Brain in Mind	3 cr
EDUC 420 Application of Classroom Strategies to Engage All Learners	3 cr
<i>Appropriate Student Teaching Course:</i>	
EDUC 409 Secondary Student Teaching.....	1-6 cr
EDUC 410 K-12 Student Teaching	1-6 cr

The Secondary English Licensure Program requires 30 credits of education course work:

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.....1-6 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 internship, students are evaluated by the Teacher Education faculty and K-12 teacher mentor(s) in terms of their potential for becoming effective teachers. This process of evaluating professional teaching dispositions is used for screening Teacher Education students for support needs and/or continuation in the Teacher Education Program.

Recommendation for Initial Licensure. Students must meet the following requirements during the last semester of their internship year:

1. successfully complete all responsibilities of an intern;
2. perform at least at a “3, Proficiency” on each relevant standard element as evaluated by mentor teachers, supervisors of the internship, and/or course professors;
3. submit a complete work sample to the Teacher Education office for final approval, as stipulated in the work sample requirements handout, and earn a score of no less than “3, Proficiency” on each standard element of the licensure work sample; and
4. apply for licensure from the Colorado Department of Education within the five years immediately following program completion.

Teacher Education Program Selection and Retention Process. Throughout the Teacher Education Program, students are systematically assessed by the Selection and Retention Committee from the Teacher Education Program with 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 in the Teacher Education Program 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 Teacher Education Program, students must complete the prerequisite education course (EDUC 340 Brain Based Learning Motivation and Achievement) with a “C-” or above, and have an overall GPA of 2.75 or above. Anyone who fails two or more courses in the Teacher Education Program 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 Teacher Education Program based on current state licensure requirements. Copies of official transcripts, course descriptions, and/or course syllabi must be submitted to the Teacher Education Program for a determination of transfer credit.

Selection and Retention Procedures. Students who appeal Program policy and procedures must abide by the selection and retention procedures process. This process involves submitting materials to the Teacher Education 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 student's transcript(s) and current course schedule; and
3. additional materials supporting the student's appeal.

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 Program. Graded Satisfactory/Unsatisfactory only.

EDUC 197 Special Topics in Education

1-6 credits

EDUC 297 Special Topics in Education

1-6 credits

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 Teacher Education Program.

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 Disabilities

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 Teacher Education Program.

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 Teacher Education Program.

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, classroom 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 Teacher Education Program.

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 short and long range standards-based lessons and units for diverse student populations based on their respective content areas. Students are taught to integrate literacy, math, and technology into their standards-based instructional plans encompasses the development and utilization of various types of curriculum based measures both formal and informal in order to accurately document and report ongoing student achievement. Students learn to use assessment data to drive standards-based curriculum that measure student knowledge, understanding, and skills. Technology is utilized to manage and communicate assessment results and their implications to students, parents, professionals, administrators and the community. At the end of this course, students reflect and evaluate their own performance, and articulate that teaching is a worthy career. Prerequisite: admission to the Teacher Education Program.

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 Teacher Education Program.

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 Teacher Education Program.

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 classroom student. Students apply expert content knowledge to enrich and extend student learning and apply individual educational plans. Prerequisite: admission to the Teacher Education Program.

EDUC 409 Secondary Student Teaching 1-6 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 can be repeated twice for credit. Prerequisite: admission to the Teacher Education Program.

EDUC 410 K-12 Student Teaching 1-6 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 can be repeated twice for credit. Prerequisite: admission to the Teacher Education Program.

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 Teacher Education Program.

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 Teacher Education Program.

EDUC 459 Elementary Student Teaching 1-6 credits

Student teaching in an elementary school setting. The student teaching experience averages 24 hours per week over the course of the academic year and is in collaboration with mentor teachers. May be repeated 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 and Mark D. Todd;

Associate Professor Alina M. Luna;

Assistant Professor Teresa A. Milbrodt;

Senior Lecturers JoAnn M. Arai-Brown and Courtney P. Fullmer;

Lecturers Jennifer McArdle and 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 Literature	3 cr
ENG 371 Literary Theory and Criticism.....	3 cr
ENG 394 Junior Seminar	3 cr
ENG 494 Senior Seminar	3 cr
<i>One of the following:</i>	
ENG 230 Environmental Literature	3 cr
ENG 237 Women and Literature	3 cr
ENG 238 Literary Culture of the American West.....	3 cr
<i>One of the following:</i>	
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
<i>Two of the following:</i>	
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
<i>Two of the following:</i>	
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:

COTH 241 Media Writing	3 cr
COTH 343 Persuasive and Expressive Writing on Public Issues	3 cr
ENG 205 Introduction to Creative Writing	3 cr
ENG 250 Critical Approaches to Literature	3 cr
ENG 358 Global Literature	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
<i>Three of the following:</i>	
COTH 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
<i>Two of the following:</i>	
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
<i>Two of the following:</i>	
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:

COTH 241 Media Writing	3 cr
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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 Literature.....	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
<i>One of the following:</i>	
COTH 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
<i>Two of the following:</i>	
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
<i>Two of the following:</i>	
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
<i>One of the following:</i>	
COTH 215 Development of Theatre I.....	3 cr
COTH 216 Development of Theatre II	3 cr

English Minor

A minimum of 18 credits is required for a Minor in English including twelve credits of electives, nine of which must be upper division, and the following:

ENG 205 Introduction to Creative Writing.....	3 cr
ENG 250 Critical Approaches to Literature.....	3 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 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.

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-."

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 Formula Fiction**3 credits**

A focus on works that adhere to a specific “formula” 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 formula 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-.”

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: senior standing.

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."

ENVIRONMENTAL STUDIES (ENVS)

The Environmental Studies Program focuses on the interactions of humans and the natural environment. Specifically, the Program studies the structure and functioning of natural systems and the ways that human social, political, and economic activity affects those systems.

Goals of the Environmental Studies Program include:

- developing students’ capacities for interdisciplinary critical thinking, problem solving, and communication;
- applying the diverse research methods of the social sciences and natural sciences to understand and analyze local, national, and international environmental issues;
- fostering an understanding of the literature of the environment and ethical questions in environmental decision making; and
- enhancing career and graduate study opportunities in environmentally related disciplines.

FACULTY

Associate Professor John C. Hausdoerffer;

Assistant Professor and Director of the Colorado Water Workshop Jeffrey Sellen;

Assistant Professor Jonathan D. Coop.

ENVIRONMENTAL STUDIES COUNCIL

John C. Hausdoerffer, Environmental Studies Director

Kevin D. Alexander, Biology

Jonathan D. Coop, Biology Environmental Studies

Daniel M. Cress, Sociology

Matthew H. Ebbott, Recreation and Outdoor Education

Christopher W. Greene, Business Administration

Sally E. Hays, Economics

Jack F. Lucido, Communication

Patrick A. Magee, Biology

John Mason, Physics

M. Brooke Moran, Recreation and Outdoor Education

William L. Niemi, Politics and Government

Jeffrey Sellen, Environmental Studies

Lynn L. Sikkink, Anthropology

Heather Thiessen-Reily, History

DESCRIPTION OF THE PROGRAMS

Environmental Studies Major: Standard Program

A minimum of 39 credits is required.

ENVS 100 Introduction to Environmental Studies	3 cr
ENVS 200 Writing the Environment	3 cr
ENVS 301 Science, Technology, and the Environment	3 cr
ENVS 350 U.S. and Western Environmental Politics	3 cr
ENVS 390 Environmental Monitoring	4 cr
ENVS 400 Applied Environmental Studies	3 cr

ENVS 410 Environmental Ethics	3 cr
<i>One of the following:</i>	
ENVS 360 Global Environmental Policy.....	3 cr
ENVS 370 Water Policy and Politics	3 cr
<i>Required supporting courses:</i>	
ECON 215 Environmental Economics	3 cr
HWTR 200 Introduction to the Headwaters	1 cr
SOC 150 Environmental Sociology	3 cr
<i>One of the following:</i>	
BIOL 150 Biological Principles (with laboratory).....	4 cr
BIOL 151 Diversity and Patterns of Life (with laboratory).....	4 cr
PHYS 140 Introductory Physics (with laboratory).....	4 cr
PHYS 170 Principles of Physics (with laboratory)	4 cr
<i>or both:</i>	
BIOL 130 Environmental Biology.....	3 cr
BIOL 135 Environmental Biology Laboratory	1 cr
<i>or both:</i>	
CHEM 111 General Chemistry I.....	3 cr
CHEM 112 General Chemistry Laboratory I.....	1 cr
<i>or both:</i>	
GEOL 101 Physical Geology.....	3 cr
GEOL 105 Physical Geology Laboratory.....	1 cr
<i>And one of the following:</i>	
ECON 216 Statistics for Business and Economics	3 cr
MATH 213 Probability and Statistics	3 cr
SOC 211 Quantitative Research Methods.....	3 cr

Environmental Studies Major: Comprehensive Program

Students have two options for a comprehensive major: the 66-credit Water Emphasis or the 57-credit Individualized Contract.

WATER EMPHASIS

A minimum of 66 credits is required.

ENVS 100 Introduction to Environmental Studies	3 cr
ENVS 200 Writing the Environment	3 cr
ENVS 301 Science, Technology, and the Environment	3 cr
ENVS 350 U.S. and Western Environmental Politics	3 cr
ENVS 370 Water Policy and Politics	3 cr
ENVS 373 The Water Planet.....	3 cr
ENVS 390 Environmental Monitoring	4 cr
ENVS 376 Colorado Water Workshop.....	1 cr
ENVS 400 Applied Environmental Studies	3 cr
ENVS 410 Environmental Ethics	3 cr
<i>Two of the following for at least six credits:</i>	
ECON 370 Natural Resource Economics.....	3 cr
ENVS 360 Global Environmental Policy.....	3 cr
ENVS 375 Seminar in Water Topics	1-3 cr
<i>One of the following:</i>	
ENVS 420 Natural History of the Gunnison Basin.....	3 cr

130 Environmental Studies

ENVS 430 Watersheds of the World	3 cr
ENVS 499 Internship in Environmental Studies.....	3-6 cr
<i>Required supporting courses:</i>	
ANTH 107 Introduction to General Anthropology	3 cr
ANTH 320 Cultural Ecology	3 cr
GEOL 101 Physical Geology.....	3 cr
GEOL 105 Physical Geology Lab	1 cr
GEOL 320 Geomorphology (with laboratory)	4 cr
HWTR 200 Introduction to Headwaters	1 cr
<i>One of the following:</i>	
BIOL 151 Diversity and Patterns of Life (with laboratory)	4 cr
<i>or both:</i>	
BIOL 130 Environmental Biology	3 cr
BIOL 135 Environmental Biology Lab	1 cr
<i>One of the following:</i>	
CHEM 101 Introduction to Inorganic Chemistry	3 cr
CHEM 111 General Chemistry I	3 cr
<i>One of the following:</i>	
ECON 216 Statistics for Business and Economics	3 cr
MATH 213 Probability and Statistics	3 cr
SOC 211 Quantitative Research Methods	3 cr
<i>Two of the following:</i>	
BIOL 440 Conservation Biology	3 cr
BIOL 476 Aquatic Ecology (with laboratory)	4 cr
GEOG 222 Map and Air Photo Interpretation	3 cr
ROE 293 Outdoor Pursuits Education—Water Based.....	3 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 Environmental Studies advisor and with the approval of the Environmental Studies 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 3.200 GPA in the major and a 3.000 overall GPA. Consult an Environmental Studies advisor for details.

Environmental Studies and Business Administration Coordinated Double Major:

If a student elects to complete an Environmental Studies 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 Politics must be elected. ECON 216 must be elected, with MATH 140 as its prerequisite. The student may also substitute GEOG 120 Introduction to Human Geography for SOC 150 Environmental Sociology.

Environmental Studies Minor

The Environmental Studies Minor requires a minimum of 22 credits including:

ENVS 100 Introduction to Environmental Studies	3 cr
ENVS 200 Writing the Environment.....	3 cr
ENVS 301 Science, Technology, and the Environment	3 cr
ENVS 350 U.S. and Western Environmental Politics.....	3 cr
ENVS 410 Environmental Ethics	3 cr
<i>One of the following:</i>	
ECON 215 Environmental Economics.....	3 cr
SOC 150 Environmental Sociology	3 cr
<i>One of the following:</i>	
BIOL 150 Biological Principles (with laboratory)	4 cr
BIOL 151 Diversity and Patterns of Life (with laboratory)	4 cr
PHYS 140 Introductory Physics (with laboratory)	4 cr
PHYS 170 Principles of Physics I (with laboratory)	4 cr
<i>or both:</i>	
BIOL 130 Environmental Biology	3 cr
BIOL 135 Environmental Biology Laboratory	1 cr
<i>or both:</i>	
CHEM 111 General Chemistry I	3 cr
CHEM 112 General Chemistry Laboratory I.....	1 cr
<i>or both:</i>	
GEOL 101 Physical Geology.....	3 cr
GEOL 105 Physical Geology Laboratory	1 cr

Capstone Course Requirement. The following course in the Environmental Studies Major fulfills the capstone course requirement: ENVS 400 Applied Environmental Studies.

ENVIRONMENTAL STUDIES COURSES

ENVS 100 Introduction to Environmental Studies **3 credits**

An introduction to the field of environmental studies emphasizing connections between person, place, and time. The unique natural and social history of the Southern Rocky Mountains is used to introduce the importance of human relationships to the land. Through readings in the foundational texts of environmental philosophy, exposure to the complexities of “environmentalism,” and reflective outdoor experiences, students develop an appreciation for their unique ecological identity, significance in history, and role in their surroundings.

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; COTH 202 is recommended.

ENVS 292 Independent Study **1-3 credits**

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

ENVS 301 Science, Technology, and the Environment **3 credits**

A study of ecosystem principles informed by the natural sciences. Ecosystem principles are used as the basis for discussions regarding appropriate and alternative technologies. The interactions between scientific advances in the understanding of ecosystems and technological applications are emphasized. Field experiences on campus are used to demonstrate local environmental concerns and social and technological solutions. Prerequisite: at least one credit from General Education Area II that is a laboratory or includes a laboratory and completion of Area II GE.

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; ECON 201 or ENVS 200 or SCI 202; junior standing, or instructor approval.

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; ECON 201, ENVS 200 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 philos-

ophy, 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 Environmental Studies **3 credits**

A field-based, collaborative, problem-solving experience that addresses a current environmental issue. Students collect information, analyze results, write a report, publicly present their findings, and begin to implement solutions informed by their analysis. 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 Environmental Studies advisor and the Program Director.

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.

Admission to the Program. All students who wish to major in Exercise and Sport Science must be formally admitted to the program. For admission, a student must have:

1. completed ESS 181 Foundations of Exercise and Sport Science, and ESS 185 Lifetime Wellness, with a minimum grade of “C”;
2. completed at least 12 semester credits; and,
3. submitted a letter of application and portfolio (guidelines available from the departmental administrative assistant).

FACULTY

Professor Kathleen M. Kinkema;
 Associate Professor Ashwin J. Patel;
 Assistant Professor Christina A. Buchanan;
 Lecturers and Sarah Baysden and Anna Swisher.

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 495 Senior Seminar in Exercise and Sport Science	3 cr

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)	4 cr
ESS 275 Motor Development and Learning.....	3 cr
ESS 280 Biomechanics	3 cr
ESS 330 Exercise Physiology.....	3 cr
ESS 331 Exercise Physiology Lab.....	1 cr
<i>Three of the following:</i>	
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
<i>One of the following:</i>	
BUAD 220 Computer Applications in Business	3 cr
CIS 120 Information Management and Analysis	3 cr
<i>One of the following:</i>	
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 59 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 280 Biomechanics	3 cr
ESS 330 Exercise Physiology	3 cr
ESS 331 Exercise Physiology Lab	1 cr
ESS 370 Essentials of Strength Training and Conditioning	3 cr
ESS 410 Assessment and Exercise Prescriptions	3 cr
<i>One of the following:</i>	
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)	4 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 Abnormal Psychology.....	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 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

Two credits from the following:

ESS 298 Fitness Instruction: (select two different topics)	1 cr
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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 280 Biomechanics	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 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:

ESS 181 Foundations of Exercise and Sport Science.....	3 cr
ESS 185 Lifetime Wellness	3 cr
ESS electives at the 200-level or above (excluding ESS 276 and ESS 321-329)	12 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 student teaching 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 112 Selected Activities in Recreation and Exercise and Sport Science** **1 credit**
A specific activity is offered as student interest, facilities, faculty, and equipment are available.
- ESS 114 Fly Fishing** **1 credit**
An introduction to the activity, equipment, safety procedures, and terminology to develop proficiency in the fundamental skills of fly fishing.
- ESS 126 Tennis** **1 credit**
Provides the novice the opportunity to develop basic tennis skills. Particular emphasis is placed on the forehand and backhand strokes and the service. Students are introduced to singles and doubles play and court etiquette. Provide one can of tennis balls.
- ESS 131 Physical Conditioning** **1 credit**
Students develop the knowledge of how to improve cardiovascular endurance, strength, and flexibility in a natural outdoor setting. Students learn to plan and carry out activities without dependency on others.
- 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 134 Ski Conditioning** **1 credit**
An introduction and practice in a combination of activities to provide the student with a systematic approach to ski conditioning and all-around physical conditioning.
- 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 137 Triathlon Training** **1 credit**
Students become familiar with the components of a successful triathlon training program. Students are taught to maximize their potential in swimming, biking, and running and to rotate these sports to maximize their time and energy.
- 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 laboratory)****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 handball, 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 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 Sports Science majors have first option for this course.

ESS 280 Biomechanics**3 credits**

Basic bone, joint, muscle and movement information is presented and used to gain an understanding of basic biomechanical principles including body levers, correct and efficient movement, and application of movement to the varied aspects of health, wellness, teaching, and sport. Prerequisites: ESS 201 or BIOL 372, completion of the University Mathematics course requirement; admission to the major or instructor permission.

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:****1 credit**

A variety of announced topics within the area of fitness instruction. Students are provided with current instructional techniques, related assessment tools, and professional resources for an integrated presentation of the announced topic. The course may be repeated three times for credit if a different topic is selected. Topics might include: aquatic exercise, resistance training, cardiorespiratory exercises, flexibility training, 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 321 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 323 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 325 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 327 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 329 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 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: completion of the University Mathematics course requirement; admission to the major and ESS 290.

ESS 353 Coordinated School Health Programs**1 credit**

Overview of coordinated school health programs with a focus on the school health education curriculum. Other components include school health services, healthy school environments, nutrition services, counseling, psychological, and social services, health promotion for staff, and family and community involvement. Includes 2-4 hours of field experience. Prerequisites: EDUC 000 and junior or senior 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 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: admission to the major or instructor permission.

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: admission to the major or permission of instructor.

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; admission to major or instructor permission.

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: junior or senior standing and admission to the major. Graded Satisfactory/Unsatisfactory.

ESS 410 Assessment and Exercise Prescription**3 credits**

Students work with assessment formats, appraisal techniques, and metabolic calculations to gain information needed to then construct exercise prescriptions designed to meet individual needs for different segments of the population. Prerequisites: ESS 331 and ESS 370 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, consti-

tutional law as relevant for physical activity professionals, development of a risk management plan, and risk reduction strategies. Prerequisites: junior or senior standing.

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: senior standing and admission to the major. 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 **6-9 credits**

An opportunity for in-depth work at a site in an area of exercise and sport science. The experiences must meet standards of the department and the University. Prerequisites: satisfactory grade in ESS 405, overall GPA of 2.750, department advisor permission, and completion of all major course requirements.

FRENCH (FREN)

The French program allows its students to study the language, literature, and culture of France and French-speaking countries. Graduates of the French Minor are expected to have an understanding of and proficiency in comprehending, speaking, reading, and writing French; to be acquainted with the phonology of modern French dialects and to explore the sound system; to be able to read, discuss, critique and appreciate the literary value of Francophone literature; and to be familiar with and appreciate Franco civilization and culture. Opportunities to study in Canada or France are provided.

Some graduates who minored in French are teachers and professors, while others work for the federal government or with major corporations concerned with international business. They are also prepared for a variety of other positions, such as court translators, interpreters, and hotel managers in resort areas.

FACULTY

Professor Helynné H. Hansen.

DESCRIPTION OF THE PROGRAM

French Minor

The French minor consists of 18 credits of French courses and laboratory work (beyond FREN 101 and 102) to be selected with an advisor.

The 18 credits are to be chosen from the following:

FREN 254 Intermediate French I.....	3 cr
FREN 255 Intermediate French II	3 cr
FREN 256 French Literature in Translation	3 cr
FREN 264 French Conversation and Composition I.....	3 cr
FREN 380 History of French Civilization.....	3 cr
FREN 392 Independent Study.....	1-6 cr
FREN 432 Contemporary French Life	3 cr
FREN 490 Workshop in France.....	1-8 cr

FRENCH COURSES

FREN 101 Elementary French I **3 credits**

An introduction to understanding, speaking, writing, and reading French. Reserved for students with fewer than two years of high school French.

FREN 102 Elementary French II **3 credits**

A continuation of FREN 101. Prerequisite: FREN 101 or equivalent.

FREN 254 Intermediate French I **3 credits**

A continuation of the elementary course with special emphasis on speaking and writing the language. Prerequisites: FREN 101 and FREN 102 or equivalent (two years or more of high school French).

FREN 255 Intermediate French II **3 credits**

A systematic review of French grammar through translation and reading of modern texts. Prerequisites: FREN 254 or equivalent.

FREN 256 French Literature in Translation**3 credits**

A survey of well-known and respected works of French-language literature, from the Middle Ages through modern times that have been translated into English. All class discussion and writing assignments are in English. Prior French-language courses are not required.

FREN 264 French Conversation and Composition I**3 credits**

Intensive conversation and composition to achieve competency in the target language. Prerequisite: FREN 254 or equivalent.

FREN 297 Special Topics**1-6 credits****FREN 380 History of French Civilization****3 credits**

A survey of the history, institutions, and arts of the French nation, from its origin to the present. Conducted in French except when the course is offered through the Honors Program. Prerequisite: FREN 255 or equivalent.

FREN 392 Independent Study**1-6 credits**

An opportunity for individual research on topics of interest to students (literature, business, education, media), studied from the French perspective. Prerequisite: FREN 254.

FREN 397 Special Topics**1-6 credits****FREN 432 Contemporary French Life****3 credits**

An introduction to the customs and contemporary lifestyles of native speakers of the French language, from France and its various regions to French-speaking Europe, Africa, and North America. The course provides insights that enable students to relate to and interact with people of the French-speaking world. Prerequisite: FREN 255.

FREN 490 Workshop in France**1-8 credits**

A series of workshops, offered in France or other French-speaking countries of the world, which are designed to study various aspects of contemporary issues in modern France: business, media, society, etc.

FREN 492 Independent Study**1-4 credits**

A special study in areas of student interest. May be taken for a maximum of four credits.

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

GEOGRAPHY (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. The Geography Program at Western State Colorado University emphasizes the study of human geography while providing background in sciences that improve our understanding of the natural environment through courses offered by other disciplines.

A minor in Geography complements a major in many other disciplines including Biology, Business Administration, Economics, English, Environmental Studies, Geology, History, Political Science, Psychology, and Sociology.

FACULTY

Professor Philip L. Crossley.

DESCRIPTION OF THE PROGRAM

Geography Minor

A minimum of 21 credits is required including:

GEOG 110 World Regional Geography.....	3 cr
GEOG 120 Introduction to Human Geography	3 cr
GEOG 222 Map and Air Photo Interpretation	3 cr
GEOG 250 Geography of North America.....	3 cr
<i>One of the following:</i>	
BIOL 130 Environmental Biology.....	3 cr
GEOL 101 Physical Geology.....	3 cr
PHYS 120 Meteorology.....	3 cr
<i>Two of the following:</i>	
ANTH 320 Cultural Ecology	3 cr
ENVS 360 Global Environmental Policy.....	3 cr
GEOG 330 Urban Geography	3 cr
GEOG 340 Introduction to Geographic Information Systems	3 cr
GEOG 351 Geography of Latin America and the Caribbean	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.

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 Map and Air Photo Interpretation** **3 credits**
 Acquaints students with the basic principles and techniques of map making and interpretation, and with the features, methods of interpretation, and limitations of aerial photography. Emphasis is on the skilled use of topographic maps, creation and interpretation of thematic maps, and interpretation of rural and urban cultural landscapes from various forms of aerial photography.
- 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.
- GEOG 297 Special Topics** **1-6 credits**
- GEOG 330 Urban Geography** **3 credits**
 A thematic approach to making sense of cities. Topics include ancient and modern forms of urbanization, how cities create their own climates, and how they function as economies, places of residence, interaction, segregation, and meaning. Prerequisite: GEOG 120 or sophomore standing.
- 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 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 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 adequately prepared to enter graduate programs in Geology. The program meets or exceeds American Geological Institute standards.

FACULTY

Professors Robert P. Fillmore and Allen L. Stork;
Associate Professor David W. Marchetti;
Moncrief Chair in Petroleum Geology and Assistant Professor Timothy F. Wawrzyniec.

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
<i>One of the following:</i>	
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 II3 cr

CHEM 114 General Chemistry Laboratory II.....1 cr

MATH 151 Calculus I4 cr

MATH 251 Calculus II4 cr

One of the following:

CIS 190 Computer Science I.....3 cr

GEOG 340 Introduction to Geographic Information Systems3 cr

MATH 213 Probability and Statistics3 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 Anthropology3 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 Systems3 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 School4 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
<i>One of the following:</i>	
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 (with laboratory).....	4 cr
GEOL 450 Field Geology.....	4 cr
GEOL 455 Petroleum Geology (with laboratory).....	4 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
PHYS 170 Principles of Physics I (with laboratory).....	4 cr
PHYS 171 Principles of 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
PHYS 170 Principles of Physics I (with laboratory).....	4 cr
PHYS 171 Principles of Physics II (with laboratory)	4 cr
<i>One of the following:</i>	
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.

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.

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 geologic 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 throughout 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 hydrocarbon 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, CHEM 113, and MATH 141. Prerequisite or corequisite: CHEM 114.

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: ENG 102 with a minimum grade of "C-," GEOL 201.

- 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: 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.
- 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 351 Geochemistry 3 credits**
 A study of the distribution and movement of chemical elements and isotopes in the geologic environment. Topics include the structural, thermodynamic, and kinetic controls of element distribution. Examples illustrate the origin of economic mineral deposits, geochemical exploration, and the transport of material from mineral deposits and hazardous waste sites by natural waters. Prerequisite: GEOL 305.
- 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.
- 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 (with laboratory) 4 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 water chemistry. Laboratory exercises 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 Research Seminar in Geology 1 credit

A seminar where advanced undergraduate students can engage in and report on independent or group research projects. Topics are chosen from the current research literature. A student may earn a maximum of four credits under this course title. Prerequisite: 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. As the “headwaters college of the Southwest,” Western is uniquely situated for using “place” as a medium for integrating learning. This Headwaters Region surrounding the University is one of the most geographically, ecologically, and culturally diverse regions on the continent; few schools have such close access to a diverse “living laboratory” of learning opportunities. 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 College, 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 Wallace G. Lewis, James M. Stewart, Heather Thiessen-Reily, and Duane L. Vandenbusche.

DESCRIPTION OF THE PROGRAMS

No more than six credits in independent study or correspondence courses can be counted toward any History Major.

All History Majors require the 15-credit History Nucleus.

History Nucleus

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 402 Seminar in History	3 cr

History Major: Standard Program

A minimum of 39 credits is required including the 15-credit History Nucleus and the following:

History electives numbered 300 or above.....	18 cr
<i>Two of the following courses in regional history:</i>	
HIST 250 History of the Middle East	3 cr
HIST 254 History of Africa	3 cr
HIST 260 History of Latin America	3 cr

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 the 15-credit History Nucleus and three credits of upper-division history electives. 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
HIST 327	Colorado History	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

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

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.

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.

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.

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.

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.

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.

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 north and 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, supervised 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 within 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 students who have achieved a 3.50 cumulative grade point average in high school or at Western. Students may also be nominated to the program by a faculty member if they achieve the required grade point average and exhibit the program's academic and intellectual characteristics.

Program Requirements. Continuation and completion of the program is based upon maintaining an overall 3.50 grade point average as well as completing the program requirements. Service learning is a valued component of the Honors Core and incorporated into the HNRS 200 Honors Forum course. A maximum of two additional credits of service learning from the following courses HNRS 202 Service Learning in Honors, ENG 240 Writing Center Workshop, HNRS 302 Service Learning in Honors, ENG 396 Writing Center Assistantship, HNRS 402 Service Learning in Honors, may be used to satisfy program requirements. Students are recommended to take a minimum of one Honors course per academic year.

HONORS COUNCIL

Heather Thiessen-Reily, Honors Director
 Robin Bingham, Biology
 Dan Cress, Sociology
 Paul A. Edwards, Communication
 and Theatre

Nancy Gauss, Library
 Anthony Miccoli, Philosophy
 Ashwin J. Patel, Exercise and
 Sport Science
 Don E. 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
<i>Eight credits from the following (at least six credits must be upper division):</i>	
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

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 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 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. 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**

INTERDISCIPLINARY STUDIES/LIBERAL ARTS (IDLA)

The Interdisciplinary Studies/Liberal Arts Major prepares students to be effective elementary educators and is aligned with the Model Content Standards for the State of Colorado. The depth and breadth of the Interdisciplinary Studies/Liberal Arts Major curriculum prepared students to successfully teach in a Colorado standards-based classroom or be prepared to enter other education and training job opportunities.

FACULTY

Professor Nella B. Anderson;
 Assistant Professors Laura A. Tuthill and James M. Woytek;
 Lecturers Brooke Hanks, Gaye Jenkins, Amy Okafor, and Cori Woytek.

DESCRIPTION OF THE PROGRAM

The Interdisciplinary Studies/Liberal Arts Major requires students to complete the requirements of the Elementary Education Licensure Program, including 30 credits of coursework. These requirements are described under the Education Program description in this *Catalog*. The Major consists of 92 credits of interdisciplinary courses and 30 credits of teacher education course work. The 92 credits of interdisciplinary coursework includes the University’s general education requirements (nine credits of essential skills, and 26 credits of liberal arts).

Interdisciplinary Studies/Liberal Arts Major: Comprehensive Program

ART 105 Introduction to Art	3 cr
COTH 202 Academic Writing and Inquiry.....	3 cr
ECON 201 Macroeconomics	3 cr
ECON 202 Microeconomics.....	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
ENG 250 Critical Approaches to Literature	3 cr
ENG 370 Myth and Culture	3 cr
ESS 353 Coordinated School Health Programs.	1 cr
GEOG 110 World Regional Geography.....	3 cr
GEOG 120 Introduction to Human Geography	3 cr
GEOG 250 Geography of North America.....	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
MATH 140 College Algebra.....	3 cr
MATH 209 Mathematics for Elementary School Teachers I.....	3 cr
MATH 210 Mathematics for Elementary School Teachers II	3 cr
MUS 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
POLS 360 American Foreign Policy	3 cr
SCI 110 Habitable Planet (with laboratory)	4 cr
SCI 111 Nature of Science	1 cr
SCI 120 Living Planet (with laboratory).....	4 cr
SCI 210 Dynamic Planet (with laboratory)	4 cr
SPAN 101 Elementary Spanish I	3 cr

Capstone Course Requirement: The Capstone Course Requirement in the Interdisciplinary Studies/Liberal Arts Major is fulfilled by the appropriate student teaching experience.

MATHEMATICS (MATH)

Western State Colorado University provides three programs of study in Mathematics: the Standard Mathematics Major, the Comprehensive Mathematics Major with a Computer Information Science Emphasis, and the Comprehensive Mathematics Major with Secondary Licensure Emphasis. Each major offers students a strong, competitive program to prepare them for career fields in mathematics or computer science or for entry into graduate school. Students majoring in Mathematics have opportunities to develop abstract reasoning skills and problem-solving skills.

The advancement of thinking skills is one of the primary reasons mathematicians and computer scientists are in demand in education, business, and high-tech firms. Western graduates are currently employed in a variety of fields including actuarial science, computer programming, education, system analysis, software engineering, and mathematical research for business and engineering firms.

FACULTY

Professors Andrew G. Keck, Heidi L. Keck, and Daniel L. Schuster;
Associate Professor Robert A. Cohen;
Assistant Professors Kimberly J. Fix, and Jeremy Muskat;
Lecturers Edith Cranor-Buck, Ann Scheels, and Zachary Treisman.

DESCRIPTION OF THE PROGRAMS

Each Mathematics Major requires the 38-credit Mathematics Core.

Mathematics Core

CIS 190	Computer Science I	3 cr
MATH 151	Calculus I	4 cr
MATH 213	Probability and Statistics	3 cr
MATH 220	Introduction to Advanced Mathematics.....	3 cr
MATH 251	Calculus II	4 cr
MATH 252	Calculus III	4 cr
MATH 300	Introduction to Mathematical Modeling.....	3 cr
MATH 360	Linear Algebra	3 cr
MATH 370	History of Mathematics	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 38-credit Mathematics Core and the following:

One of the following:

CIS 191	Computer Science II.....	3 cr
MATH 314	Applied Probability.....	3 cr
MATH 330	Topics of Geometry	3 cr
MATH 354	Differential Equations.....	3 cr
MATH 456	Introduction to Complex Analysis	3 cr

Mathematics Major: Comprehensive Programs

COMPUTER INFORMATION SCIENCE EMPHASIS

A minimum of 53 credits is required, including the 38-credit Mathematics Core and the following:

CIS 191	Computer Science II	3 cr
CIS 280	Data Structures	3 cr
CIS 375	Numerical Methods	3 cr
CIS 430	Computer Graphics	3 cr
MATH 354	Differential Equations.....	3 cr

Recommended Supporting Courses:

PHYS 200	General Physics I (with laboratory)	4 cr
PHYS 201	General Physics II (with laboratory).....	4 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 53 credits is required including the 38-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 266	Secondary Mathematics from an Advanced Perspective	3 cr
MATH 330	Topics in Geometry	3 cr
MATH 366	Methods of Teaching Secondary Mathematics	3 cr

One of the following sequences:

CHEM 111	General Chemistry I.....	3 cr
CHEM 113	General Chemistry II.....	3 cr

or

PHYS 170	Principles of Physics I (with laboratory).....	4 cr
PHYS 171	Principles 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

Mathematics Minor

The Mathematics Minor requires a minimum of 18 credits:

MATH 151	Calculus I	4 cr
MATH 251	Calculus II	4 cr
Mathematics elective (300-level or above).....		3 cr

At least seven credits from the following:

MATH 200	Discrete Mathematics	3 cr
MATH 213	Probability and Statistics.....	3 cr
MATH 220	Introduction to Advanced Mathematics.....	3 cr
MATH 252	Calculus III.....	4 cr
MATH 275	Scientific Programming Modeling and Simulation.....	3 cr
or any upper-division Mathematics course.....		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 105 Mathematics for the Liberal Arts

3 credits

An investigation of a number of mathematical concepts, which may include ratios and proportions, descriptive statistics, sets and logic, geometry, right-angle trigonometry, counting, and probability. A variety of teaching methods are employed such as cooperative groups, writing about mathematics, and technology (calculators and computers). Prerequisite: ACT math score of 19 or above; SAT math score of 460 or above; MATH 098; MATH 099; or Accuplacer Elementary Algebra test score of 85 or above.

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 19 or above; SAT math score of 460 or above; MATH 099; or Accuplacer Elementary Algebra test score of 85 or above.

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 19 or above; SAT math score of 460 or above; MATH 099; or Accuplacer Elementary Algebra test score of 85 or above.

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. and of Integral calculus including antiderivatives, 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.

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.

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 232 Applied Calculus for the Managerial and Social Sciences **3 credits**

An introduction to differential and integral calculus for students majoring in business, accounting or the social sciences. The calculus is presented using a variety of real-world business and economic applications, stressing marginality, elasticity, and accumulation. Offered upon sufficient demand. Prerequisite: MATH 131 or MATH 140 with a minimum grade of “C-”; or Accuplacer university-level mathematics test score of 75 or above.

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 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: CIS 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 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: MATH 220 with a minimum grade of "C-."

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**

An introduction to systems of linear equations, matrix operations, vector spaces, properties of determinants, eigenvalues, and orthogonality and least-squares. Prerequisite: MATH 220 with a minimum grade 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 CIS 275 or CIS 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 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 452 Analysis II**2 credits**

A continuation of the study of the theory of calculus. Topics include series, sequences and series of functions, pointwise and uniform convergence and the transcendental functions defined as power series. Prerequisite: MATH 451 with a minimum grade 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 472 Abstract Algebra II

2 credits

A continuation of the study of abstract algebra. This course develops the ring properties and continues the development of algebra from integral domains to the field concept. Discussion includes the basic theory of factorization and unique factorization domains. Prerequisite: MATH 471 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 Program.

Western State Colorado University is an accredited institutional member of the National Association of Schools of Music.

FACULTY

Professor Robert H. Barrett;
Associate Professor John M. Wacker;
Assistant Professor Heather D. Roberson;
Emeritus Professor Martha W. Violett;
Lecturers Amanda Cook and 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 quali-

fy 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 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 312	Introduction to MusicTechnology.....	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
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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.....	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 Program 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 Program 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 312 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 312 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 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 312 Introduction to Music Technology.....	1 cr
MUS 350 Advanced Conducting: Choral and Instrumental.....	2 cr
MUS 360 Teaching General Music in Elementary Schools.....	1 cr
MUS 365 Methods and Philosophy of Teaching and Supervising Instrumental Music in the Public Schools: K-12.....	3 cr
MUS 370 Methods and Philosophy of Teaching and Supervising Vocal and General Music in the Public Schools: K-12	3 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

BUAD 270 Principles of Marketing.....	3 cr
BUAD 333 Organizational Behavior	3 cr
MUS 312 Introduction to Music Technology.....	3 cr
<i>One of the following:</i>	
CIS 120 Information Management and Analysis	3 cr
BUAD 220 Computer Applications in Business	3 cr
<i>One of the following:</i>	
ECON 201 Macroeconomics	3 cr
ECON 202 Microeconomics.....	3 cr

Music Minor

A minimum of 23 credits is required. 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
MUS 352 History of Music.....	3 cr
MUS 353 History of Music.....	3 cr
Private Lessons.....	4 cr
Major Performing Organizations or Small Ensembles.....	2 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.

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 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.

MUS 104 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.

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 Content Standards for Music and technology used in music education. Prerequisite to the 200 and 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 determined 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. Corequisite: MUS 128.

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) Prerequisites: 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 counterpoint. (Offered fall) Prerequisites: MUS 128 and MUS 129 with minimum grades of "C." Corequisite: MUS 130.	
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.	
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 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 2012).
- 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 2013).
- 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 (fall 2013).
- 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 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 tech-

niques. Students conduct in class and observe rehearsal situations with the University ensembles. Offered in alternate years (fall 2012). 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 312 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 2012). Prerequisite: MUS 254 with a minimum grade of "C" or instructor permission.

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 2013). 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 (fall 2012). 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 2012). 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 2013). 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

Associate 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
<i>One of the following:</i>	
PHIL 315 Eastern Philosophy	3 cr
PHIL 345 Philosophy of Religion	3 cr
PHIL 355 Philosophy of Science	3 cr
<i>One of the following:</i>	
POLS 309 Political Theory I–Ancient to Early Modern	3 cr
POLS 310 Political Theory II–Late Modern and Contemporary.....	3 cr
<i>One of the following:</i>	
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.
- 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 written?'; 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 Professor John D. Mason;
Lecturer M. Suzanne Taylor.

DESCRIPTION OF THE PROGRAM

Physics Minor

The Physics Minor consists of a minimum of 18 credits, including ten credits chosen from Physics courses numbered 330 or above and the following:

PHYS 170 Principles of Physics I (with laboratory)	4 cr
PHYS 171 Principles of Physics II (with laboratory)	4 cr
<i>or</i>	
PHYS 200 General Physics I (with laboratory)	4 cr
PHYS 201 General Physics II (with laboratory)	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.

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.

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.

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.

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.

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.

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.

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.

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 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 400 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 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 460 Theory and Application of Radioisotopes (with laboratory)** **3 credits**
 Familiarizes the student with the structure of nuclei and the properties of naturally occurring radiations. It also provides an introduction to the experimental techniques necessary in the utilization of radioisotopes in various areas of science. Prerequisite: PHYS 171 or PHYS 201.
- PHYS 470 Electronics for Scientists (with laboratory)** **3 credits**
 An introductory lecture and laboratory study of electrical circuits and electronic devices that are of particular importance in science. Prerequisites: PHYS 171 or PHYS 201; MATH 141 or Accuplacer university-level mathematics test score of 95 or above; or score 3 or above on AP Calculus.
- 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: CIS 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: CIS 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;
 Assistant Professor Maria B. Struble.

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
<i>Five of the following electives:</i>	
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 355 Politics of Development	3 cr

POLS 360 American Foreign Policy	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

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

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 355 Politics of Development	3 cr
POLS 360 American Foreign Policy	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

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
COTH 271 Small Group Communication.....	3 cr
COTH 371 Argument and Conflict Management	3 cr
COTH 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
<i>One of the following capstone courses:</i>		
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.

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.

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.

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. Questions 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?

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 inter-state commerce power. Prerequisite: POLS 180 recommended.

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 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 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.

202 Politics and Government

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 capstone 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 capstone 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

Professors Susan J. Coykendall and Roger A. Drake;
Associate Professor C. Patrick Stark;
Assistant Professor Scott I. Cohn;
Lecturer Kari E. Commerford.

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 or 9 cr

Two of the following:

PSY 270 Developmental Psychology	3 cr
PSY 368 Abnormal Psychology	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

204 Psychology

PSY 361 Industrial and Applied Psychology	3 cr
PSY 369 Health Psychology.....	3 cr
PSY 457 Social Psychology	3 cr
<i>Two of the following:</i>	
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 437 Sensation and Perception	3 cr
PSY 480 Behavioral Genetics.....	3 cr
<i>One of the following capstone courses:</i>	
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 Abnormal Psychology.....	3 cr
PSY 457 Social Psychology	3 cr
PSY 460 Psychological Testing.....	3 cr
PSY 475 Clinical Psychology	3 cr
<i>One of the following:</i>	
PSY 335 Learning and Behavior	4 cr
PSY 336 Psychology of Motivation.....	3 cr
PSY 338 Cognitive Psychology	3 cr
PSY 437 Sensation and Perception	3 cr
PSY 480 Behavioral Genetics.....	3 cr
<i>One of the following:</i>	
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
<i>One of the following capstone courses:</i>	
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
<i>Four of the following:</i>	
PSY 335 Learning and Behavior	4 cr
PSY 336 Psychology of Motivation.....	3 cr
PSY 338 Cognitive Psychology	3 cr
PSY 437 Sensation and Perception	3 cr
PSY 480 Behavioral Genetics.....	3 cr
<i>One of the following capstone courses:</i>	
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.

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 105, MATH 131, or MATH 140.

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 dissonance 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 covered include worker morale, leadership, work climate, communication networks, and productivity.

PSY 368 Abnormal Psychology**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 disordered behavior. Prerequisite: 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 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, supervised 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 Sensation and Perception** **3 credits**
Considers the relationship between the physical world and our internal perceptions. Attention is given to the visual, auditory, and olfactory systems from both a scientific and philosophical perspective. Students are involved in classroom demonstrations of various perceptual phenomena. Prerequisites: PSY 200, PSY 345.
- 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 480 Behavioral Genetics** **3 credits**
A discussion of the mechanisms of genetic inheritance and the quantitative methods used to assess the relative contribution made by both genetic and environmental factors to individual differences in human behavior. Students evaluate evidence for and against genetic, environmental and evolutionary determinants of behavioral characteristics such as intelligence, personality, mate choice, and psychopathology. Prerequisite: PSY 345.
- 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 mission of the Recreation and Outdoor Education major is to prepare students for careers in recreation, outdoor education, or outdoor environmental education. This entails helping them cultivate knowledge and practical skills in the following areas: leadership and facilitation, educational techniques, written and oral communication, environmental awareness, philosophy and ethics, critical and creative thinking, program planning, problem solving, serving people with differing needs, and the ability to manage risk. In addition, students are encouraged to gain specialized knowledge in recreation, outdoor leadership, or outdoor environmental education. High value is placed on experiential learning as well as field-based learning through participating in extended backcountry inter-semester expeditions (generally in January, May, August, and during Spring Break). There is a consecutive two-week backcountry minimum requirement with an industry leader for students pursuing an Outdoor Leadership or Outdoor Environmental Education emphases.

Excellence in this professional preparation is achieved through an interdisciplinary approach, which also incorporates public and private partnerships, experiential education, and our unique proximity to recreation facilities, land management agency offices, and extensive and remote public lands.

In addition to the traditional competencies and critical and creative thinking skills expected of all liberal arts students, those majoring in Recreation and Outdoor Education learn how the overall quality of life can be enhanced by the integration of appropriate leisure and educational activities. As well, students who graduate from the program gain confidence and leadership skills that can be applied in a variety of professional fields. Recreation and Outdoor Education majors pursue careers in many different areas. Options include employment with outdoor and environmental education centers, specialty outdoor training schools, municipal park and recreation departments, social services, land management agencies, military programs, student services in higher education, and commercial guiding operations, among others. With additional graduate work, even more options are available.

Admission to the Program. All students who wish to major in Recreation and Outdoor Education must be formally admitted to the program. For admission, a student must:

1. have completed or be enrolled in the following courses: ENG 102, ROE 182, and ROE 283;
2. have earned a grade of "C-" or above in ENG 102 and a have a minimum GPA of 2.500 in ROE 182 and ROE 283; and
3. have submitted an application for admission to the Recreation and Outdoor Education Program.

Once admitted to the program and for students to continue to participate in the major and graduate from the program, they must maintain an average GPA of 2.5 or higher for all classes required of the ROE major or emphasis therein. Students whose GPA drops below 2.5 must repeat a course to raise the cumulative GPA prior to taking additional ROE courses, or obtain permission from the Program Coordinator to repeat the course(s) while pursuing further ROE coursework.

FACULTY

Professor Mark A. Gibson;
Associate Professor M. Brooke Moran;
Senior Lecturer Matthew H. Ebbott;
Lecturer Paul G. M. Tame;

DESCRIPTION OF THE PROGRAMS

The 18-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 283 Leadership and Facilitation.....	3 cr
ROE 351 Inquiry into Sustainability.....	3 cr
ROE 398 Program Planning (with laboratory).....	3 cr
ROE 490 Capstone: Recreation Philosophy and Ethics.....	3 cr
ROE 491 Recreation and Outdoor Education Capstone.....	3 cr

Medical and work/volunteer hour requirements: All Recreation and Outdoor Education majors must obtain a medical competency prior to graduation. Standard program majors must take ESS 276 Emergency Response or equivalent. Students with an emphasis in Outdoor Environmental Education 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: Standard Program

The Standard Major consists of 39 credits including the 18-credit Recreation and Outdoor Education Core, First Aid/CPR Competency and the following courses. Students should consult with their advisor for selection of an appropriate minor.

ROE 240 Alternative Programming.....	3 cr
ROE 454 Human Development and Counseling for Outdoor Educators.....	3 cr
ROE 468 Leadership and Administration of Outdoor Pursuits.....	3 cr

Required Supporting Courses:

ESS 282 Principles of Sport and Fitness Management.....	3 cr
ESS 450 Risk Management in Physical Activity Settings.....	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

Recreation and Outdoor Education Major: Comprehensive Programs

OUTDOOR ENVIRONMENTAL EDUCATION EMPHASIS

A minimum of 59 credits is required, including the 18-credit ROE Core and the courses listed below. Additionally, students must become certified as a Wilderness First

Responder (WFR).

ROE 189 Principles of Outdoor Education	3 cr
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	3 cr
ROE 391 Experiential Education Theory and Pedagogy.....	3 cr
ROE 454 Human Development and Counseling for Outdoor Educators.....	3 cr
<i>Two of the following:</i>	
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
<i>Required supporting courses:</i>	
ENVS 100 Introduction to Environmental Studies	3 cr
ENVS 200 Writing in the Environment	3 cr
<i>One of the following:</i>	
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
<i>Eight credits from the following:</i>	
BIOL 151 Diversity and Patterns of Life (with laboratory).....	4 cr
SCI 110 Habitable Planet (with laboratory)	4 cr
<i>or both:</i>	
BIOL 130 Environmental Biology.....	3 cr
BIOL 135 Environmental Biology Laboratory.....	1 cr
<i>or both:</i>	
GEOL 101 Physical Geology.....	3 cr
GEOL 105 Physical Geology Laboratory.....	1 cr

OUTDOOR LEADERSHIP EMPHASIS

A minimum of 55 credits is required, including the 18-credit ROE Core and the following courses. Additionally, students must 1) become a certified Wilderness First Responder (WFR), 2) participate in a back country expedition with an industry leader for a minimum of two consecutive weeks within four years of graduation, and 3) complete at least 100 hours of certification-based or skill-based courses (not including WFR). Requirements one and three above may not fulfill the field experience (ROE 496) requirement.

ROE 189 Principles of Outdoor Education	3 cr
ROE 240 Alternative Programming.....	3 cr
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	3 cr
ROE 391 Experiential Education Theory and Pedagogy.....	3 cr
ROE 454 Human Development and Counseling for Outdoor Educators.....	3 cr
ROE 468 Leadership and Administration of Outdoor Pursuits	3 cr

ROE 496 Field Experiences.....	1-6 cr
<i>One of the following:</i>	
BIOL 130 Environmental Biology.....	3 cr
ENVS 100 Introduction to Environmental Studies	3 cr
<i>One of the following:</i>	
ROE 230 Interpretation of Natural and Cultural History.....	3 cr
ROE 235 Foundations of Teaching Environmental Education	3 cr
<i>One of the following:</i>	
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 six credits of skills courses (e.g., 293, 295, 296) may count toward the minor:

ROE 182 Introduction to Recreation and Outdoor Education.....	3 cr
ROE 283 Leadership and Facilitation.....	3 cr
ROE 351 Inquiry into Sustainability	3 cr
Recreation and Outdoor Education electives	9 cr

Capstone Course Requirement: The following courses in the Recreation and Outdoor Education Major fulfill the capstone course requirements: ROE 490 Capstone: Recreation Philosophy and Ethics and ROE 491 Recreation and Outdoor Education Capstone.

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.

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, admission to the Program, 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, admission to the Program, 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, admission to the Program and instructor permission.

ROE 297 Special Topics**1-6 credits****ROE 320 Leave No Trace Master Educator****3 credits**

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, and practical application. The curriculum also requires students to design and teach an LNT Trainer course, employing diverse teaching techniques and exploring personal wilderness ethics. Prerequisite: ROE 189 or instructor permission.

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.

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 behaviors as they pertain to sustainability. The course examines theoretical and practical examples of sustainable businesses, communities, and other systems. Teaching, applied projects, field trips, and/or participation in conferences may be required.

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.

ROE 391 Experiential Education Theory and Pedagogy 3 credits

An introduction to the historical, theoretical, and pedagogical foundations of experiential education. Teaching opportunities in the classroom and/or in the outdoors allow students to hone facilitation styles and effectiveness. Course topics include the experiential learning cycle, reflective learning, feedback, edgework, communication techniques, and multiple intelligences.

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.

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: admission to the Program 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 barriers, plus equipment as related to recreation areas and facilities. Field visits required.

ROE 468 Leadership and Administration of Outdoor Pursuits 3 credits

A focus on the implementation of outdoor pursuits programs, planning and leadership components, outdoor adventure-based administrative techniques, leadership competencies, therapeutic/adaptive considerations, and risk management. Field trip required. Prerequisites: admission to the Program; ROE 391 and ROE 398; ROE 293, ROE 295, or ROE 296.

ROE 490 Capstone: 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: admission to the Program and senior standing; corequisite: ROE 491.

ROE 491 Recreation and Outdoor Education Capstone 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: admission to the Program and senior standing. Corequisite 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: admission to the Program.

ROE 494 Research

1-4 credits

Provides students the opportunity to pursue research in the field of recreation. Prerequisite: admission to the Program.

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: admission to the Program.

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, completion of all required ROE courses, 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 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 additional 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;
Associate Professor Caroline G. Mitchell;
Lecturer MaryMike Haley.

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 210 Qualitative Research Methods	3 cr
SOC 325 Self and Society	3 cr
SOC 380 Race, Class and Gender	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 210 Qualitative Research Methods	3 cr
SOC 259 Introduction to Criminal Justice	3 cr
SOC 325 Self and Society	3 cr
SOC 349 Law Enforcement	3 cr
SOC 367 Corrections.....	3 cr
SOC 380 Race, Class, and Gender	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 Abnormal Psychology.....	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 perspective 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 everyday life. Prerequisite: SOC 101 with a minimum grade of “C.”

SOC 210 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 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 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 contemporary 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 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 325 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 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 Race, Class & Gender**3 credits**

A description of major theories and concepts associated with social inequality (for example, prejudice and discrimination) and the consequences of the social construction of race/ethnicity, gender/sexuality and class in everyday life. The focus is on the historical and contemporary aspects of inequality in the United States and the links between race/ethnicity, gender/sexuality and class. Forms of resistance to social inequality are also considered including social movements aimed at social change. 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;
Senior Lecturer Marjie B. Foster.

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
<i>Six of the following:</i>	
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: Prose3 cr
- SPAN 475 Judicial and Medical Interpreting II3 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 Culture3 cr
- SPAN 370 Advanced Spanish Conversation and Composition3 cr
- SPAN 460 Hispanic Literature: Prose3 cr
- SPAN 475 Judicial and Medical Interpreting II3 cr
- SPAN 494 Capstone Experience.....3 cr
- Two of the following:*
- SPAN 340 Spanish Civilization and Culture3 cr
- SPAN 460 Hispanic Literature: Drama3 cr
- SPAN 460 Hispanic Literature: Poetry3 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 Culture3 cr
- SPAN 341 Latin American Civilization and Culture3 cr
- SPAN 370 Advanced Spanish Conversation and Composition3 cr
- SPAN 460 Hispanic Literature:3 cr
- SPAN 475 Judicial and Medical Interpreting II3 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.

PERSONNEL (As of August 1, 2012)

Faculty

Kevin D. Alexander (2000) Professor of Biology. B.A., University of Texas at Austin; Ph.D., University of North Texas.

Nella B. Anderson (1998) Professor of Teacher Education. B.S., Texas Tech University; M.Ed., University of Texas at Austin; Ph.D., University of Houston.

Robert H. Barrett (1993) Professor of Music. B.M., Brigham Young University; M.M., University of North Texas; D.M.A., University of Oklahoma–Norman.

Robin A. Bingham (1997) Professor of Biology. B.A., University of Vermont; M.A., Ph.D., University of Colorado.

Michael R. Brooks (1987) Professor of Communication and Theatre. A.B., University of California–Santa Cruz; M.F.A., University of Montana.

Christina Buchanan (2004) Assistant Professor of Exercise and Sport Science. B.A., Mount Holyoke College; M.S., Ph.D., Colorado State University.

Albert R. Caniff, Jr. (1994) Professor of Art. B.F.A., M.A., M.F.A., Western Michigan University; Ed.M., Nazareth College.

Jonathan D. Coop (2012) Assistant Professor of Environmental Studies and Biology. B.A., University of California-Santa Cruz. Ph.D., University of Wisconsin-Madison.

Robert A. Cohen (2006) Associate Professor of Mathematics. B.A., Humboldt State University; Ph.D., University of Colorado.

Scott I. Cohn (2007) Assistant Professor of Psychology. B.S., Lafayette College; M.A., Ph.D., American University.

James C. Coogan (2002) Rady Chair in Petroleum Geology. B.S., College of William and Mary; Ph.D., University of Wyoming.

Susan J. Coykendall (1997) Professor of Psychology. B.A., Kalamazoo College; M.A., Ph.D., Ohio State University.

Daniel M. Cress (2001) Professor of Sociology. B.S., Augsburg College; M.A., Ph.D., University of Arizona.

Philip L. Crossley (2000) Professor of Geography. B.A., Trinity Western University; M.A., Ph.D., University of Texas at Austin.

Roger A. Drake (1969) Professor of Psychology. B.A., Western Washington University; M.A., University of Iowa; Ph.D., University of Tennessee.

Cynthia L. Drexel (1982) Professor of Business Administration; Faculty Athletic Representative. B.A., M.A., Western State College of Colorado; Ph.D., Brigham Young University.

Michaela C. Driver (2008) Professor of Business Administration. B.S., M.A., Ph.D., University of Alabama.

Paul A. Edwards (1987) Professor of Communication and Theatre. B.A., St. Michael's College; M.A., State University of New York–Albany; Ph.D., University of Colorado.

- Robert P. Fillmore** (1997) Professor of Geology. B.A., Western State College of Colorado; M.S., Northern Arizona University; Ph.D., University of Kansas.
- Kimberly J. Fix** (2009) Assistant Professor of Mathematics. B.A., Winona State University; Ph.D., University of Iowa.
- Peter H. Gauss** (1990) Professor of Biology. B.S., St. Joseph's University; Ph.D., Johns Hopkins University.
- Mark A. Gibson** (2000) Professor of Recreation and Outdoor Education. B.A., Eastern Washington University; M.S., Colorado State University; Ed.D., University of Northern Colorado.
- Christopher W. Greene** (2010) Assistant Professor of Business Administration. B.S., University of Wyoming; J.D., University of Colorado School of Law.
- Greg P. Haase** (1988) Professor of Sociology; Chair, Department of Behavioral and Social Sciences. B.A., M.A., Louisiana State University; Ph.D., Colorado State University.
- Helynn H. Hansen** (1988) Professor of Modern Languages. B.A., M.A., Ph.D., University of Utah.
- John C. Hausdoerffer** (2005) Associate Professor of Environmental Studies and Philosophy; Director, Environmental Studies Program. B.A., Western State College of Colorado; M.A., St. John's College; Ph.D., Washington State University.
- Sally R.E. Hays** (2004) Professor of Economics. B.A., University of Colorado; Ph.D., University of Oregon.
- Shan M. Hays** (2005) Assistant Professor of Biology. B.A., University of Colorado; Ph.D., University of Oregon.
- Jay W. Helman** (1989) President; Associate Professor of Exercise and Sport Science. B.A., University of Santa Clara; M.A., California State University–Sonoma; Ph.D., Pennsylvania State University.
- Roger L. Hudson** (2000) Professor of Business Administration. B.S., M.B.A., Ph.D., University of Minnesota.
- S. Chase Hutchison** (2006) Assistant Professor of Art. B.F.A., Western State College of Colorado; M.F.A., New Mexico State University.
- Christine Jespersen** (1998) Professor of English. B.A., University of Colorado; M.A., Ph.D., Rutgers University.
- Andrew G. Keck** (1997) Professor of Mathematics and Computer Information Science. Chair, Department of Mathematics and Computer Information Science. B.A., DePauw University; M.Phil., University of Utah; Ph.D., University of Montana.
- Heidi L. Keck** (1997) Professor of Mathematics; B.S., Bemidji State University; M.S., University of Utah; Ph.D., University of Montana.
- Kathleen M. Kinkema** (1998) Professor of Exercise and Sport Science; Chair, Department of Recreation and Exercise and Sport Science. B.A., Grand Valley State University; M.S., Ph.D., University of North Carolina–Greensboro.

Casey Krawczyk (2006) Assistant Professor of Art. B.F.A., University of Wisconsin-Superior; M.F.A., New York Academy of Art.

Scott A. Lazerus (2000) Professor of Economics. B.A., Ph.D., University of Utah.

Wallace G. Lewis (1991) Professor of History. B.A., M.A., Ph.D., University of Idaho.

John F. Lucido (2007) Associate Professor of Communication; B.A. Humboldt State University; M.F.A., University of North Carolina–Greensboro.

Alina M. Luna (2005) Associate Professor of English; Chair, Department of Communication Arts, Languages, and Literature. B.A., Russell Sage College; Ph.D., State University of New York at Albany.

Patrick A.M. Magee (1996) Thornton Chair in Biology. B.S. Colorado State University; M.S., Ph.D., University of Missouri.

David W. Marchetti (2007) Associate Professor of Geology. B.A., State University of New York; M.S., Ph.D., University of Utah.

John D. Mason (2011) Assistant Professor of Physics. B.A., Colby College; M.S., Ph.D., University of California–Santa Cruz.

Verónica Méndez-Maqueo (2006) Associate Professor of Spanish. B.A., Universidad Nacional Autónoma de México; M.A., Universitat Autònoma de Barcelona; Ph.D., Universidad Nacional Autónoma de México.

Anthony Miccoli (2006) Assistant Professor of Communication and Philosophy. B.A., Pace University; Ph.D., State University of New York at Albany.

Teresa Milbrodt (2008) Assistant Professor of English. B.A., B.F.A., M.A., M.F.A., Bowling Green State University.

Caroline G. Mitchell (2004) Associate Professor of Sociology. B.A., LeMoyne College; M.S., Ph.D., South Dakota State University.

M. Brooke Moran (2003) Associate Professor of Recreation and Outdoor Education. B.S., University of New Hampshire; M.A., Harvard University; Ph.D., University of New Hampshire.

Jason E. Mullins (2006) Assistant Professor of Chemistry. B.S. Clemson University; Ph.D., University of Montana.

Terri J. Murphy (1990) Professor of Art. B.A., Colorado State University; M.A., Adams State College; M.F.A., Kansas State University.

Jeremy Muskat (2009) Assistant Professor of Mathematics. B.A., Western State College of Colorado; M.A., University of Vermont; Ph.D., Colorado State University.

Kevin A. Nelson (1999) Professor of Business Administration; Chair, Department of Business, Accounting and Economics. B.A., Brigham Young University; M.A., Ph.D., Michigan State University.

Monica D. Newman (1990) Professor of Accounting; Department of Business, Accounting and Economics. B.A., Western Washington University; M.T., Baylor University; Ph.D., University of Texas at Austin; C.P.A.

Scott G. Newman (1989) Professor of Accounting. B.A., DePauw University; M.B.A., Indiana University; Ph.D., University of Texas at Austin; C.P.A.

William L. Niemi (1997) Professor of Politics and Government; Associate Vice President for Academic Affairs. B.A., University of California–Santa Cruz; M.A., University of California–Santa Barbara; Ph.D., University of California–Los Angeles.

Heather S. Orr (1997) Professor of Art; Chair, Department of Art. B.A., M.A., University of Victoria; Ph.D., University of Texas at Austin.

Dale L. Orth (2001) Professor of Chemistry; Chair, Department of Natural and Environmental Studies. B.A., The Colorado College; Ph.D., University of Wisconsin–Madison.

Cassandra L. Osborne (2007) Associate Professor of Biology. B.S., Allegheny College; Ph.D., Dartmouth College.

Ashwin J. Patel (2006) Associate Professor of Exercise and Sport Science. B.A., University of Guelph; M.S., University of Tennessee; Ph.D., University of Tennessee–Knoxville.

John C. Peterson (2005) Professor of Computer Information Science. B.S., University of Denver; M.S., University of Colorado; Ph.D., University of Utah.

David J. Plante (1999) Professor of Economics. B.A., Boston University; Ph.D., University of Utah.

Heather D. Roberson (2008) Assistant Professor of Music. B.M., Illinois Wesleyan University; M.A., University of Iowa; D.M.A., University of Kansas.

Anne W. Ryter (1996) Professor of Chemistry. B.S., Beloit College; Ph.D., University of Colorado.

Terence S. Schliesman (1998) Professor of Communication. B.A., Central Washington University; M.A., Ph.D., Washington State University.

Daniel L. Schuster (1988) Professor of Computer Information Science and Mathematics. B.A., University of Colorado; B.S., M.S., Eastern Washington University; Ph.D., University of Texas at Austin.

Don E. Seastrum (1999) Professor of Art. B.A., Western State College of Colorado; M.L.S., University of Denver; Ph.D., The Union Institute.

Jeffrey Sellen (2010) Assistant Professor of Environmental Studies; Director of the Colorado Water Workshop. B.A., Wartburg College; M.A., University of Nebraska–Omaha; Ph.D., Washington State University.

Lynn L. Sikink (2006) Professor of Anthropology. B.A., University of Colorado; M.A., Ph.D., University of Minnesota.

Charles P. Stark (2003) Associate Professor of Psychology. B.A., M.A., Ph.D., University of Colorado.

James M. Stewart (1988) Professor of History. B.A., University of Northern Colorado; M.A., Ph.D., University of Colorado.

Mark Stiger (1989) Moncrief Chair in Anthropology; Professor of Anthropology. B.A., M.A., University of Colorado; Ph.D., University of New Mexico.

Allen L. Stork (1985) Professor of Geology; Chair, Department of Natural and Environmental Sciences. B.A., Pomona College; Ph.D., University of California–Santa Cruz.

Maria Boikova Struble (2008) Assistant Professor of Politics and Government. B.A., Louisiana State University; M.A., Arizona State University.

Heather Thiessen-Reily (1996) Professor of History; Director, Honors Program. B.A., University of Saskatchewan; M.A., Flinders University of South Australia; Ph.D., Tulane University.

Mark D. Todd (1988) Professor of English. B.A., M.A., Eastern New Mexico University; Ph.D., Texas Tech University.

Laura A. Tuthill (2011) Assistant Professor of Teacher Education; Director of Teacher Education Program. S., Butler University; M.A., Ph.D., University of Denver.

Duane L. Vandenbusche (1962) Professor of History. B.S., Northern Michigan University; M.A., Ed.D., Oklahoma State University.

Michael Vieregge (2011) Professor of Business Administration. M.A., M.P.A., University of Texas at Austin; Ph.D., The Pennsylvania State University.

John M. Wacker (2005) Associate Professor of Music; Chair, Department of Music. B.M.Ed., University of Northern Colorado; J.D., University of Wyoming; M.M., Indiana University of Pennsylvania; D.M.A., University of North Texas.

R. Greg Waggoner (1985) Associate Professor of Exercise and Sport Science; Director of Intercollegiate Athletics. B.A., M.A., Western State College of Colorado; Ed.D., University of Northern Colorado.

Karin A. Waidley (2005) Associate Professor of Communication and Theatre. B.A., University of California–Berkeley; M.A., Northwestern University; Ph.D., University of Washington.

Timothy F. Wawrzyniec (2010) Moncrief Chair in Petroleum Geology; Assistant Professor of Geology. B.S., University of New Mexico; M.S., University of Minnesota–Twin Cities; Ph.D., University of New Mexico.

James M. Woytek (2011) Assistant Professor of Teacher Education. B.A., Mesa State College; M.A., Villanova University.

NOTE: Dates indicate first year of employment at Western State College of Colorado.

Administration

Jay W. Helman (1989) President; Associate Professor of Exercise and Sport Science. B.A., University of Santa Clara; M.A., California State University–Sonoma; Ph.D., Pennsylvania State University.

W. Bradley Baca (2002) Vice President for Finance and Administration. B.A., Dartmouth College; M.A., University of Colorado.

Thomas F. Burggraf (1997) Vice President for Institutional Advancement. B.F.A., Tulane University.

Patricia Manzanares-Gonzales (2012) Provost and Vice President for Academic Affairs. B.A., M.A., M.A., New Mexico Highlands University; Ed.D. Northern Arizona University.

Gary C. Pierson (1998) Vice President for Student Affairs. B.A., M.A., Adams State College.

Michael Aimone (2010) Interim Assistant Football Coach. B.S., Chadron State College.

Cynthia Asbury (2009) Mail Center Manager. B.S., University of North Carolina–Greensboro.

Noor Al-Hemyari (2011) Senior Systems Administrator. B.S., Baghdad University, Baghdad, Iraq.

Jaskaran S. Bains (2010) Head Football Coach. B.S., California State University–Fresno; M.S., Chadron State College.

Renee Barney (2012) Public Service/Information Literacy Librarian. B.A., College of the Ozarks; M.L.I.S., Kent State University.

Jennifer M. Bjornstad (1998) Disability Services Coordinator. B.A., Western State College of Colorado.

Molly Bolyard (2006) Assets Accountant. B.A., Western State College of Colorado.

Erica S. Boucher (2008) Executive Assistant to the Vice President for Academic Affairs. B.A., Western State College of Colorado.

Rachel Burleson (2012) Assistant Athletic Director/Equipment, Events, and Facilities Coordinator. B.S., Tarleton State University; M.S., Chadron State College.

Chris Bradford (2009) Head Track and Field Coach. B.S., Elmhurst College.

Laurel Butcher (2008) Executive Assistant to the Vice President for Student Affairs. B.A., Western State College of Colorado.

Anthony Case (2011) Interim Assistant Football Coach. B.A., Adams State College; M.S., Chadron State College.

Debra Clark (2007) Registrar. B.P.S., Granite State College.

Jeremy Clevenger (2012) Head Women's Soccer Coach. B.S., San Francisco State University; M.S., University of Central Missouri.

Hannah Cottier (2012) Interim Admissions Counselor. B.A., Western State College of Colorado.

- Amanda Crosby** (2012) Interim Financial Aid Counselor. B.A., Western State College of Colorado.
- Madelyn Curry** (2011) Escalante Fitness Center Manager. B.F.A., University of Kansas.
- Sandra L. Dowis** (1976) Graduate Intern. B.A., Western State College of Colorado.
- Douglas L. Driver** (2009) Director of Institutional Research. B.A., M.L.S., University of Alabama.
- Jennifer R. Drumm** (2010) Director of the Academic Resource Center. B.S., University of Rhode Island; M.A., University of Connecticut.
- Elva Dryer** (2009) Aspinal-Wilson Center Manager. B.A., Western State College of Colorado.
- Shannon C. H. Eagles** (2009) Technical Services Librarian. B.A., Portland State University; M.L.I.S., McGill University.
- Eric Escalante** (2006) Head Access Services Librarian. B.A., Northern Arizona University.
- Carolyn R. Esquibel** (1992) Associate Director of Financial Aid. B.A., Western State College of Colorado.
- Julie S. Feier** (2010) Associate Vice President for Finance and Administration. B.A., Western State College of Colorado; M.A., Southern Illinois University.
- Thomas A. Fleming** (2012) Interim Assistant Volleyball Coach. B.A., Western State College of Colorado; M.A., Ashford University; M.S., Chadron State University.
- Eric Freson** (2010) Interim Admissions Counselor. B.A., Western State College of Colorado.
- Kimberly E. Gailey** (2003) Director of Human Resources. B.S., University of Oklahoma.
- Garrison Garcia** (2010) Interim Admissions Counselor. B.A., Western State College of Colorado.
- Nancy V. Gauss** (1992) Director of Library Services. B.A., Goucher College; M.A., University of Denver.
- Van Girard** (2012) Head Women's Basketball Coach. B.A., California State University-Long Beach; M.A., California State University-Dominguez Hills.
- Ciera Glenn** (2011) Interim Admissions Counselor. B.A., Western State College of Colorado.
- Mariah G. Green** (2006) Career and Academic Advisor. B.A., Western State College of Colorado.
- C. Scott Groom** (1989) NCAA Compliance Coordinator; Assistant Athletic Director. B.A., Eastern Illinois University; M.A., Western State College of Colorado.
- John Gunning** (1996) Accountant-Payroll/Liabilities. B.A., Western State College of Colorado.
- Janna Hansen** (2005) Director of Wilderness Pursuits, Wilderness Based Orientation and Escalante Fitness Center. B.A., Western State College of Colorado.
- Roberta K. Harper** (1991) Accountant - Assets and Grants. B.S.C., Ohio State University; B.A., Western State College of Colorado.

- Teri Sue Haus** (1998) Bookstore Manager. B.A., Western State College of Colorado.
- Ginny Hayes** (2006) Associate Registrar. B.A., Western State College of Colorado.
- Celeste M. Helminski** (2004) Executive Assistant to the President. B.A., Indiana University.
- Deborah Hindi** (2007) Assistant Bookstore Manager. B.S., Colorado State University.
- Tara L. Holmes** (2004) Assistant Director of Admissions. B.A., Western State College of Colorado.
- Deborah L. Hoskins** (1998) Director of Annual and Special Gifts. B.A., University of Houston.
- Shelley C. Jansen** (1999) Associate Vice President for Student Affairs/Director of Campus Life and Orientation. B.A., M.S., University of Wisconsin–La Crosse.
- Edward A. Klein** (2011) Director of Residence Life. B.S., Keene State College; M.A., Michigan State University.
- Nathan Kubes** (2010) Interim Director of Campus Security. B.A., Western State College of Colorado.
- Marilyn Laverty** (2008) Director of the Small Business Development Center. B.S., University of Denver.
- Kelly F. Ledwith** (2011) Interim Assistant Football Coach. B.A., California State University–Fresno.
- Daniel Leeworthy** (2010) Interim Assistant Men's Basketball Coach. B.A., Brigham Young University–Hawaii; M.S., Ohio University.
- Scott Little** (2012) Technical Director of Theater. B.S., University of Wyoming; M.F.A., University of South Dakota.
- Yuriy Litvinski** (2010) Interim Assistant Track Coach; Assistant Escalante Fitness Center Program Coordinator. B.A., University of Northern Iowa; M.S., University of Central Missouri.
- Patricia Love** (2009) Director of Procurement and Contracts. B.A., Miami University; M.B.A., J.D., University of Kansas–Lawrence.
- Chris Luekenga** (2010) Western Responsible Alcohol Partnership Judicial Coordinator. B.A., Anderson College; M.A., Trinity Theological Seminary.
- Aaron MacLennan** (1994) Assistant Director of Enterprise Information Systems. B.A., Western State College of Colorado.
- Jerry Martinez** (2010) Director of Financial Aid. B.S., Metropolitan State College of Denver.
- Tanith Martinez** (2011) Interim Financial Aid Counselor. B.S., Metropolitan State College of Denver.
- Torrence Maurer** (2011) Technical Director of Media. B.A., Western State College of Colorado; M.F.A., University of California–Los Angeles.
- Ryan Dale McDonough** (2011) Interim Assistant Football Coach. B.A., Simpson College; M.A., Chadron State College.

- Jennifer L. Michel** (2004) Head Cross-Country Coach. B.A., Western State College of Colorado.
- Katie L. Miller** (2011) Academic Advisor. B.A., University of Missouri-Columbia; M.Ed., Colorado State University.
- Katherine Moskowitz** (2008) Head Volleyball Coach. B.A., Black Hills State University; M.A., Adams State College.
- Michael W. Moskowitz** (2008) Head Men's Basketball Coach. B.A., M.A., Adams State College.
- Don L. Mundell** (1991) Head Athletic Trainer. B.A., University of Northern Colorado; M.Ed., Colorado State University.
- Layne M. Nelson** (1992) Director of Extended Studies. B.S., Miami University; M.B.A., University of Southern California.
- Desolee Pennartz** (2008) Interim Executive Assistant to the Vice President for Finance and Administration.
- Shannon Piquette** (2007) Assistant Director of Student Financial Services. B.A., Western State College of Colorado.
- Sara Phillips** (2008) Assistant Director of Campus Life. B.A., University of Puget Sound; M.U.R.P., University of Colorado–Denver.
- Janine Pleau** (2006) Assistant Athletic Trainer. B.A., Fort Lewis College.
- Carrie Reinecke** (2010) Registration Specialist. B.A., Western State College of Colorado.
- Chad Robinson** (2002) Director of Computing, Media, and Telecommunications. B.S., University of Michigan–Ann Arbor.
- Kate Robinson** (2010) Network Administrator. B.A., Western State College of Colorado.
- Sally Jo Romero** (1996) Coordinator of Multicultural Affairs. B.A., Western State College of Colorado.
- Rodney Russell** (1988) Director of Accounting. B.S., Ball State University.
- Stephanie Ruybal** (2008) Campus Visit Coordinator. B.A., Western State College of Colorado.
- Kristin Satterlee** (2012) Assistant Director of Residence Life and Conference Services. B.A., Ashland University; M.A. Bowling Green State University.
- Bradley Smith** (2012) Head Women's Swimming and Diving Coach. B.S., University of Vermont.
- Robert Swinton** (2012) Assistant Director of Residence Life and Housing Operations. B.A., University of Scranton; M.Ed., Jones International University.
- Melissa Tucker** (2008) Interim Assistant Volleyball Coach. B.A., Western State College of Colorado.
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INDEX

A

- Academic Advising · 19
- Academic Alert · 30
- Academic Amnesty · 31
- Academic Calendar · 8
- Academic Credit · 23
- Academic Dean's List · 29
- Academic Dismissal · 31
- Academic Due Process · 35
- Academic Integrity · 34
- Academic Leave of Absence · 27
- Academic Load · 24
- Academic Policies · 23
- Academic Probation · 30
- Academic Programs · 6, 41-226
- Academic Resource Center · 20
- Academic Standing · 29
- Academic Suspension · 30
- Accessibility for Individuals with Disabilities · i
- Accounting Courses · 44
- Accounting Faculty · 42
- Accounting Major · 42
- Accounting Minor · 43
- Accreditation · 2
- Add/Drop · 25
- Admissions Policies · 9
- Advising · 24
- Affirmative Action · i
- Anthropology Courses · 48
- Anthropology Faculty · 47
- Anthropology Major · 47
- Anthropology Minor · 47
- Application for and Awarding of the Degree · 33
- Art Courses · 56
- Art Education Licensure Emphasis · 51
- Art Faculty · 50
- Art History and Theory Emphasis · 52
- Art Major · 51
- Art Minor · 55
- Assessment of Academic Programs and Services · 7
- Athletic Programs · 21
- Auditing Courses · 26

B

Bachelor of Fine Arts Degree in Art · 52
 Biochemistry Emphasis · 86
 Biology Courses · 68
 Biology Faculty · 64
 Biology Major · 65
 Biology Minor · 68
 Business Administration and ENVIS
 Coordinated Double Major · 75, 130
 Business Administration Courses · 79
 Business Administration Faculty · 74
 Business Administration Major · 75
 Business Administration Minor · 78
 Business Emphasis; Music · 180

C

Cable Television Station · 18
 Calendar, Academic · 8
 Career-Related Services · 19
 Catalog, Operative · 32
 Cell Biology/Pre-Medicine Emphasis · 65
 Cheating · 34
 Chemistry Courses · 88
 Chemistry Faculty · 85
 Chemistry Major · 86
 Chemistry Minor · 87
 Class Attendance · 25
 Classification, Student · 23
 Clinical, Counseling, and School
 Psychology Emphasis · 204
 Club Sports · 21
 Co-curricular Programs · 18
 Commencement · 34
 Communication Emphasis · 92
 Communication and Theatre
 Courses · 94
 Communication and Theatre Faculty · 92
 Communication and Theatre Major · 93
 Communication and Theatre Minor · 93
 Communication Concentration · 94
 Complaint Procedure, Informal · 35
 Computer Information Science
 Courses · 101

Computer Information Science
 Emphasis; Math · 171
 Computer Information Science
 Faculty · 100
 Computer Information Science
 Major · 101
 Computer Information Science
 Minor · 101
 Computing Services Available · 20
 Course Numbering System · 23
 Creative Writing Emphasis · 120
 Criminal Justice Emphasis · 218

D

Daycare · 22
 Dean's List · 29
 Deferral Policy, Admission · 11
 Degree Programs · 6
 Deposit, Housing · 14
 Design, Art Graphic Design Emphasis,
 BFA · 55
 Disability Services · 20

E

Economics Courses · 107
 Economics Faculty · 106
 Economics Major · 106
 Economics Minor · 107
 Education Courses · 116
 Education Faculty · 111
 Education Program · 111
 Educational Services · 19
 Elementary Licensure · 112
 Emeritus Faculty · 236
 English Courses · 122
 English Faculty · 119
 English Major · 120
 English Minor · 121
 Entrepreneurship Emphasis · 76
 Environmental Biology and Ecology
 Emphasis · 66

- Environmental Studies and Business
 - Administration Coordinated Double Major · 75, 130
- Environmental Studies Council · 128
- Environmental Studies Courses · 131
- Environmental Studies Faculty · 128
- Environmental Studies Major · 128
- Environmental Studies Minor · 131
- Essential Skills Requirement · 37
- Exercise & Sport Science Courses · 137
- Exercise & Sport Science Emphasis · 134
- Exercise & Sport Science Faculty · 134
- Exercise & Sport Science Major · 135
- Exercise & Sport Science Minor · 137
- Exercise & Sport Science Minor,
 - Sport Psychology Concentration · 137
- Exercise Science Emphasis · 135
- Experimental Psychology Emphasis · 204
- Exploratory Program · 20
- Extended Studies · 21
- Geoarchaeology Emphasis · 150
- Geography Courses · 147
- Geography Faculty · 147
- Geography Minor · 147
- Geology Courses · 152
- Geology Emphasis · 149
- Geology Faculty · 149
- Geology Major · 149
- Geology Minor · 152
- Governance · 2
- Grade Point Average · 28
- Grades · 28
- Graduation Plan, Four-Year · 32
- Graduation Requirement Audit · 33
- Graduation Requirements · 32
- Graduation with Honors · 33
- Graphic Design Emphasis · 51
- Grants · 17
- Grievance Procedure · 35

F

- Fees, Mandatory · 14
- Film Concentration · 94
- Film Studies Emphasis · 93
- Financial Analysis Emphasis · 43
- Financial Assistance · 17
- First Writing Course, Essential Skills Requirement · 37
- Formal Grievance Procedure · 35
- Foundation, Western State Colorado University · 4
- Four Year Graduation Plan · 32
- French Courses · 145
- French Faculty · 145
- French Minor · 145

G

- General Biology Emphasis · 66
- General Chemistry Emphasis · 86
- General Education · 37
- General Psychology Emphasis · 203

H

- Headwaters Conference · 18
- Headwaters Courses · 156
- Headwaters Regional Studies · 156
- Health Center · 22
- History Courses · 159
- History Faculty · 157
- History Major · 157
- History Minor · 158
- History of Western · 3
- Honorary Organizations · 18
- Honors Council · 164
- Honors Courses · 164
- Honors, Graduation with · 33
- Honors Program · 163

I

- Index · 242
- Individualized Contract Emphasis,
 - Environmental Studies · 130
- Informal Complaint Procedure · 35
- Institutional Mission · 2
- Insurance, Student Injury and Sickness · 15

Intercollegiate Athletics · 21
 Interdisciplinary Studies/Liberal Arts
 Major · 168
 Interdisciplinary Studies/Liberal Arts
 Faculty · 168
 Internships · 26
 Intramural Program · 21

K

K-12 Art, Exercise and Sport Science,
 Music, and Spanish Licensure · 113
 K-12 Licensure Emphasis in
 Art · 51
 Music · 180
 Physical Education · 136
 Spanish · 224

L

Latin American Business Emphasis · 77
 LEAD Office · 18
 Learning Skills Assistance · 20
 Liberal Arts · 38
 Library · 4
 Living/Learning Communities · 19
 Loan Programs · 17

M

Major and Minor Requirements · 33
 Management Emphasis · 75
 Marketing Emphasis · 76
 Mathematics Course, Essential Skills
 Requirement · 37
 Mathematics Courses · 172
 Mathematics Faculty · 170
 Mathematics Major · 171
 Mathematics Minor · 171
 Media · 18
 Mediation (Ombudsperson) · 22
 Mountain Rescue Team · 19
 Multicultural Center · 19
 Music Courses · 181
 Music Education Emphasis, K-12 · 180

Music Faculty · 177
 Music Major · 179
 Music Minor · 181

N

National Student Exchange Program · 21
 Newspaper, Student · 18

O

Ombudsperson · 22
 Organizational Communication
 Emphasis · 92
 Outdoor Environmental Education
 Emphasis · 210
 Outdoor Leadership Emphasis · 211

P

Payment of Charges · 15
 Peak Productions · 19
 Petroleum Geology Emphasis · 151
 Philosophy Courses · 190
 Philosophy Faculty · 190
 Philosophy Minor · 190
 Physics Courses · 193
 Physics Faculty · 193
 Physics Minor · 193
 Plagiarism · 34
 Politics and Government Courses · 199
 Politics and Government Faculty · 196
 Politics and Government Major · 196
 Politics and Government Minor · 199
 Politics and Government Pre-Law
 Minor · 199
 Pre-Allied Health Emphasis · 67
 Pre-Law Emphasis · 197
 Professional Emphasis; Accounting · 43
 Professional Land and Resource
 Management Emphasis · 77
 Program Council · 19
 Psychology Courses · 205
 Psychology Faculty · 203
 Psychology Major · 203
 Psychology Minor · 205

R

- Radio Station · 18
- Recreation and Outdoor Education Courses · 212
- Recreation and Outdoor Education Faculty · 210
- Recreation and Outdoor Education Major · 210
- Recreation and Outdoor Education Minor · 212
- Recreational and Athletic Programs · 21
- Refund of Charges · 16
- Registration · 24
- Repetition of Courses · 28
- Residence Life Requirement · 15
- Residency Classification · 16
- Resident Credit Requirement · 32
- Resort Management Emphasis · 78
- Room and Board Costs · 14

S

- Scholarships · 17
- Science · 216
- Science Courses · 216
- Second Writing Course, Essential Skills Requirement · 37
- Secondary and K-12 Licensure · 113
- Secondary Licensure Emphasis in
 - Biology · 67
 - Chemistry · 86
 - Earth-Space Science · 151
 - Economics · 106
 - English · 120
 - History · 158
 - Mathematics · 171
 - Politics and Government · 198
- Sociology Courses · 219
- Sociology Faculty · 217
- Sociology Major · 217
- Sociology Minor · 219
- Spanish Faculty · 223
- Spanish Courses · 224
- Spanish Major · 223
- Spanish Minor · 224

- Sport and Fitness Management
 - Emphasis · 135
- Sport Psychology Concentration · 137
- Sports Clubs · 21
- Student Injury and Sickness Insurance · 15
- Student Bill of Rights · 7
- Student Classification · 23
- Student Employment Programs · 17
- Student Government Association · 19
- Student Handbook · 22
- Studio Art Emphasis · 51

T

- Telecommunications Services
 - Available · 20
- Testing Services · 21
- Theatre Concentration · 94
- Theatre and Performance Studies
 - Emphasis · 93
- Three-Dimensional Art Ceramics
 - Emphasis, BFA · 54
- Three-Dimensional Art Jewelry
 - Emphasis, BFA · 55
- Three-Dimensional Art Sculpture
 - Emphasis, BFA · 55
- Transfer Credit · 11
- Turning Point · 20
- Tuition · 14
- Two-Dimensional Art Painting
 - Emphasis, BFA · 53
- Two-Dimensional Art Photography
 - Emphasis, BFA · 54
- Two-Dimensional Art Printmaking
 - Emphasis, BFA · 54

U

- Non-degree Admission · 10
- Unit of Credit · 23

V

- Variable Credit Courses · 25

W

Water Emphasis · 129

Western State Colorado University
Foundation · 4

Westerners in Transition (WIT) · 22

Wilderness Pursuits · 22

Wildlife Biology Concentration · 66

Withdrawal from Courses · 27

Withdrawal from University · 27